TACKS

175th Anniversary Year of the Medical Society of the State of New York

NEW YORK STATE JOURNAL OF MEDICINE

JANUARY 1982

Argon Laser Treatment of the Glaucomas. Artist's conception of argon laser beam photocoagulating iris surface in creating an iridectomy. Illustration by Shelley E. Eshleman See page 17.

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*Hannemann, R. E., Erb, R. J., Stoltman, W. P., Bronson, E. C., Williams, E. J., Long, R. A., Hull, J. H. and Starbuck, R. R.: Digital Plethysmography For Assessing Erythrityl Tetranitrate Bioavailability. Clin Pharmacol and Ther 29:35-39, 1981.

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Brief Summary

*__INDICATIONS__: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information FDA has classified the indications as follows

"Possibly effective for the relief of moderate to moderately severe pain in those situations where the physician wishes to add a mild sedative effect

Final classification of the less-than-effective indications requires further investigation

CONTRAINDICATIONS: Hypersensitivity to dihydrocodeine, codeine, promethazine or aspirin.

WARNINGS: Salicylates should be used with extreme caution in the presence of peptic ulcer or coagulation abnormalities

Drug Dependence: Dihydrocodeine can produce drug dependence of the codeine type and therefore has the potential of being abused Psychic dependence physical dependence and tolerance may develop upon repeated administration of dihydrocodeine, and it should be prescribed and administered with the same degree of caution appropriate to the use of other oral narcotic-containing medications

Like other narcotic-containing medications, dihydrocodeine is subject to the provisions of the Federal Controlled Substances Act

Usage in Ambulatory Patients: Dihydrocodeine and promethazine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery The patient using Synalgos-DC should be cautioned accordingly.

Interactions with other Central-Nervous-System Depressants: Patients receiving other narcotic analgesics, general anesthetics other phenothiazines, tranquilizers sedative-hypnotics or other CNS depressants (including alcohol) concomitantly with Synalgos-DC may exhibit an additive CNS depression When such combined therapy is contemplated the dose of one or both agents should be reduced

Patients who have demonstrated a hypersensitivity reaction (e g blood dyscrasia, jaundice) with a phenothiazine should not be reexposed to any phenothiazine including Synalgos-DC, unless in the judgment of the physician the potential benefits of the treatment outweigh the possible hazards.

Usage in Pregnancy. Reproduction studies have not been performed in animals There is no adequate information on whether this drug may affect fertility in human males and females or has a teratogenic potential or other adverse effect on the fetus

Usage in Children: Since there is no experience in children who have received this drug safety and efficacy in children have not been established.

PRECAUTIONS: Promethazine should be administered cautiously to patients with cardiovascular or liver disease Synalgos-DC should be given with caution to certain patients such as the elderly or debilitated and those with hypothyroidism, Addison's disease and prostatic hypertrophy and urethral stricture

ADVERSE REACTIONS: The most frequently observed reactions include light-headedness dizziness, drowsiness sedation nausea vomiting constipation, pruritus, skin reactions, and rarely hypotension

DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient Synalgos-DC is given orally. The usual adult dose is two capsules every 4 hours as needed for pain

DRUG INTERACTIONS: The CNS depressant effects of Synalgos-DC may be additive with that of other CNS depressants

See Warnings

Aspirin may enhance the effects of anticoagulants and inhibit the uricosuric effects of uricosuric agents

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† Phenacetin replaced with additional aspirin on a milligram per milligram basis.

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Unlike beta agonists, "no development of tolerance appears to occur with chronic use of theophylline."[1]

Beta agonists act by stimulating beta$_2$ receptors in bronchial smooth muscle. This stimulus results in increased levels of cyclic AMP, which triggers the series of biochemical events leading to bronchodilation.

Beta agonists may be difficult to control in chronic use.

There is concern that chronic use of beta agonists can lead to clinically important drug tolerance.[2] Repeated stimulation of receptors by beta agonists causes an eventual reduction in the number of receptor sites and a decreased ability to produce cyclic AMP. The result: a potential decline in both magnitude and duration of bronchodilator response.[3]

This may help account for the fact that more than half of all patients on beta agonists require concomitant therapy, usually a theophylline.[4]

Theophylline: no evidence of tolerance.

Unlike beta agonists, theophylline appears to act through the inhibition of phosphodiesterase, the enzyme which breaks down cyclic AMP. Theophylline has no effect on the number of beta$_2$ receptors and therefore has none of the potential for tolerance seen with beta agonists.

Conclusion: Current thinking strongly suggests that beta agonists should be reserved for use in acute attacks. Theo-Dur is indicated for both relief and prophylaxis of bronchospasm.

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Please see next page for a summary of prescribing information

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Indications and Usage: Symptomatic relief and/or prevention of asthma and reversible bronchospasm associated with chronic bronchitis and emphysema.
Contraindications: THEO-DUR is contraindicated in individuals who have shown hypersensitivity to any of its components or xanthine derivatives.
Warnings: Excessive theophylline doses may be associated with toxicity; serum theophylline levels should be monitored to assure maximum benefit with minimum risk. Incidence of toxicity increases at serum levels greater than 20 mcg/ml. High blood levels of theophylline resulting from conventional doses are correlated with clinical manifestation of toxicity in: patients with lowered body plasma clearances, patients with liver dysfunction or chronic obstructive lung disease, and patients who are older than 55 years of age, particularly males. There are often no early signs of less serious theophylline toxicity such as nausea and restlessness, which may appear in up to 50% of patients prior to onset of convulsions. Ventricular arrhythmias or seizures may be the first signs of toxicity. Many patients who have higher theophylline serum levels exhibit a tachycardia. Theophylline products may worsen pre-existing arrhythmias.
Usage In Pregnancy: Safe use in pregnancy has not been established relative to possible adverse effects on fetal development, but neither have adverse effects on fetal development been established. This is, unfortunately, true for most anti-asthmatic medications. Therefore, use of theophylline in pregnant women should be balanced against the risk of uncontrolled asthma.
Precautions: THEO-DUR TABLETS SHOULD NOT BE CHEWED OR CRUSHED. Theophyllines should not be administered concurrently with other xanthine medications. It should be used with caution in patients with severe cardiac disease, severe hypoxemia, hypertension, hyperthyroidism, acute myocardial injury, cor pulmonale, congestive heart failure, liver disease, and in the elderly, particularly males, and in neonates. Great caution should be used in giving theophylline to patients in congestive heart failure since these patients show markedly prolonged theophylline blood level curves. Use theophylline cautiously in patients with history of peptic ulcer. Theophylline may occasionally act as a local irritant to G.I. tract, although gastrointestinal symptoms are more commonly central and associated with high serum concentrations above 20 mcg/ml.
Adverse Reactions: The most consistent adverse reactions are usually due to overdose and are:
Gastrointestinal: Nausea, vomiting, epigastric pain, hematemesis, diarrhea.
Central Nervous System: Headaches, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions.
Cardiovascular: Palpitation, tachycardia, extrasystoles, flushing, hypotension, circulatory failure, life threatening ventricular arrhythmias.
Respiratory: Tachypnea.
Renal: Albuminuria, increased excretion of renal tubular cells and red blood cells, potentiation of diuresis.
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Caution: FEDERAL LAW PROHIBITS DISPENSING WITHOUT A PRESCRIPTION.
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References:
1 Theo-Dur package insert.
2 Plummer AL: *Chest 73*:6 (Suppl 949-957), 1978.
3 Jenne J et al *J Allergy Clin Immunol 59*:383-390, 1977
4 Data on file, Key Pharmaceuticals, Inc.

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Letters to the Editor

Skin transplantation; current status in burn injury treatment

To the Editor: I read Dr. Luterman's* paper with interest and I would like to make the following comment: I could not find any reference in the article to the use of amniotic membrane as a "biological dressing."

I published a paper about this topic: Transplantation in the Treatment of Burns.† The literature and the use of amniotic membrane are widely increasing. The membrane met most of the criteria for an ideal dressing; reduced the pain; accelerated epithelialization; stimulated better circulation; and was effective in combating infection and minimized the protein and fluid losses. The amniotic membranes are taken at delivery or cesarean section, washed generously with saline solution, and stored in sterile jars at 4°C. To keep the amnion in place, it must be covered with a single layer of antibiotic-soaked fine mesh gauze.

Amnion has been used to treat acute burns, leg ulcers, decubiti, donor sites, to cover raw surfaces at radical vulvectomy, or to prevent bowel adhesions after exenteration. Apply amnion directly over the defect before surgery (biological dressing).

LEOPOLD SCHEIBER, M.D.
133 East 73rd Street
New York, N.Y. 10021

* Luterman, A., Kraft, E., and Bookless, S.: Skin transplantation; current status in burn injury treatment, New York State J. Med. 81: 1689 (Oct.) 1981.

† Scheiber, L.: Transplantation in the treatment of burns, Delaware M. J. 30: 97 (1958).

Dr. Luterman's reply

To the Editor: Thank you for forwarding to me the letter from Dr. Scheiber concerning the use of amniotic membrane in the treatment of burn victims. In writing the article concerning biological dressings, I specifically omitted amniotic membrane for the following reasons.

The article was mainly concerned with the use of biological dressings in the treatment of burn victims in two settings. If a viable take of a biological material is required, as in a major excision, amniotic membrane has not proved to be a satisfactory material. The reason for this is that the material is far too flimsy. This thinness of the amniotic membrane similarly does not make it nearly as efficacious as heterograft when one is using a biological material and viability is not a major factor. The two clinical settings where this occurs is in treatment of superficial, second degree burns and in cleaning up granulating beds. The technique that has been described by Dr. Scheiber in terms of putting the amniotic membrane in sterile jars at 4°C. will not guarantee viability of the amniotic membrane. Therefore, after major excision of burns, using this material would not prove to be satisfactory.

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Abstracts

Shamah, M. A., and Stein, A. J.: Argon laser treatment of glaucomas, **New York State J. Med.** 82: 17 (Jan.) 1982.

Argon laser photocoagulation of selected areas of the anterior segment is revolutionizing the treatment of the glaucomas. We present our experience with use of this modality in creating peripheral iridectomies for primary narrow-angle glaucoma, for breaking aphakic pupillary block, and for treating secondary angle-closure glaucoma. Also presented are cases of rubeosis irides in which photocoagulation is used to prevent development of neovascular glaucoma. Laser gonio-photocoagulation in chronic open-angle glaucoma shows that the argon laser can also be used to lower the intraocular pressures in these patients.

Chervenak, F. A., Stangel, J. J., Nemec, M., and Amin, H. K.: Mayer-Rokinansky-Küster-Hauser syndrome; congenital absence of vagina, **New York State J. Med.** 82: 23 (Jan.) 1981.

MRKH (Mayer-Rokinansky-Küster-Hauser) syndrome, a müllerian system maldevelopment characterized by congenital absence of the vagina, is not an uncommon cause of primary amenorrhea. Seven patients from Westchester County Medical Center and St. Luke's Medical Center are described. Historical background, clinical presentation, etiology, and treatment are reviewed.

Hariprasad, M. K., Reddy, K., Paul, P. K., Eisinger, R. P., and Raju, G. S.: Ascitic ultrafiltration; treatment for intractable congestive cardiomyopathy, **New York State J. Med.** 82: 28 (Jan.) 1982.

Ascitic fluid was dialyzed, ultrafiltered, and returned to the abdomen of a uremic cirrhotic patient with severe congestive cardiomyopathy. Improved cardiac performance was observed.

Abstracts in Interlingua

Shamah, M. A., e Stein, A. J.: Tractamento del glaucoma con Argon-Laser, **New York State J. Med.** 82: 17 (Januario) 1982.

Le photocoagulation con Argon-Laser de areas selectate del segmento anteriori es "revolutionante" in le tractamento del glaucoma. Nos presenta nostra experientia con le uso de iste modalitate therapeutic pro facer iridectomias peripheric in casos de glaucoma primari de angulo stricto, etiam pro rumper le block pupillari aphakic, e pro le tractamento del glaucoma secondari de angulo intime ("close"). Etiam es presentate casos de rubeosis irides in que le photocoagulation esseva usate pro prevenir le disveloppamento del glaucoma neovasculari. Le gonio-photocoagulation con Laser in le glaucoma chronic de angulo aperte demonstra que le Argon-Laser etiam pote esser usate pro reducer le pression intraoculari in iste patientes.

Chernevak, F. A., Stangel, J. J., Nemec, M., e Amin, H. K.: Syndrome de Mayer-Rokinansky-Kuster-Hauser; absentia congenital del vagina, **New York State J. Med.** 82: 23 (Januario) 1982.

Le yndrome de M-R-K-H, mal disveloppamento del systema de Müller characterisate per le absentia congenital del vagina, non es un causa commun de amenorrhea primari. Septe (7) patientes del Westchester County Medical Center e del Hospital St. Luke Medical Center es discutite. Le antecedentes historic, le presentation clinic e le etiologia e tractamento es revistite.

Hariprasad, M. K., Reddy, K., Paul, P. K., Eisinger, R. P., e Raju, G. S.: Ultrafiltration del liquido ascitic; tractamento del cardiomyopathia congestive intractabile, **New York State J. Med.** 82: 28 (Januario) 1982.

Le liquido ascitic esseva dialisate, ultrafiltrate e retornate al abdomen in un patiente uremic e cirrhotic, con cardiomyopathia congestive grave. Esseva observate melioramento del performantia cardiac.

Translated by Eduardo I. Juliet, M.D.

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Medical News

Homebound patients at risk for scurvy

A recurrence of scurvy, a disease thought to have been wiped out in the United States, prompted New York physician Victor Herbert, M.D., J.D., to question the methods physicians use to determine the dietary habits of their homebound patients.

In a letter to the Journal of the American Medical Association, November 13, Herbert cites the case of a man exhibiting symptoms of scurvy, a disease caused by severe vitamin C deficiency due to poor diet or alcoholism. Hospital staff members noted only that the patient was not an alcoholic and "ate well" before asking Herbert to examine him.

Through questioning Herbert discovered that the man, jobless and without a working refrigerator, subsisted on coffee and one daily meal of rice and canned sardines in tomato sauce. The vitamin C in the tomato sauce should have been sufficient to prevent the development of scurvy. On further investigation, however, Herbert found that the food mixture was boiled, effectively destroying most of the vitamin C content.

"This case of scurvy illustrates both the basics of sound nutrition and the value of an adequate dietary history," Herbert writes. He urges physicians to establish an accurate history, including the methods by which food is prepared, before making any firm diagnosis.

The advice is particularly appropriate for physicians who care for homebound elderly, disabled or mentally ill patients; alcoholic patients; and patients whose economic circumstances render them unable to purchase or store fresh produce regularly.

Students will move where the jobs are

Almost 70 percent of NSNA (National Student Nurses' Association) members who attended the 1981 NSNA convention and participated in a market research project study, will begin practice in a hospital other than where they received their clinical training. Of that group, over 80 percent will accept employment in another geographic area of the country.

That could mean even more competition for graduates of nursing schools as the nursing shortage tightens its grip on the nation's hospitals. Over 85 percent of students responding to the survey intend to find employment in hospitals when they enter practice.

A small metropolitan location was the choice of 53.81 percent of the respondents; while 24.76 preferred to work in a rural suburban community and 21.43 in a large metropolitan area.

The survey also indicated that 78.54 percent intend to enter practice but work toward a degree as time permits. Over 93 percent intend to specialize after graduation.

Material for inclusion in the medical news section must be received eight weeks prior to publication date.

U.S. needs mix of energy sources, AMA panel urges

Utilities and energy-related government agencies should continue to improve nuclear reactor safety and efficiency while exploring competing methods of generating electricity, states a panel of medical radiation experts assembled by the American Medical Association's Council on Scientific Affairs.

The recommendation is one of several made in the panel's 40-page report, *Risks of Nuclear Energy & Low-Level Ionizing Radiation*, published recently by the AMA. The AMA has been studying the health effects of nuclear energy and other energy sources since 1972.

The report was written in response to a resolution adopted by the AMA House of Delegates in July, 1979, directing the AMA "to monitor studies of the inherent safety of nuclear power versus other energy sources . . . and the safe disposal of low-level radioactive wastes" and "to study the potential risks of exposure to low-level radiation." The report was approved by the House of Delegates in June, 1981.

Information contained in the report will be especially helpful to nonradiological physicians, but it is also intended to fulfill the public's need for a brief and objective, review of nuclear energy risks and safety.

The report tells how a nuclear power plant generates electricity and explains the construction techniques and devices used to prevent the escape of radioactivity. In addition, it describes forms of radioactive waste, including mine tailings remaining after uranium is chemically extracted from low-grade ore; high-level wastes, which require more than 1,000 years to decay to a stable, nonhazardous condition; and low-level wastes, such as clothing, solutions, and other materials that are contaminated with small amounts of radioactivity.

The report reviews on-the-job exposure to ionizing radiation in a variety of occupations and presents statistics on average exposures to radiation and on associated health risks, including cancer and genetic damage.

The report's concluding sections deal with analyses of accidents at nuclear power reactors around the country; federal, state, and local responsibilities in disaster planning; public perceptions of the risks of nuclear energy; and benefit/risk relationships among alternate sources of energy.

The following are selected from the panel's recommendations:

- While it is not known whether uranium mine tailings have had any adverse health effects on exposed populations, the tailings should be buried or otherwise covered.
- There should be acceleration of pilot projects to evaluate techniques for the disposal of high-level radioactive wastes from nuclear reactors. Major possibilities include burial in deep salt caverns, into or onto

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Medical Meetings

Postgraduate course

"Advances in Asthma, Allergy, and Clinical Immunology," a postgraduate course, will be held on Friday, January 29, 9:30 a.m. to 3:30 p.m., at the Podell Auditorium, Beth Israel Medical Center, 10 Nathan D. Perlman Place, New York, New York 10003.

James M. Rubin, M.D., and Stuart Young, M.D., are the course directors and faculty.

Internal medicine board review

The New York University Medical Center and The Department of Medicine are offering Internal Medicine Board Review which began January 6 and will continue through June 23 (no session April 7). The sessions will be held Wednesdays, 4:00 p.m. to 7 p.m.

For information call or write: NYU Post-Graduate Medical School, First Avenue, New York, New York 10016; telephone: (212) 340-5295 (24-hour telephone).

Recent developments in the study of childhood and adolescent depression

The Department of Psychiatry, Long Island Jewish-Hillside Medical Center, The Postgraduate Institute for Medical and Dental Education, and the Health Sciences Center, SUNY at Stony Brook, is presenting a course on "Recent Developments in the Study of Childhood and Adolescent Depression" on Friday, February 5, 8:15 a.m. to 5:00 p.m., at the Warwick Hotel, 54th Street and Sixth Avenue, New York City. Stuart L. Kaplan, M.D., Director, Child and Adolescent Psychiatry, The Department of Psychiatry, Long Island Jewish-Hillside Medical Center is the program chairman.

This continuing medical education offering meets the criteria for 7 hours credit in Category 1 from the LCCME and from the Physician's Recognition Award of the American Medical Association and applies toward the American Psychiatric Association requirements.

For further information contact: Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, New Hyde Park, New York 11042.

1982 Regional CME meetings of the American College of Physicians

On February 25 a regional CME meeting will be held in New York City at The Roosevelt Hotel for New York (Downstate I and II). For information; Fenton Schaffner, M.D., F.A.C.P., The Mount Sinai Hospital, New York, New York 10029.

"Advances in Pulmonary Medicine" will be presented May 2 to 6 and on May 12 to 14 "The Clinical Pharmacology of Symptom Control." For information about these two presentations: Registrar, American College of Physicians, 4200 Pine Street, Philadelphia, Pennsylvania 19104; or telephone (215) 243-1200, Mark Christmyer, Manager, Division of Public and Professional Communications.

Sixth annual weekend symposium on Diagnostic Ultrasound

Downstate Medical Center, Department of Radiology, is presenting the Sixth Annual Spring Weekend Symposium on Diagnostic Ultrasound on April 16, 17, and 18, 1982, at the New York Sheraton Hotel, New York City. Recognized leaders in the field of diagnostic ultrasound will present established and innovative techniques in abdominal, obstetrical, and gynecological ultrasound. The areas of the breast, thyroid, and scrotum will be discussed. The program will emphasize material of clinical significance including interpretive criteria and the comparative value of the different imaging modalities.

Category I credit, 16 hours, ACOG cognates and ASRT credit are available.

For further information contact the Department of Radiology, State University of New York, Downstate Medical Center, Box #1192, 450 Clarkson Avenue, Brooklyn, New York 11203. Phone (212) 735-2043.

Board review in physical medicine and rehabilitation

NYU Medical Center and The Department of Rehabilitation Medicine is presenting a Board review in Physical Medicine and Rehabilitation, Monday through Saturday, April 19 to 24.

Category I credits (AMA) 41 will be awarded.

For information call or write: NYU Post-Graduate Medical School, 550 First Avenue, New York, New York 10016; telephone: (212) 340-5295.

Modern trends in psychiatry

Sessions on "Modern Trends in Psychiatry" will be held on February 9 at which the subject to be presented will be: "Psychotherapy: Some Observations and Techniques," by Irving J. Farber, M.D.; and on April 27: "Doctor-Patient Relationship-Management of Anxiety and Depressive Disorders," by Gerald Freiman, M.D., 8:30 to 10:00 p.m.

The February 9 session will be held at Hillside Hospital and the April 27 will meet at Queens County Medical Society.

These programs are sponsored by the Queens County Psychiatric Society (District Branch of the American Psychiatric Association), the Department of Psychiatry, Long Island Jewish-Hillside Medical Center, and Creedmoor Psychiatric Center.

Material for inclusion in the medical meetings section must be received eight weeks prior to publication date.

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There is also a problem of supply and demand. The technique which he is describing would require a continuous source of amniotic membranes and a large sudden supply when a major excision would be required. The techniques which I outlined for the preservation of human allograft are now those which have been adopted by the American Association of Tissue Banks as guidelines for the use in establishing homograft banks. These techniques will guarantee viability of homograft and allow for the increasing stockpiling of a continuous adequate source.

Dr. Scheiber is correct in that amniotic membrane as a biological dressing should have been included for completion; however, the current state of the art would suggest that if one is to use biological dressings, one requires essentially two types. The first type is homograft skin, preferably cryopreserved to assure its viability. The second type of biological dressing would be pigskin in a wide variety of preparations, all of which seem to be adequate.

I do appreciate Dr. Scheiber's comments but for the individual who is treating a large number of burns who would like to develop a biological dressing portion to his treatment modalities, I would strongly recommend that he do the following. First, make contact with the nearest regional skin bank. Arrange to have made available the supplies of homograft skin that would be required. Second, arrange to have pigskin available from the various commercial companies when he requires it. As we all await the development of a synthetic skin, these two types of dressings will satisfy all of the burn units' requirements. Extensive efforts in arranging the logistics of collecting amniotic membrane, assuring its sterility, packaging it, and storing it as outlined by Dr. Scheiber would, in fact, offer no advantage over having available a homograft source and a pigskin source.

I sincerely thank you for the opportunity to have reviewed this letter by Dr. Scheiber.

ARNOLD LUTERMAN, M.D., F.A.C.S., F.R.C.S.
Associate Professor of Surgery
Director of Trauma Services
University of South Alabama
College of Medicine
2451 Fillingim Street
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Editorial

"Look alikes"

Physicians in New York State and across the nation are being caught off guard these days by a thriving business, the sale of controlled substance "look alikes."

These "look alikes" are replicas of frequently prescribed drugs. But "look alikes" contain only noncontrolled substances. Their manufacturers label them appropriately as cold pills, sleeping aids, and so forth. But, when they are resold, "out of their original containers" (on the streets, near schools, or at rock concerts) the sellers infer that they are the real thing *and* demand the price of the legitimate controlled substance. Our patients, even our children, are being duped.

No buyer of these "look alike" drugs can be certain what he has bought. The Food and Drug Administration admits its powerlessness, and has suggested that individual states pass laws to control the manufacture, distribution, and sale of counterfeit controlled substances. New York State has no such law.

The chairman of the MSSNY Committee on Drug Abuse, Ronald J. Dougherty, M.D., has addressed this serious, *and growing*, problem in an article in this issue of the Journal.

Physicians will be alerted to its implications by reading the article.

G.J.L.

The Mystery of the Unknown

I often wonder what I was
Long before I was born.
A molecule floating in space?
Or a cloud of dust by winds torn?
A being in a galaxy above?
Or on this planet a sparrow or a dove?
A prince of a mighty land?
A speck of dust or a grain of sand?

The real truth will never be known.
For whence we come and whither we go,
No mortal man will ever know.
When all the mountains will melt like snow
And all water vanish from the land.
The real truth will be hidden
Behind a tiny grain of sand.

Alexander Krasnitz, M.D.
Roman Gardens B-45
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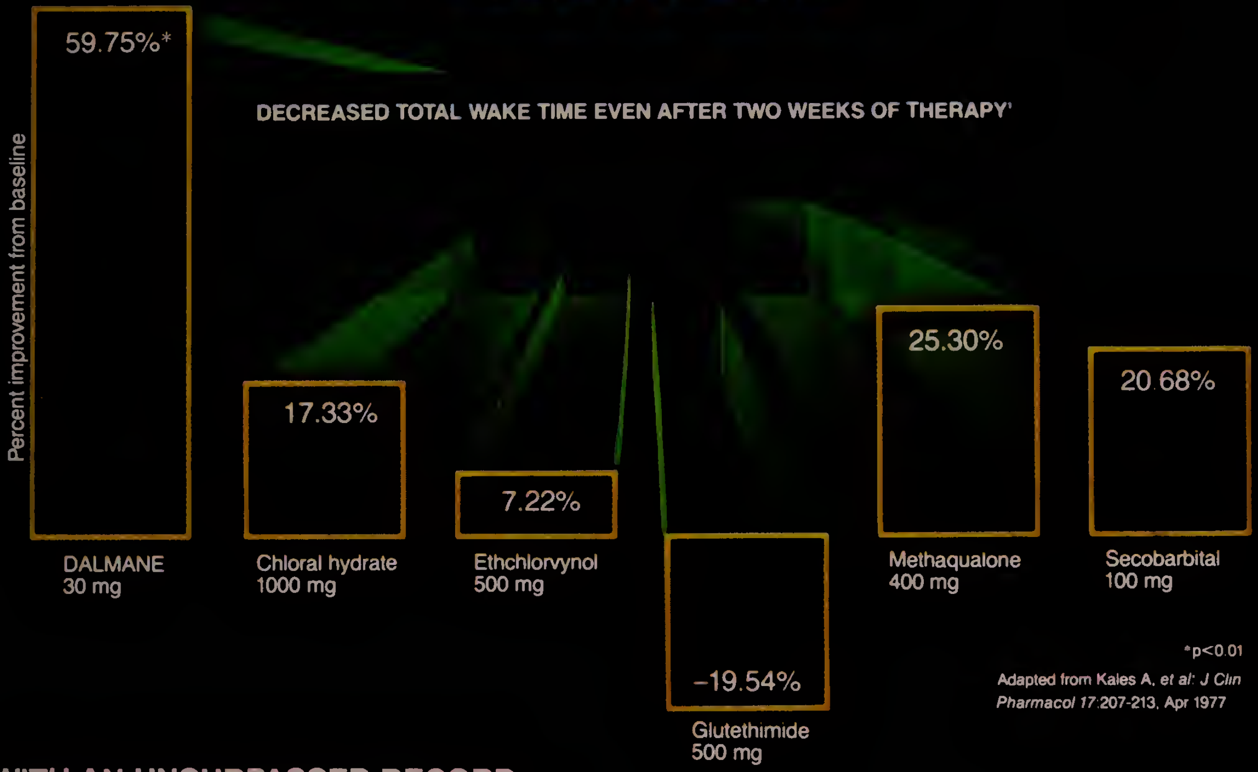
Newburgh, N.Y. 12550

EFFECTIVE ALL NIGHT



DECREASED TOTAL WAKE TIME EVEN AFTER TWO WEEKS OF THERAPY[1]

*$p<0.01$

Adapted from Kales A, *et al*: *J Clin Pharmacol* 17:207-213, Apr 1977

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The efficacy of Dalmane (flurazepam HCl/Roche) has been documented in 185 studies involving 9141 patients suffering from one or more of the three major forms of insomnia–difficulty falling asleep, staying asleep and sleeping long enough.[2]

Relative safety was demonstrated in a large study of 2542 hospitalized medical patients. Only 3.1% of these patients reported adverse reactions–predominantly unwanted residual drowsiness. None of the reactions were considered serious by attending physicians.[3]

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Should insomnia recur, the patient may require guidance in setting up a regular sleep program to help provide the optimum environment for the onset of natural sleep. If hypnotic therapy is required, it should be given for the shortest time at the lowest effective dose to achieve the desired goal.

Consider other medications the patient may be taking (including alcoholic beverages) and be aware of possible drug interactions. Please note that patients should be treated for underlying physical or psychological factors before therapy with a sleep medication is undertaken.

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(15 mg may suffice in some patients)

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- No chemical interference with many commonly ordered laboratory tests, including triglycerides, uric acid, glucose, SGOT, alkaline phosphatase and total protein[5,6] (See adverse reactions section of complete product information.)
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–which are *not* sleep specific,[9] yet are sometimes used in nondepressed patients for sleep

–which can cause transient insomnia in the elderly[10]

–which can require careful monitoring in cardiovascular patients[10]

–which have strong anticholinergic effects[10]

Antihistamines

–which are *not* reliable sleep-inducing agents[11]

–which may produce stimulation instead[11]

–which have anticholinergic effects[11]

Major tranquilizers

–whose side effects may be troublesome for nonpsychotic patients[12]

–where tolerance for sedation appears rapidly[12]

Dalmane does not cause significant worsening of sleep beyond baseline levels upon discontinuation.[4]

References: 1. Kales A *et al*: *J Clin Pharmacol 17*:207-213, Apr 1977 **2.** Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **3.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977 **4.** Kales A, *et al*: *Clin Pharmacol Ther 18*:356-363, Sep 1975 **5.** Moore JD, Weissman L: *J Clin Pharmacol 16*:241-244, May-Jun 1976 **6.** Spiegel HE: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **7.** Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, pp 641-646 **8.** Warfarin Study: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ **9.** Baldessarini RJ: Drugs and the treatment of psychiatric disorders, chap. 19, in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6. New York, Macmillan Publishing Co Inc., 1980, pp. 391-447 **10.** Cole JO, Davis JM: Antidepressant drugs, chap 31.2, in *Comprehensive Textbook of Psychiatry II*, edited by Freedman AM, Kaplan HI, Sadock BJ, ed 2. Baltimore, The Williams & Wilkins Company, vol 2, 1976, pp. 1941-1956 **11.** Douglas WW: Histamine and 5-hydroxytryptamine (serotonin) and their antagonists, chap 26, in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6. New York, Macmillan Publishing Co Inc., 1980, pp. 609-646 **12.** Davis JM, Cole JO: Antipsychotic drugs, chap 31.1, in *Comprehensive Textbook of Psychiatry II*, edited by Freedman AM, Kaplan HI, Sadock BJ, ed 2. Baltimore, The Williams & Wilkins Company, vol 2, 1976, pp 1921-1940

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect.
Adults: 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients*: 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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Argon Laser Treatment of the Glaucomas

MORRIS A. SHAMAH, M.D.[a]
Brooklyn, New York
ARNOLD J. STEIN, B.S.[b]
Brooklyn, New York

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[b] Medical student, class of 1982, State University of New York Downstate Medical Center.

Argon laser photocoagulation of selected areas of the anterior segment is revolutionizing the treatment of the glaucomas. We present our experience with use of this modality in creating peripheral iridectomies for primary narrow-angle glaucoma, for breaking aphakic pupillary block, and for treating secondary angle-closure glaucoma. Also presented are cases of rubeosis irides in which photocoagulation is used to prevent development of neovascular glaucoma. Laser gonio-photocoagulation in chronic open-angle glaucoma shows that the argon laser can also be used to lower the intraocular pressures in these patients.

The traditional treatment of the glaucomas has been supplemented by argon laser photocoagulation of selected areas of the anterior segment. The greatest experience with this modality has been with creating peripheral iridectomies in patients with the narrow-angle glaucomas.[1,2] Additionally, neovascular glaucoma,[3] pupillary block glaucoma,[4] secondary angle-closure glaucoma,[5,6] incomplete surgical iridectomies, and malignant glaucoma have also been successfully treated with argon laser photocoagulation. Very recent work has shown that photocoagulation can also be used in patients with chronic open-angle glaucoma.[7,8] We present the results of argon laser photocoagulation on all glaucoma patients treated by Dr. Shamah with this modality from September, 1976, to March, 1981. The patients are grouped and discussed according to disease type. Figure 1 shows the anatomy of the eye and the mechanisms of different glaucomas.

Patients and methods

The subjects of this report were drawn from the private ophthalmology practice of Dr. Shamah, and from the glaucoma population of the Brookdale Hospital Medical Center. The study period begins September 9, 1976, and extends until March 3, 1981.

The laser photocoagulation was performed with an argon laser photocoagulator (Coherent Radiation Model 800) attached to a slit lamp (American Optical). A Goldmann gonioscopic lens was used during the first three years of the study and an Abraham lens was used during the last two years. Patients were pretreated with pilocarpine one to two hours prior to treatment. All patients received several drops of topical proparacaine hydrochloride 0.5 percent. No patients were given retrobulbar anesthesia. Most patients were instructed to use a topical steroid drop for one to two weeks after the treatment. Treated patients are divided into five categories.

Group I: primary angle-closure glaucoma. This category included patients with chronic, subacute, and acute narrow-angle glaucoma, who required an iridectomy, as well as patients who required a prophylactic iridectomy in the second eye to prevent primary angle-closure glaucoma. Open-angle glaucoma eyes with coincidental narrow angles (mixed mechanism) are also included in this group. This group included 74 eyes of 49 patients. Five patients were black and 44 were white. Mean age was 69.6 years with a range of 45 to 95. Thirty-eight patients were female and 11 were male. Iris color is presented in Table I. Table II shows diagnostic subtypes in this group. Iridectomies were performed with the following settings: 50-micron spot size, 0.2 second duration exposure time, wattage ranged from 0.2 to 2 watts, number of applications at each separate treatment session ranged from 40 to 258, number of treatment sessions ranged from 1 to 4 (Table III). Total number of applications to achieve patency is presented in Table IV.

Group II: Neovascular glaucoma. Five patients with rubeosis irides were treated for angle neovascularization to prevent development of glaucoma. The rubeosis was caused in two patients by a central retinal artery occlusion, in two patients by a central retinal vein occlusion, and in one patient by diabetes mellitus. One additional patient had congenital trabecular vascularization that was readily

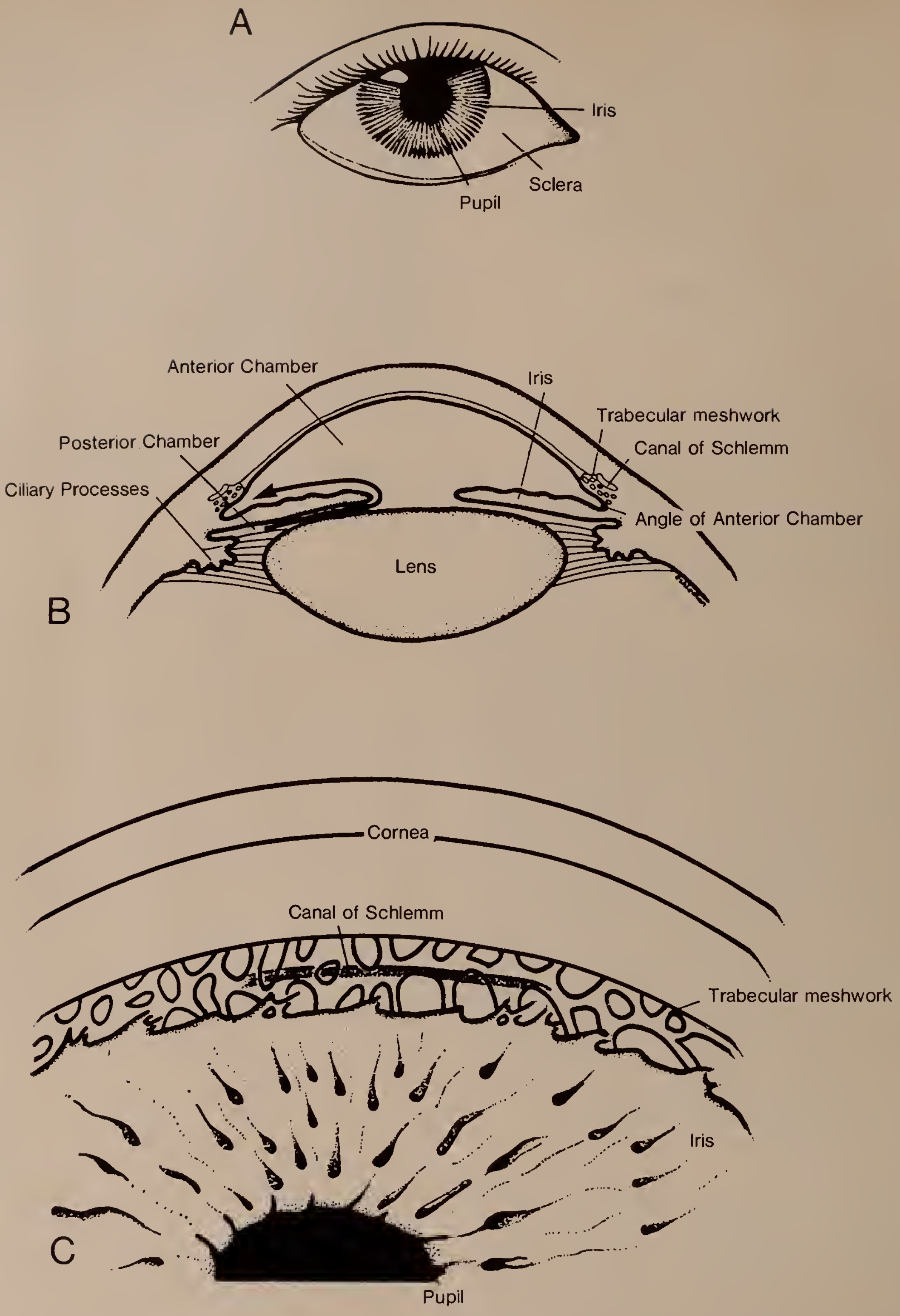

FIGURE 1. (A) Anterior view of eye. (B) In normal anatomy, aqueous, produced by ciliary processes in posterior chamber, flows as shown by arrow into anterior chamber. Here drainage is first through the trabecular meshwork, a sieve-like fibrous area, into Schlemm's canal, then into venous system. Excessive aqueous, as by hypersecretion (rare), increased venous back pressure (rare), or impedance to drainage through trabecular meshwork (most common), will cause elevated intraocular pressure by creating imbalance between secretion and drainage. (C) In chronic open-angle glaucoma, trabecular meshwork and Schlemm's canal (shown in artistic distortion) appear normal by clinical evaluation. Laser photocoagulation to trabecular meshwork will improve drainage of aqueous.

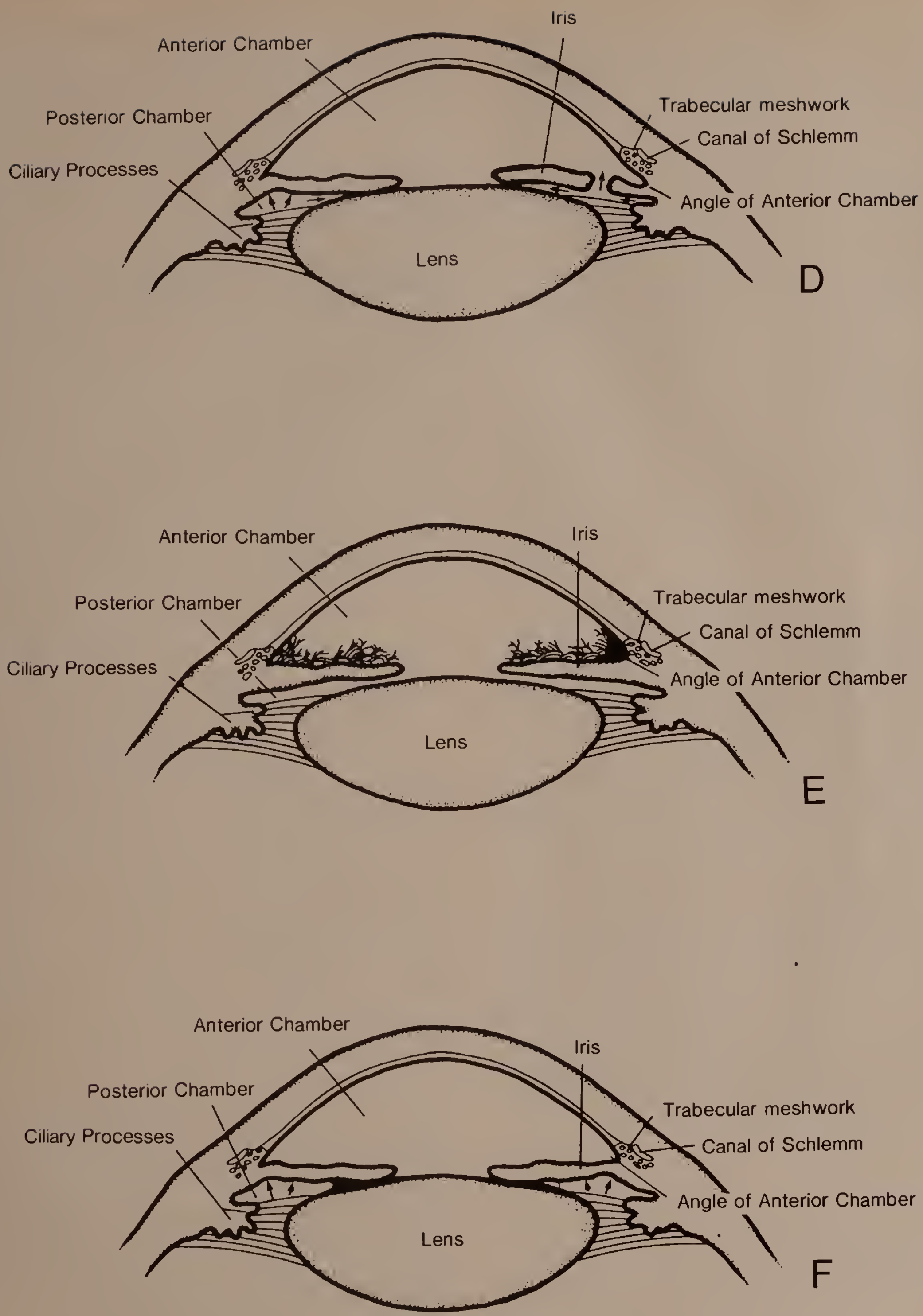

FIGURE 1. (D) In primary angle-closure glaucoma, aqueous flow between posterior and anterior chambers is partially blocked. This is usually caused by abnormal apposition between anterior lens and posterior iris surfaces, causing bowing forward of iris and secondary block to aqueous flow through trabecular meshwork. This relative pupillary block is relieved by surgical or laser iridectomy, shown on right side of illustration. (E) Shows rubeosis irides with exaggerated view of fibrovascular membrane on iris surface and "zippering" of iris base to trabecular meshwork that often occurs. This blocks aqueous outflow and causes neovascular glaucoma. Early laser photocoagulation of the vessels can prevent these adhesions. (F) In secondary angle-closure, iritis causes lens-iris adhesions, blocking flow of aqueous from posterior to anterior chamber. This causes bowing forward (bombé iris) of iris and secondary block to aqueous flow through trabecular meshwork. The block is relieved when aqueous short circuits pupil through iridectomy.

TABLE I. Eye color of patients in group I

Color	Total Number	Number of Failures
Brown	35	2*
Blue	23	4
Hazel	9	0
Not available	7	0
Total	74	6

* One of these two was in a black patient.

TABLE II. Diagnostic subgroups in group I

Diagnosis	Number
Acute angle-closure	8
Subacute angle-closure	12
Chronic angle-closure	27
Prophylactic	10
Mixed mechanism	11
Secondary angle-closure (iritis)	3
Not available	3
Total	74

TABLE III. Number of sittings to patency in group I

Number of Sittings	Number of Patients
1	52
2	8
3	5
4	3
Total	68*

* 68 patent and 6 failures: Total 74.

TABLE IV. Number of applications to patency in group I

Number of Applications	Number of Patients
0 to 49	4
50 to 99	18
100 to 149	16
150 to 199	7
200 to 249	4
250 to 299	1
300 to 349	1
350 to 399	2
400 to 449	2
450 to 499	2
500 to 549	0
550 to 600	2
Not available	9
Total	68*

* 68 patent and 6 failures: Total 74.

TABLE V. Number of applications to patency: subgroup of last 25 eyes treated

Number of Applications	Number of Patients
0 to 49	2
50 to 99	12
100 to 149	9
150 to 199	0
200 to 249	1
Greater than 249	0
Total	24*

* 24 patent and 1 failure: Total 25.

eradicated with photocoagulation to facilitate a filtering procedure.

Group III: Aphakic pupillary block glaucoma. Three patients were treated for aphakic pupillary block developing soon after cataract extraction by attempting to create an iridectomy.

Group IV: secondary angle-closure glaucoma. Three eyes in three patients were treated for iris bombé caused by iris-lens adhesions secondary to iritis. This group is a subgroup of group I and is also included in that tally.

Group V: chronic open-angle glaucoma. This group consists of five eyes in five patients with chronic open-angle glaucoma that did not achieve adequate pressure control despite maximal tolerated medical therapy. Each received 75 to 100 moderate-intensity burns to the anterior half of the trabecular meshwork covering an area of 270 to 360 degrees of the trabecular meshwork at 0.1 second, 0.8 to 1.4 watts, and 50-micron spot settings.

Results

Group I. Photocoagulation successfully created a patent iridectomy in 68 of the 74 eyes treated that had primary angle-closure glaucoma. Of the six failures, four were in blue eyes, one was in a black patient's eye, and one in a brown eye. Note that four eyes of four black patients were successfully treated. The number of sittings needed to achieve patency is shown in Table III. The number of applications needed to achieve patency is shown in Table IV.

Selective analysis of a subgroup of the last 25 eyes treated shows a marked difference from the overall group, with 1 failure in 25 attempts. Twenty-two patients required one sitting and two required two sittings. The number of applications is shown in Table V.

After achieving patency, 31 eyes were subjected to a tropicamide 1 percent provocative test. Four eyes showed a significant (greater than 7 mm.) rise in intraocular pressure. In none of these did the gonioscopic appearance of the angle show any increased closure after dilatation as compared to the predilatation appearance. The dilatation provocative test was repeated in these 4 eyes, using phenylephrine 2.5 percent, and in no case was there a significant rise in intraocular pressure.

In the patients studied, 34 showed no visual loss after treatment, 2 showed a mild visual loss of 2 to 5 lines, and one showed a severe loss of greater than 5 lines. All visual losses were due to cataract progression.

Group II. Significant eradication of new blood vessels in the angle of the anterior chamber was achieved in three patients out of a total of five with neovascular glaucoma. Two patients were unsuccessfully treated. In these patients, therapy was initiated too late in the course of the disease. In one patient with central retinal artery occlusion, photocoagulation successfully eradicated the neovascularization of the trabecular meshwork. This was followed in several months by development of 360 degrees peripheral anterior synechiae. Intraocular pressure, however, remained minimally elevated. One additional patient had marked congenital vascularization of the trabecular meshwork area; in order to perform a trabeculectomy operation, the vessels were photocoagulated successfully.

Group III. Of the three patients with aphakic pupillary block glaucoma, one case was a definite success. One black patient with a fully dilated pupil at the time of treatment was a failure; no iridectomy was created. One patient had an iris plane Copeland implant with pupillary block. Treatment created one iridectomy and relieved the iris bombé inferiorly. The patient was then lost to follow-up, and planned further laser therapy was therefore not performed.

Group IV. In all patients with secondary angle-closure glaucoma, pressure was reduced to limits that were considered safe, and surgery was not necesary.

Group V. In all patients with chronic open-angle glaucoma, pressure was reduced to limits that were considered safe, and surgery was not necessary.

Comment

Angle-closure glaucoma is caused by a relative block of aqueous flow at the area where the posterior mid-iris surface is in contact with the posterior anterior lens surface, as shown by Barkan[9] and others. The traditional cure of this problem has been a surgical iridectomy. We and others have shown that this surgical procedure can often be replaced with a laser iridectomy which significantly reduces the morbidity of the procedure.

The complications of surgical iridectomy are many: hemorrhage, endophthalmitis, cataract formation, malignant glaucoma, refractive changes, and anesthetic complications are all possible. Most of these rarely occur with a laser iridectomy. In our cases, hemorrhage was never seen. Indeed, if it were, a few low-energy broad spots would coagulate the bleeding site. The globe is not entered with this procedure, therefore, endophthalmitis is not possible. Malignant glaucoma, a dreaded complication of surgical iridectomies or filtering procedures in eyes with narrow angles, has not been reported following laser iridectomies, and we have not seen it in our cases. The only anesthesia used in this procedure is topical proparacaine or tetracaine, so the many effects and complications of general and local anesthesia with or without sedation are entirely avoided. In our cases, one patient found the procedure quite painful and a few commented that the applications felt rather sharp. In general, though, most patients felt that the laser treatment was only mildly uncomfortable. Retrobulbar anesthesia was not found to be necessary as most patients could maintain fixation on a given target and the contact lens aided in fixing the eye. Refractive changes are often found after a surgical iridectomy, because of the change in tension at the limbus due to the necessary incision and sutures. This is not a factor in the laser iridectomy. Cataract formation is discussed below.

Hence, one has eliminated many of the complications of a surgical iridectomy, but, has one successfully eliminated the pathophysiologic anatomic cause of angle-closure glaucoma by performing a laser iridectomy, and are there any limiting factors or complications in this procedure? Is the procedure dependable and reliable?

The procedure is not difficult to master. With experience, we have found that most patients require but a brief session as an outpatient at a modified slit lamp. In the earlier cases, the majority of patients required more than one sitting, but with increasing experience, one session is usually adequate.

The number of applications required per session has also been reduced dramatically with experience.

Is this a dependable procedure? We have found that over 90 percent of all patients treated and 24 of the last 25 patients treated have achieved patent iridectomies.

Surgical iridectomy will relieve a relative pupillary block. Does a laser iridectomy do the same? We have not had any patients go on to develop an acute angle-closure glaucoma attack with a patent peripheral iridectomy. Also, provocative testing has been negative in all patients tested. Although several patients with patent laser iridectomies have had a rise in intraocular pressure after tropicamide 1 percent dilatation, the gonioscopic appearance of the angle did not show increased closure and there was no significant rise when provoked with phenylephrine.

What are the possible complications of laser photocoagulation of the anterior segment?

One important concern during the photocoagulation procedure is that the fovea might be coagulated inadvertently. This complication did not occur in any of our cases. One must always be alert as to the patient's fixation and position of the aiming beam to avoid this problem.

Cataract formation has been reported to be the most significant long- term complication of the procedure.[10] In our series it has been found to be a problem in only a few cases followed from two months to five years. Small localized opacities did develop in many patients, but these are benign and not progressive. A large number of cases must be followed over a rather long period of time to determine whether cataract formation is truly a significant complication or not. Indeed, Quigley[10] has shown a 13 percent incidence in his patients that developed some loss of vision secondary to cataract. This contrasts with a 28 percent cataract incidence in a surgical iridectomy series.[11]

Transient corneal burns, mild transient iritis, and pupillary distortion all occur occasionally but have not proved to be significant problems.

Four eyes with patent iridectomies developed pigment proliferation that bridged the coloboma and closed the iridectomies. These cases were retreated with only a few laser applications and did not close again.

Generally, it is felt that if closure does not occur within the first six weeks after iridectomy, it will not occur.

Several patients were noted to have rather small but patent iridectomies. These were retreated with only a few applications to enlarge the iridectomy.

In view of the above, the laser iridectomy is indicated when a traditional surgical iridectomy would have been required. It is a safe, simple, effective procedure that eliminates many of the problems of a surgical procedure. In some cases with hazy corneas or an iris that appears extremely thick, we feel that surgical iridectomies might be indicated.

Aphakic pupillary block is seen occasionally following cataract extraction: here the vitreous occludes the pupil and the iridectomy made at the time of cataract surgery. This blocks the flow of aqueous into the anterior chamber leading to an increase in intraocular pressure. The treatment of this complication is first medical and if unsuccessful, a laser iridectomy can be performed. Three of our patients with this complication who did not respond to medical therapy were treated with laser iridectomies with moderate success. It should be attempted in all cases prior to surgery.

Neovascular glaucoma exists in eyes that have a fibrovascular membrane on the iris surface, usually after central retinal vein or artery occlusion or diabetes mellitus. This membrane usually contracts with subsequent adhesion of the iris to the trabecular meshwork area, resulting in intractable glaucoma. By obliterating the vessels on the trabecular meshwork prior to its adhesion to the iris, one can eliminate the subsequent glaucoma in many cases. Simmons et al.[3] have discussed this procedure at length. We have found that if coagulated early, the disease can be arrested. In some cases, retinal photocoagulation or a combination of the two is indicated.

We have treated chronic open-angle glaucoma with photocoagulation to the anterior trabecular meshwork. This was performed on patients whose intraocular pressures were at unsafe levels despite maximal tolerated medical therapy. In each case, intraocular pressure was lowered to a point that was considered safe. Our follow-up period is brief and we can only regard this as a pilot study. Others, however, have done extensive work in this area and have shown the results to be equally good with a much longer follow-up period.[7,8] The mechanism of action of this treatment is not proved to date. This area is certainly exciting and we feel that argon laser photocoagulation will probably become a routine mode of treatment for chronic open-angle glaucoma.

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Mayer-Rokitansky-Küster-Hauser Syndrome

Congenital absence of vagina

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MRKH (Mayer-Rokitansky-Küster-Hauser) syndrome, a Müllerian system maldevelopment characterized by congenital absence of the vagina, is not an uncommon cause of primary amenorrhea. Seven patients from Westchester County Medical Center and St. Luke's Medical Center are described. Historical background, clinical presentation, etiology, and treatment are reviewed.

Congenital absence of the vagina was first mentioned by Avicenna (980 to 1026 A.D.). Subsequent reports were made by Albucasis (1013 to 1106), Realdus Columbus (1572), and Dupuytren (1817).[1] In 1828, Mayer[2] described autopsy findings in a 53-year-old female with uterus bipartitus, shallow and blind-ending vagina, markedly widened urethral meatus, and normal-appearing tubes and ovaries, a case which appears to fulfill the criteria of the MRKH (Mayer-Rokitansky-Küster-Hauser) syndrome, as subsequently defined by Hauser. In 1838, Rokitansky[3] described 26 cases involving developmental anomalies of the uterus. Probably one case, and possibly a second case, can be described as belonging to the MRKH syndrome.

Küster[4] in 1910 reported an operative case, 3 autopsy cases, and 41 cases from the literature of Müllerian system maldevelopment. All cases consisted of an anomalous uterus and rudimentary development or lack of vagina while the ovaries were always present. Excision of the anomalous uterus with ovarian preservation was recommended, in contrast to previous practice which consisted of castration.

The condition today known as the MRKH syndrome was defined by Hauser[5] in 1961 as consisting of the following components:

1. Aplasia of the vagina with normal vulva.
2. Normal female secondary sex characteristics.
3. Duplication anomaly of the uterus (as a rule without lumen).
4. Attenuated fallopian tubes.
5. Normal ovaries.
6. Normal female karyotype.
7. Frequent association with other anomalies, most commonly, renal and skeletal anomalies.

The incidence of congenital absence of the vagina varies from 1 in 4,000 to 1 in 5,000 female births.[6,7] Within a three-year period, seven patients with MRKH syndrome appeared at Westchester County Medical and St. Luke's Hospital Center. A summary of the findings in these cases is presented in Table I.

Comment

All seven patients fulfilled Hauser's criteria defining the MRKH syndrome. Primary amenorrhea, infertility, and inability to have intercourse were the common presenting complaints. Cyclic abdominal pain, suggesting the presence of an endometrial cavity, was not described by any of the patients. No familial history of similar complaints was given by the patients or families. Although the great majority of cases of the MRKH syndrome are sporadic, probably due to gene mutation, familial incidence has been reported.[8,9] Height and secondary sex characteristics were normal in all patients; a blind vaginal pouch, of variable depth, was present in all. Inguinal hernia, which has an incidence of 7 percent in the syndrome,[10] was found in one of our patients.

The evaluation of patients with MRKH syndrome should include a karyotype, as cases of XX/XO mosaicism have been reported,[11,12] and, more important, to rule out testicular feminization syndrome. A normal female karyotype was present in all of our patients.

Diagnostic laparoscopy was performed in six patients with good visualization of the pelvic organs. Normal ovaries were present in all except one patient who had unilateral ovarian agenesis, an unusual association with the MRKH syndrome. Variable amounts of fallopian tubes were found, with medial aspects joining fibromuscular uterine buds by a fi-

TABLE I. Summary of findings of seven patients with MRKH syndrome

Age (Years)	Complaint	Pelvic Findings	Laparoscopy Findings	Urinary Tract Anomalies	Skeletal Anomalies	Treatment Follow-up
32	Infertility; primary amenorrhea	Blind 7 cm. vagina	Normal ovaries; tubes ending medially in fibromuscular buds	None	None	Adequate intercourse
19	Inability to have intercourse; primary amenorrhea	Vaginal dimple 2 cm.; pelvic kidney palpable	Normal ovaries and distal tubes; medial fibrous band	Right pelvic kidney; left renal agenesis	Fusion anomalies C_5–T_1	Frank's dilators–poor result; Williams' procedure–adequate intercourse
17	Primary amenorrhea	Blind vagina with longitudinal septum	Normal ovaries and tubes; tubes ending medially in fibromuscular buds	None	None	Resection vaginal septum
17	Primary amenorrhea	Vaginal dimple 2 cm.	Left ovarian agenesis; normal right ovary and distal 1/3 of tubes; uterus absent	Left pelvic kidney; rotation anomaly right kidney	Spina bifida occulta lower lumbar spine	Not desired by patient at this time
15	Primary amenorrhea	Absent vagina; left inguinal hernia	Normal right ovary and distal tube; left ovary in inguinal canal; uterus absent	Left pelvic kidney; rotation anomaly right kidney	Multiple fusion anomalies of cervical and upper thoracic spine; spina bifida sacral spine	Repair of inguinal hernia, Williams' procedure; Frank's dilators
17	Primary amenorrhea	Vaginal dimple	Normal ovaries and distal 1/3 of tubes; corpus luteum cyst right ovary; uterus absent	Mild obstruction upper pole of right kidney	None	Not desired by patient at present
24	Primary amenorrhea	Vaginal pouch	Refused	None	None	Adequate intercourse

brous band. Although laparoscopy was performed in all patients, it did not add further useful information to the management of the patients. Even if a uterine remnant is present, it usually has no lumen, and therefore is functionless. Laparoscopy is best considered an optional procedure in the patient with MRKH syndrome, except in those cases where cyclic abdominal pain suggests the presence of a functional uterus, when a unification procedure may be attempted.

An intravenous pyelogram is an essential part of the evaluation because of the common association of renal anomalies. Four of the seven patients had renal anomalies. Larger series report an incidence of 34 percent to 36 percent.[10,13] Ectopy, agenesis, malrotation, and malfunction are the more common anomalies. If the patient has a serious anomaly such as a solitary kidney, it is important that both she and her physician be aware of this fact.

Spine films were obtained because of the common association of skeletal anomalies. Three of seven patients had skeletal anomalies. A 12 percent incidence is found in larger series.[10,14] Spinal anomalies including scoliosis, spina bifida, fusion anomalies, failure of segmentation, and also limb and rib anomalies are encountered.

In those patients who have a history of normal sexual development and normal secondary sex characteristics on physical examination, endocrinologic testing for gonadotropin and estrogen levels adds little to the understanding or the management of the patient. A basal body temperature chart showing a biphasic pattern is probably all that is necessary to assure both physician and patient of normal ovarian function.

Embryology

To understand the embryogenesis of the MRKH syndrome, the differential derivation of cephalic and caudal paramesonephric (Müllerian) duct structures must be appreciated (Fig. 1). The cephalic component (fallopian tubes) are derived from coelomic epithelium. The development of the caudal component, the uterus and upper vagina, is dependent on the presence of the mesonephric (Wolffian) duct.[15,16] Subsequent vaginal development requires urogenital sinus epithelium displacing the Müllerian epithelium to the level of the external cervical os.[17]

Since renal structures are derived from the mesonephric duct, a defect in the mesonephros would explain not only the genital findings in MRKH syn-

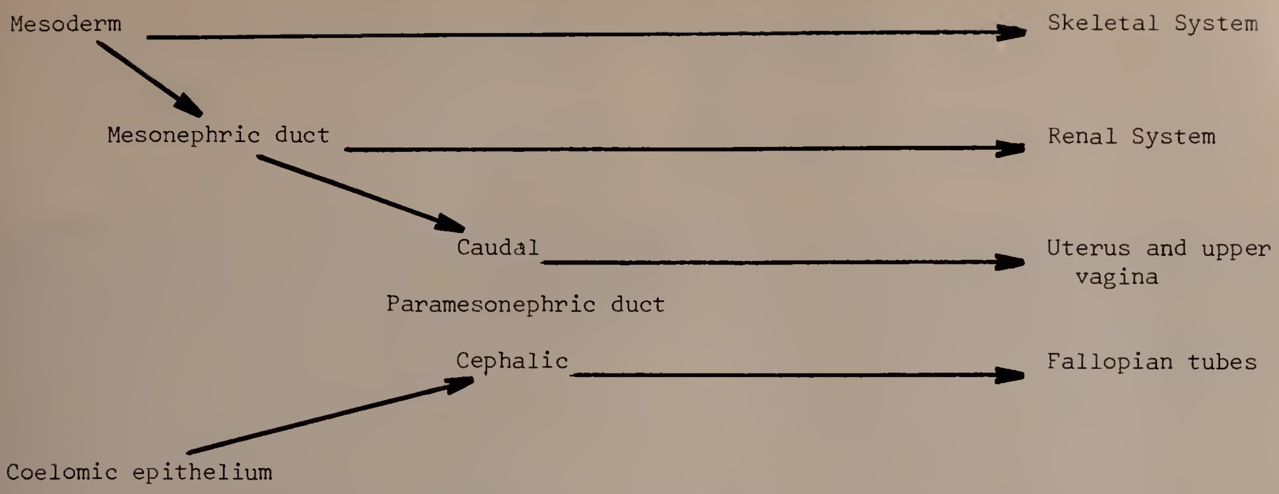

FIGURE 1. Embryogenesis of systems affected by MRKH syndrome.

drome but also the associated renal anomalies.

Associated skeletal anomalies can be explained by the fact that both the mesonephric duct and skeletal structures are derived from mesoderm. At the end of the fourth week of fetal life, a close spatial relationship has been described between mesonephric ducts and blastemas of certain vertebrae.[18] It is possible that a single embryologic insult at that time could explain the genital, renal, and skeletal anomalies seen in MRKH syndrome.

Treatment

Several approaches to the correction of vaginal agenesis have been described. Vaginal reconstructions with ileum and colon have been used but involve the risk of a major bowel operation.[19,20] Attempts at pediculated skin graft have not been successful because of graft necrosis.[21] Dissecting a cavity between the bladder and the rectum and maintaining patency permits reepithelialization over time, but unacceptable scarring results.[22] A better outcome is achieved if a split-thickness skin graft over a mold is inserted into the dissected space to permit epithelialization. McIndoe[23] reviewed his experience of 63 patients with this procedure and reports 89 percent of patients obtained an excellent result. However, two rectovaginal fistulas were created. Cali and Pratt[24] reviewed 123 patients with this procedure: 7 major complications occurred and 10 repeat operations were required. Ninety percent of patients reported good sexual functioning, but 42 percent had vaginal contracture or stenosis.

In 1964, a less invasive procedure was described by Williams[25] in which a new vagina is dissected in the perineum. Immediately post operation, the vaginal pouch is in an almost vertical position, but after repeated dilatation or intercourse a more normal vaginal angle is achieved.

If a vaginal dimple is present, simple pressure, either with dilators or intercourse, can lead to the development of an adequate vagina.[26,27] Excellent cooperation by the patient is necessary.

In our experience, the Williams' procedure offers excellent results without risk of bowel or bladder injury. Pressure dilation either by Frank's dilators or intercourse is most helpful if used in conjunction with this procedure.

In conclusion, the physician caring for the patient with vaginal agenesis must concern himself with the total patient. Early diagnosis, supportive counseling, and optimal timing of correction permit adequate sexual functioning in most patients. However, psychologic effects such as reactive depression and compromised sexual identity and body image have been reported and must be detected.[28,29] In general, the outcome will be good although the unavoidable sterility is a condition which the patient must come to accept.

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Extra vitamins seldom needed

Millions of basically healthy Americans have decided without medical advice that they need to take vitamin pills to supplement the daily diet.

Do these pill-poppers really need additional vitamins?

It is most unlikely, says the August 21 Journal of the American Medical Association.

Now and then one of these self-prescribed vitamin pill devotees will actually go to a physician and ask for tests to determine his or her vitamin status.

What should the physician do?

This question is posed to an internist and a biochemist by the Journal editors.

Unless there are definite physical symptoms indicating possible vitamin deficiency, the physician is usually advised to tell the patient, "Save your money!"

Tests are available to determine vitamin levels in the body. But these levels vary abruptly and widely from day to day, even from hour to hour within a day. A low reading on one test does not necessarily mean there is an underlying deficiency.

In advising physicians on whether to order vitamin level tests in their patients, Kenneth L. Cohen, M.D., an internist with the Yale University School of Medicine, New Haven, Connecticut, writes:

"There are few, if any indications for measuring vitamin levels in basically healthy people or for vitamin supplementation in otherwise healthy persons eating a balanced diet.

"In those situations where supplemental vitamins are frequently recommended, either owing to decreased intake or increased requirement, such as pregnancy, food faddism, or alcoholism, it usually is more practical and less expensive to provide a daily multivitamin tablet than to try to document specific vitamin deficiencies."

The true vitamin deficiency diseases such as scurvy, beriberi and pellegra, are virtually nonexistent in the United States today. When they are found they usually can be traced to gross dietary deficiencies.

Biochemist Myron Brin, Ph.D., of Columbia University, New York City, points out that in this country the usual vitamin problem is one of "marginal deficiency," in which the physical symptoms are vague.

Among the signs of marginal vitamin deficiency are general malaise, reduced appetite, sleepiness, insomnia, irritability and reduced attention span. But all of these conditions can also be due to other causes, and only by carrying out specific vitamin status tests can one determine whether one or more of them is lacking, Dr. Brin says.

Tests for vitamin deficits might be useful in certain at risk population groups, such as elderly individuals with eating habits that provide an unbalanced diet, he adds.

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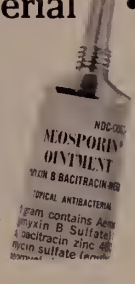

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CONTRAINDICATIONS: Not for use in the eyes or in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

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Ascitic Ultrafiltration

Treatment for intractable congestive cardiomyopathy

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Ascitic fluid was dialyzed, ultrafiltered, and returned to the abdomen of a uremic cirrhotic patient with severe congestive cardiomyopathy. Improved cardiac performance was observed.

Repeated extracorporeal ascitic ultrafiltration was performed using an artificial kidney in a patient with intractable congestive cardiomyopathy. Circulatory overload was corrected, and marked improvement in left ventricular function was documented.

Case report

A 34-year-old man with a history of severe alcoholism was chronically ill with class 4 CHF (congestive heart failure) due to cardiomyopathy and atrial fibrillation. The electrocardiogram showed diffuse S-T segment abnormalities and diminished voltage of QRS complexes. Chest x-ray film before ultrafiltration showed cardiomegaly with increased interstitial markings of the lungs. Ascites remained massive despite therapy with spironolactone, 200 mg. daily, metalozone, 10 mg. daily, and intravenous furosemide, 360 mg. daily. Peritoneovenous shunt (LeVeen) was contemplated but not performed because of poor cardiac status. The patient became uremic, with BUN (blood urea nitrogen)/creatinine levels of 114/3.9 mg. per deciliter, but conventional dialytic therapy was impractical in view of hypotension and massive ascites. Therefore, extracorporeal ascitic dialysis was performed.

Methods and results

A 14-gauge angiocath (Desseret, catalog number 2911, 5¼ inches long with five side holes) was theaded over a guide wire (Cook, Inc. WG 21-78) into the abdomen. Ascitic fluid was drawn by a pump at a rate of 400 ml. per minute, circulated and ultrafiltered in an artificial kidney, and returned to the abdomen. The ultrafiltrate of the ascites was not returned intravenously to avoid the known complication of causing disseminated intravascular clotting. Transmembrane pressure of 300 mm. Hg was achieved using a screw clamp on the return line. This arrangement provided an ultrafiltration rate of at least 25 ml. per minute for four hours.[1,2] Thus, his uremia was controlled.

Subsequently, we undertook extracorporeal ascitic ultrafiltration without the aid of a dialysis machine, using only a dialyzer circuit and a pump. This technique, used weekly, controlled his ascites and CHF by safely removing about 7.2 kg. of fluid per treatment. The dialytic therapy maintained BUN/creatinine levels at about 55/1.8 mg. per deciliter.

M-mode echocardiography indicated improvement in left ventricular systolic and diastolic volume, improved shortening of myocardial fibers, and enhanced ejection fraction (Table I, and Figs. 1 and 2).

Ascitic ultrafiltration also was associated with increased blood pressure, augmentation of urine output from 21 ml. per hour before ultrafiltration to 102 ml. per hour during therapy, and increased creatinine clearance from 1.9 to 8.8 ml. per minute. The patient thus was able to return home with cardiac function now considered class 2.

Comment

Ultrafiltration of ascites provided a method of salt and water removal without loss of protein and without further overloading a congested circulation. Improvement in circulatory efficiency was indicated by increased blood pressure, urine output, and creatinine clearance. The side-effects of diuretic therapy or paracentesis also were avoided.

This technique proved very cost-effective and may also have application in rapid reduction of ascites in nonuremic patients with cirrhosis of the liver or in

TABLE I. Echocardiographic data before and after ascitic ultrafiltration therapy

Time	End-diastolic Diameter (mm.)	End-systolic Diameter (mm.)	Fractional Shortening of Left Ventricle (percent)	Ejection Fraction (Normal >65 percent)
Before ultrafiltration (Body weight 75 kg.)	66	60	9	24
After ultrafiltration (Body weight 53 kg.)	56	43	23	55

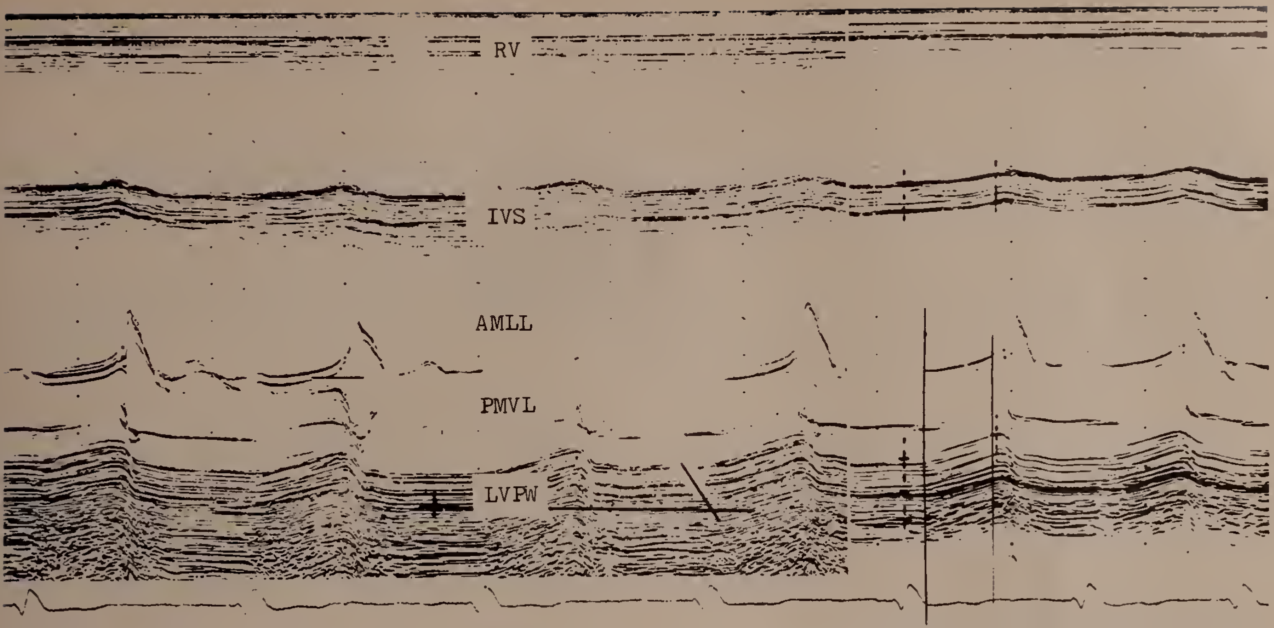

FIGURE 1. Echocardiogram before ascitic ultrafiltration. RV—right ventricle; IVS—interventricular septum; AMLL—anterior mitral valve leaflet; PMVL—posterior mitral valve leaflet; LVPW—left ventricle posterior wall.

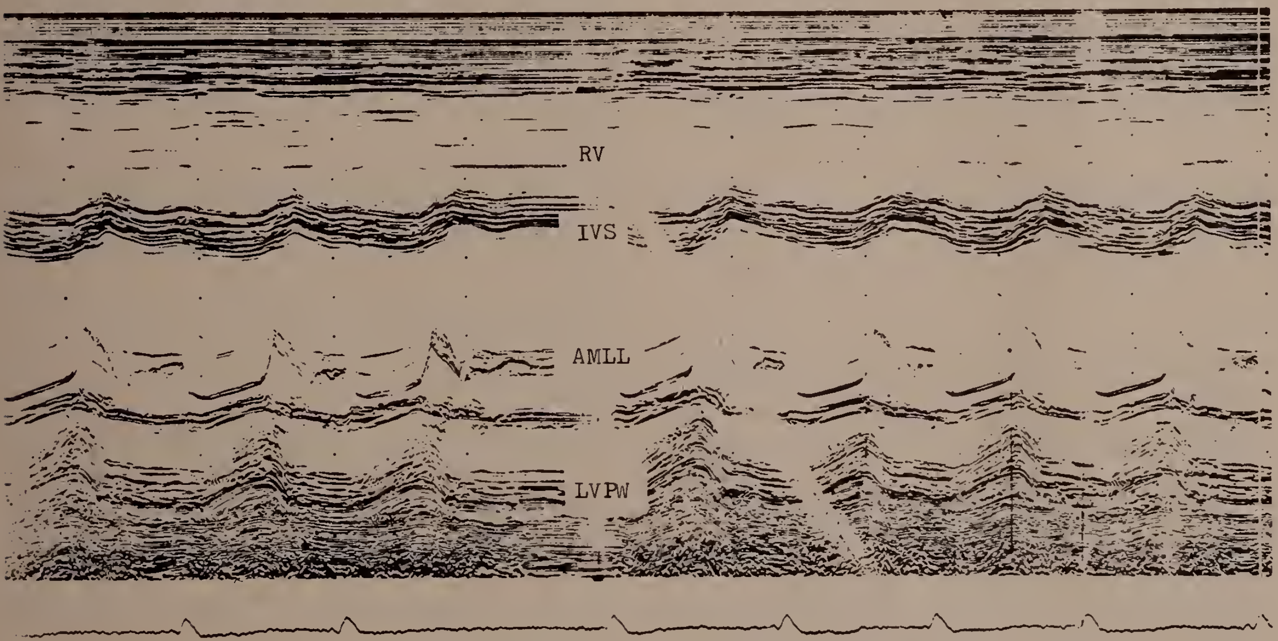

FIGURE 2. Echocardiogram after ascitic ultrafiltration.

other patients with ascites associated with primary cardiac disease.

Summary

Dialysis and ultrafiltration of ascitic fluid were used to treat uremia and intractable ascites in a patient with cardiomyopathy. Improved left ventricular function was observed. This method of management of intractable ascites may also be of help in management of alcoholic cardiomyopathy.

Acknowledgment. The authors wish to thank Spencer Annabel, M.D., Hornell, New York, for his helpful comments.

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SYMPOSIUM

Newer Approaches to Management of Acute and Chronic Pain

Editors Note. Although the New York State Journal of Medicine's editorial policy is not to publish controversial articles or topics, this time we take exception. The authors clearly indicate that the patients were referred and examined by physicians, and had medical treatment prior to attempting the discussed multidisciplinary approaches for rehabilitation and management of pain. Their combined efforts, as well as the efforts of others, indicate that future research needs to be focused and well documented, with further investigation into the factors of personality for successful pain assessment and management.

Cognitive and Behavioral Approaches to Management of Chronic Pain

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In recent years the study of chronic pain, including diagnosis, treatment, and research, has become a multidisciplinary endeavor. Within this multidisciplinary structure, clinical and rehabilitation psychologists have played an increasingly important role. Behavioral and cognitive-behavioral approaches to both assessment and management have figured prominently in comprehensive approaches to pain management. The purpose of this article is to provide an overview of both cognitive and behavioral approaches to chronic pain management.

Behavioral psychology has its foundations in empirical data from the experimental laboratory. While behaviorism is generally held to encompass two broad categories of theory, namely, the classic Pavlovian model and the instrumental operant or Skinnerian model, we are concerned here with the latter. The central premise of operant learning is that any behavior that is reinforced, with a reward will have an increased probability of recurrence given the same or similar antecedent conditions. The applicability of operant theory to chronic pain will be clarified later. Cognitive-behavioral approaches stress the profound effect that thoughts can play in our interpretation and reaction to both bodily and situational cues. Both of these theoretical positions have played an important role in expanding our knowledge of the psychology of chronic pain and, particularly with regard to clinical application, the two areas appear to be moving toward an integration.

Principles of learning are so numerous and complex that their relevance for clinical application is often obfuscated. London[1] has suggested that all of the learning principles can be reduced to one or one and a half concepts: "learning depends on the connections in time, space, and attention between what you do and what happens to you subsequently." In a review of behavioral applications to chronic pain, such a conceptual condensation allows for greater clarity and practicality.

Learning theory

Chronic pain has been defined in a number of ways, such as pain that endures despite appropriate medical and/or surgical treatment, as pain that persists for more than six months, and as pain that is disproportionate to defined tissue damage or pathologic processes. While acute pain usually serves as a signal, usually of a medical or surgical condition in need of immediate and definitive treatment, chronic pain often does not serve such a signal function. Pinsky[2] has noted that invariably the chronic pain patient has an event or illness that fixes the point of pain onset but that such events or illness were either too minor or occurred too long ago to account for the intensity and persistence of the pain complaint. However, in clinical practice, it is

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* By invitation.

important to always regard a complaint of pain as a legitimate communication of distress.[3]

Behavioral psychologists do not address pain per se but refer to pain behavior. Pain behaviors are the overt, observable signs that communicate suffering to an observer. They include verbalizations of pain, nonverbal signs such as grimacing, limping, and guarded movements, as well as visible indications of autonomic arousal such as pallor, perspiration, and increased respiration. Without some form of communication, there cannot be a pain problem from the perspective of the observer.[4,5]

Fordyce et al.,[6,7] a pioneer in applications of operant learning theory to chronic pain, has stated that a chronic pain problem develops when pain behavior is rewarded while concomitant efforts at well behavior go unnoticed and unrewarded. In this framework, the individual is often unaware of the subtle shift of behavior in the direction of chronicity and illness. Fordyce[5] distinguishes between respondent and operant pain. Respondent pain is a response to specific antecedent stimulation within the organism; it is a signal of disease or biologic malfunction. Operant pain, on the other hand, is pain expression that has been shaped or molded by its reinforcing consequences in the environment. It is important to note that respondent pain, when it exists for any prolonged period of time, takes on operant components. In other words, pain always has a moving effect on the observer such that the observer alters aspects of behavior to accommodate the person in pain. Such accommodations are rewarding and increase the likelihood of more pain behavior. Thus, when a medical/surgical procedure is performed to correct a long-standing painful physical problem, it is not unusual for the pain behavior to continue, usually frustrating all those individuals involved with the patient's care.

There are three general sets of conditions that lead to the development of an operant pain problem.[5] First, pain behavior receives direct and positive reinforcement, for example, pain behavior leads to increased attention, medication, and so forth. Second, pain enables the individual to avoid unpleasant or arduous tasks; this is avoidance learning, a "time-out" from one's unpleasant tasks. Third, health or well behaviors are not rewarded or even punished through, for example, admonitions to "take it easy." Most chronic pain patients have a history of more frequent painful illness, or of family members with chronic painful illness, thus affording the opportunity for learning a repertoire of pain behaviors. In summary, the chronic pain patient with operant pain has learned the rewarding consequences of pain expression. To alter or modify chronic pain behavior requires that the contingencies be reversed so that pain behavior is not rewarded while well behaviors receive increased attention and praise. Thus, the individual will be more likely to engage in well behavior because it leads to positive consequences.[5]

Some psychologists think that an operant approach is too simplistic and devoid of personal meaning. They have attempted to modify pain expression by focusing on the patient's cognitions or thoughts regarding pain and its control. The cognitive-behavioral focus is on self-control. The cognitive-behavioral perspective grew out of the cummunal marriage of such diverse psychologic approaches as behaviorism, social learning theory, rational-emotive therapy, cognitive psychology, and experimental and clinical hypnosis. The core idea behind cognitive-behaviorism is the premise that if one can instruct patients to modify what they say to themselves, then they can alter their response to a variety of stressors, including pain.[9–11] There is extensive literature on cognitive modification of experimental pain but only within the last few years have clinicians attempted to apply cognitive training strategies for the control of clinical chronic pain.[12–14]

A frequent observation in clinical settings that gives credence to the presence of a potent cognitive component, actually a cognitive mislabeling component, to pain experience is that patients often complain of pain when, in fact, the clinical picture is indicative of either anxiety or depression.[4,5,15] Fordyce,[5] in discussing this issue has noted: "the nature of associative processes are such that when one member of a class of responses or feelings of distress (for example, anxiety, depression, or pain) is elicited by adequate stimulation, other members of the response class may also be experienced." Briefly summarized, the idea is that a nonspecific physiologic state of arousal is triggered by untoward or noxious internal or external stimulation and, although the state is organismically uncomfortable, it only takes on the characteristics of specific affect such as pain, anxiety, or depression after cognitive mediation.[15] Therefore, it is reasonable to assume that cognitively-oriented therapeutic approaches should have the potential for effectively altering pain experience.

Behavioral approaches impact on pain behavior by systematically altering the consequences of pain behavior through its nonreinforcement while rewarding concomitant well behaviors so that healthy behavior is more satisfying. Cognitive-behavioral approaches train patients in the application of cognitive strategies designed to enhance one's sense of self-control over pain experience. In some programs there is an attempt to use both approaches in the comprehensive management and rehabilitation of the chronic pain patient.

Behavioral and cognitive assessment

To insure appropriate treatment, accurate diagnosis is a necessity. Some chronic pain problems are related to undetected pathophysiology while others have their continuing basis in a more complex matrix of both physical and psychologic components. All pain patients should have a comprehensive medical-diagnostic evaluation utilizing the most sophisticated diagnostic technology available. Although such diagnostic work-ups are expensive, these costs pale when compared with the enormous expenses involved in maintaining chronic pain patients on disability and compensation. In some settings, medical and psychologic evaluations are done concurrently while in other settings the psychologic evaluation is initiated only after medical evaluation has failed to clarify the etiology of the pain complaint. Behavioral assessment of the chronic pain patient has been thoroughly articulated in the literature[5,8,16] and we will only review the salient aspects here.

Three major areas are important in the behavioral analysis of a pain problem. First, it is necessary to clarify the time patterns related to the pain problem. Frequency of pain episodes is important. Can a relationship be determined between onset of pain and other activities? What are the nocturnal and diurnal patterns? In other words, is there an opportunity for pain-contingent reinforcement? The second area requires a detailed analysis of the behavior that accompanies pain with particular attention to the roles of others in the pain behavior picture. Fordyce[5] has offered the critical question in terms of pain behavior assessment. He asks the question "If I were there, what would I see you do and hear you say, and what would others do in response to you?" In other words, how do others respond to your pain complaints? If the observer, in most instances the spouse, cannot tell that the patient is in pain, then there is little opportunity for the development of an operant component. Activity levels are another important source of diagnostic data. One must determine what activities increase and decrease pain. Is the relationship between these activities and pain systematic or random? If no relationship between activity and pain can be identified, the pain problem is not likely to be under operant control. Parenthetically, most of the above data are obtained through interviews with patient and spouse as well as by analysis of the daily diary that each potential candidate is required to keep for one or two weeks prior to the evaluation proper. The third area of concern is closely related to the above, namely, the interactive patterns between spouse and other family members in relation to the patient. The evaluator must be able to identify systematic relationships between pain behavior and its consequences, either in terms of reinforcement or avoidance patterning, before tentatively assuming some degree of operant control of pain behavior.

Cognitive assessment adds yet another dimension to the psychologic investigation of pain. This perspective rests on the premise that individuals develop adaptive and maladaptive patterns of behavior and affective response through cognitive processes.[17] The role of the diagnostician is to identify the maladaptive cognitions and/or faulty coping styles that have left the individual unable to cope with the stress of illness and pain. Cognitive assessment relies more heavily on self-report and self-monitoring than does traditional behavioral analysis.[18] An interesting illustration of the use of the questionnaire approach in defining specific treatment directions has been offered by Meichenbaum and Turk[11] who have used results of the McGill Pain Questionnaire[19] to identify preferred methods for cognitive intervention in pain experience. According to the gate-control theory of Melzack and Wall,[20] pain experience has three different but interacting components, namely, sensory-discriminative motivational-affective, and cognitive-evaluative. Each component has cognitive correlates that can be addressed through application of cognitive-behavioral techniques. The sensory-discriminative component can be modified by training in techniques that alter sensory input, for example, relaxation exercises, autogenic training, or biofeedback. Many patients are unaware of their chronic tension and such training enables them to be more aware of a variety of somesthetic cues. The motivational-affective component is often accompanied by feelings of helplessness and lack of control that can be modified by cognitive strategies that assist in counteracting thoughts of helplessness. The cognitive-evaluative component can be dealt with by teaching the patient a method for breaking down the pain experience into its phases and dealing with each aspect by applying prearranged cognitive self-statements. Again, the main theme is enhancement of self-control.

Cognitive and behavioral assessment methods, especially when used in combination, allow for a reasonably accurate determination of the role of learning processes, either operant, cognitive, or both, in the genesis and maintenance of a chronic pain problem.

Approaches to treatment and management

Many chronic pain problems cannot be treated in the sense that the application of a specified treatment will totally alleviate pain. Approaches that enhance self-management are necessary for many individuals who must learn to live with chronic benign pain. Cognitive and behavioral approaches have proved useful in the management of selected chronic pain problems and we will review some of them. To a great extent, the dichotomy between behavioral and cognitive approaches becomes unclear with respect to clinical applications. We begin with a review of a rather orthodox operant pain program, mention a few more eclective programs, illustrate some individual and group approaches, and conclude with some of the new directions being reported in the psychologic management of pain.

Pain programs

The prototype for pain management programs is that of Fordyce et al.[5-7,16] Also called contingency management, this program appears best suited for a small, highly specialized, inpatient setting. The general operant program is designed to reduce the frequency of pain behavior while rewarding well behavior and increased activity.

When new patients enter an operant pain program, all aspects of the program are explained in detail and discussed. There is no ambiguity about what will take place or of the participant's responsibilities to the program. On admission, each new patient is required to provide a daily diary of at least two-weeks-duration with detailed information on medication intake, activity levels, pain episodes, and so on. This information forms a partial baseline for treatment planning.

Medication management. The medication program is designed to reduce or eliminate requests for and reliance on pain medication. This process will be reviewed briefly as more detailed explanations can be found in Fordyce[5,21] and Grzesiak.[8] On admission, the patient turns in all medications and then for a one to two week period all medications are administered orally on an as necessary basis. This procedure is designed to establish a baseline for the minimum adequate medicinal coverage of pain complaints. Medical supervision of this process is necessary because of possible toxic and interaction effects. After baseline has been established, all medications are delivered by way of a pain cocktail mixture on a time-contingent basis (every 2 or 3 hours). This regime is designed to insure that the patient receives medication without having to complain of pain. The next step is to fade the active ingredients and/or extend the time between dosages. The rationale for this treatment approach is that receipt of medication has often become a potent reward for pain complaints. Too often in clinical practice patients are prescribed medications on an "as needed" basis and the result is an inadvertent iatrogenic conditioning effect between pain and medication intake. With chronic pain patients medication is rewarding because, in addition to the analgesic effect, there are sought after alterations in consciousness and mood, like a sense of well-being or mild euphoria. By providing adequate medicinal coverage on a time-contingent basis, the learned link between pain behavior and medication intake is abolished.

Exercise. The therapeutic use of exercise is another central feature of the contingency management approach. Not only is exercise generally beneficial for one's body but it is also an activity that is not compatible with pain behavior. Exercise programs should be chosen that are pain relevant, related to functional weakness, or good for general conditioning. Also, the kind of exercise chosen should be quantifiable in units or in the number of repetitions; time is not a reliable measure for exercise. As with medication intake, a baseline is established for each exercise using working to tolerance criteria. Working to tolerance means doing each exercise until one is forced to stop because of pain, fatigue, or weakness. The work to tolerance approach is used only to establish a baseline; actual prescribed exercise will be lower than pretreatment baselines to insure the patient success in early efforts. The therapeutic benefits of exercise do not require continual working to tolerance and, in fact, for most exercises working to tolerance would not be judicious. All exercises are monitored and recorded. Typical exercises used on a pain program are riding a fixed bicycle, walking, climbing or descending stairs, deep-knee bends, and pelvic tilts. Quotas are set for each prescribed exercise and the quota is increased on a preset basis, usually by one additional repetition every day or every other day. The quota system insures that rest becomes contingent on exercise, not on pain. Obviously, all exercises have upper limits or ceilings; the appropriate ceiling for any given exercise is a medical judgment.

Activity levels. In addition to the above mentioned exercises, the activity levels are important and become even more necessary as the patient makes progress on the pain program. Activities are expanded as a patient continues to function without pain at any of the criterion levels. Walking, which may have initially been part of the exercise program, includes traveling a predetermined, and premeasured, route around the hospital. Recreational activities are part of the program as well and are especially important if a patient has been in a chronic state for an extended period of time. If the patient plans to return to work, it is advisable to find nonpaid assignments within the institution. Such assignments should be consistent with the patient's educational and occupational level prior to the pain problem. The ultimate goal is for on-program activity levels to closely approximate those that are anticipated after discharge from the program.

Family retraining. The retraining of family is an integral part of pain management. Most pain programs require the explicit agreement, cooperation, and participation of spouse, significant other, and other family members who come into daily contact with the patient. The importance of interpersonal responses in the operant conditioning of pain cannot be underestimated. The first task is training the spouse in careful observation of pain behavior. The spouse is required to generate a list of the partner's pain behaviors. Fordyce[5] suggests that the list be limited to between 5 and 10 items lest the process become too cumbersome. The spouse then learns to monitor these behaviors during visits with his or her mate. Training focuses on what the spouse actually does in response to pain behavior and on what alternate responses can be developed that are not rewarding to pain behavior. It should be emphasized that none of these activities are covert. The effective observation and systematic reinforcement of well behavior and nonreinforcement of pain behavior can proceed equally well with or without the pain patient's knowledge.[8]

Posttreatment planning and follow-up.

Post-treatment and follow-up are the final aspects of the contingency management program. The patient's referring or primary physician should be aware of all aspects of the program; particularly important is information regarding the time-contingent use of a pain cocktail since the fading of medication sometimes continues postdischarge. Patients and spouses should have sessions devoted to planning post-treatment activity levels. The family must learn to continue their more appropriate patterns of responding to pain behavior. Plans are made for patient's continued self-monitoring of activity levels and medication intake. Diary forms and exercise charts are provided along with a schedule for fading their use. Dates are set for these forms to be returned to the hospital where the pain program staff will review, analyze, and respond to the data, usually with a reinforcing letter. One word of caution regarding the family's involvement with the patient after discharge. The fact that the patient once had, or continues to have, an operant pain problem does not preclude the development of new respondent pain due to illness. The family should exercise reasonable judgment that new pain behavior may be related to the new illness that requires appropriate medical investigation.

The emphasis in an operant pain management program is on activity and behavior. Virtually every aspect of the pain program is amenable to observation and quantification. The patient's own responsibility for monitoring activities, sometimes even charting or graphing these activities, keeps him or her in constant touch with the degree of progress and is, in and of itself, a motivator.

While there are now numerous pain programs that follow the model described or modified versions of it, space does not permit extensive review. We will limit our discussion of results to some of the major programs that have reported reasonable follow-up data.

Fordyce et al.[22] have reported on 36 chronic pain patients, 33 were back pain patients, who underwent the previously described operant pain program. All were treated on an inpatient basis; length of stay was 4 to 12 weeks. Results presented were for the period encompassing the first to the last week on program for the following variables: activity level, exercise tolerance, medication intake, and pain rating. Activity level showed a significant increase and on 22 month follow-up, it continued to increase. Exercise tolerance also showed a significant increase for the program exercises. Pain ratings showed a significant decrease during the treatment and the lower level of pain rating remained stable on follow-up. Medication intake decreased significantly during the inpatient phase. A worrisome follow-up finding is the fact that 50 percent of those responding failed to answer the questions concerning current medication intake. However, on follow-up, these patients were clearly active and pain was no longer a serious interference in their daily lives.

The efficacy of inpatient operant treatment of chronic pain has also been investigated by Roberts and Reinhardt.[23] They used an operant program with stringent selection criteria and equally stringent outcome measures. Twenty-six treated patients were contrasted with 20 patients who were rejected for treatment as well as with 12 patients who refused treatment. Criterion measures are too extensive to be included in this review. In a follow-up ranging from one to eight years, 77 percent of the treated group were leading normal lives without medication whereas only one patient from the other two groups was classified as such. While the authors present detailed data, it is enlightening to review the medication intake data for the treated group as this was the variable in question in the Fordyce et al.[22] report. Of the 26 treated patients, 20 were medication-free while 2 were essentially unimproved. Another two reported significantly less pain-related interference with daily activities although continuing on prescription medication. One patient reported no pain interference in daily activity but continued use of several pain medications. The final patient treated reported less pain interference and no medication use but had had three back operations since discharge from the operant program. This study is particularly important for its clarification of the medication issue. Another finding was a normalization of MMPI (Minnesota Multiphasic Personality Inventory) profiles in the successfully treated group.

A follow-up study was reported by Swanson, Floreen, and Swenson.[24] Their pain management program was operant in nature based on the Fordyce model. Of the patients completing the program, 79 percent met the criteria for good outcome on discharge. However, at six-month follow-up only 50 percent had maintained those gains. Of the stated 50 percent, a significant number reported further improvements in overall functioning after discharge. In another study from the same program, Maruta, Swanson, and Swenson[25] attempted to differentiate successes from failures on a number of variables including personal and clinical history, subjective pain levels, diagnoses, and MMPI profiles. Patients in the failure category had pain of more than five years duration, greater than 1.5 years of work-time loss, three or more surgeries, higher subjective pain levels, and more drug dependency. In addition, the failure group demonstrated higher elevations on the hypochondriasis and hysteria scales of the MMPI. These results suggest that chronicity and its attendant emotional upheaval are the determining factors for success or failure of pain management programs. However, a recent report by Block, Kremer, and Gaylor[26] suggests that disability payments are a significant consideration relative to outcome and that chronic pain patients who are receiving disability income show reliably less improvement than do patients not on disability, the disability payment is a positive reward for continued pain expression.

As mentioned earlier, many pain programs use some aspects of the operant approach but have added other modalities. Some of these more eclectic programs have presented good outcome results that include quite extensive follow-up. Of particular note are the program reports by Sternbach and his associates[27,28] and the pain program developed by Gottlieb et al.[29] at Casa Colima Hospital. From a scientific perspective, the eclecticism of these programs prohibits analysis of the various therapeutic variables for effectiveness. However, these programs clearly produce creditable results that have solidified the value of multidisciplinary approaches to chronic pain management.

Individual, group, and outpatient approaches

Behavioral. The behavioral techniques described in the operant pain program can be applied on an individual, group, or outpatient basis although, as a general rule, it is safe to say that the decrease in structure carries with it less opportunity for the systematic monitoring of behavior, less control over treatment and, therefore, requires a more sincere commitment from the patient to comply with prescribed treatment strategies.

Fordyce et al.[6,7] have demonstrated how the operant approach can be applied on an individual basis in an inpatient setting. In their first case report of chronic pain treated by behavioral methods, the patient, a 37-year-old married woman with an 18-year history of low back pain, severely restricted activities, addiction to pain-relieving medication, and numerous back operations, was successfully managed using the same principles described above for the pain program. However, without the benefit of a formal program, much more staff education, training, and cooperation is required.

Relaxation training. Relaxation can be accomplished with or without electromyograph (EMG) biofeedback. The largest area of application has been with tension headaches although it has been found useful with other chronic pain problems as well. Grzesiak[30] found it useful in modifying the pain experienced at and below the level of lesion in spinal cord injured patients. In a small clinical study, four patients with chronic pain were treated with a relaxation-meditation procedure designed to enhance a sense of self-control. Three of the four reported success in using relaxation to manage their pain; the one unsuccessful case had a premorbid history of extensive substance abuse. Two have been lost to follow-up but the other two continue to report successful pain management more than five years post treatment. Relaxation training has been used as a treatment for phantom limb pain by Sherman, Gall, and Gormly[31] who reported on 16 cases. Of the 16, 10 experienced complete relief of pain, 4 demonstrated significant relief and required no further treatment, while 2 remained unchanged. The follow-up period ranged from six months to three years.

The rationale for relaxation treatment of pain has to do with the observation that pain is usually accompanied by anxiety and tension. Therefore, if one could lessen anxiety, it is logical to assume that pain intensity would subside as well. This approach is effective with selected cases although the mechanisms underlying its effectiveness remain unclear. Fair and Basmajian[32] have noted that deep relaxation is achieved through a conscious dampening of influences on the spinal motor neurons that descend in the corticospinal and extrapyramidal pathways. It is clear that approaches such as relaxation training, autogenic training, and biofeedback have impact on physiologic systems in ways that we are just beginning to explore.

Cognitive and cognitive-behavioral. The final area of consideration is that of cognitive or cognitive-behavioral applications to pain control. As mentioned self-control and enhanced coping skills are central to this approach. Having discussed many of the conceptual foundations for the use of cognitive approaches with pain, we will now turn to specific applications. A number of cognitive techniques have proved capable of attenuating experimental pain.

One such technique is somatization, which involves focusing attention on the afflicted or painful body part.[33,34] Another technique is called imaginative inattention which involves ignoring the pain by directing one's attention to other thoughts, for example, a pleasant event.[35] Another technique is imaginative transformation which involves reinterpretation of the sensation as something other than pain, the example, coldness or numbness.[36,37] Cognitive strategies have been further divided into relevant and irrelevant categories.[38] An irrelevant strategy is one that serves a distraction function, for example, thinking about a blank wall. The relevant strategy attempts to reinterpret the sensation as something inconsistent with but not divorced from the actual sensation. Cognitive strategies are often part of a well-defined treatment package.

Training programs

Stress-inoculation. One of the more popular and effective programs is called stress-inoculation training.[9,11] This program has three phases as follows: (1) the patient is given educational information that allows for a reasonable conceptualization of the problem; (2) using learned conceptualization, the patient is instructed in a number of different cognitive strategies to enhance coping skills; and (3) the patient practices these skills, usually in a group situation utilizing role-playing in a variety of simulated situations and then in terms of pain control. Through practice, the patient learns which techniques are best suited for dealing with the pain problem. The stress-inoculation paradigm was first applied to experimental pain by Turk,[10] and then to clinical chronic pain by Rybstein-Blinchik, and Grzesiak.[12,14] The treatment process involved assessment of the sensory-discriminative, motivational-affective, and cognitive-evaluative components of pain; provision of a conceptual framework for understanding both pain, and why pain should respond to cognitive treatment; training in specific cognitive techniques; and practice in the use of these strategies in real and anticipated settings that are pain-related.

In the Rybstein-Blinchik and Grzesiak[12] preliminary study, five patients with chronic pain of differing causative factors were seen for four one-hour sessions over a three-week period and were provided with a program similar to stress-inoculation. These patients were given a conceptualization of pain that stressed the importance of the cognitive labeling aspect of pain. They were trained to be aware of their thoughts, self-statements, and attempts at coping prior to and during the pain episode. They were then instructed to omit the word "pain" and replace it with a different label, for example, arousal, numbness, and other applicable terms. Finally, the techniques were practiced in a small group setting. Thus, this approach used a relevant or reinterpretive cognitive strategy within a stress-inoculation paradigm. On follow-up (one month post treatment) there were substantial changes on a number of measures, including pain ratings, pain behavior, and nursing notation of pain behavior. While this study was clearly preliminary, it demonstrated the potential value of cognitive approaches for control of clinical pain and the need for further study.

In a more extensive and controlled study, Rybstein-Blinchik[13] investigated the relative effectiveness of different cognitive strategies for pain control. Using the same paradigm described above, 44 chronic pain patients were randomly assigned to one of four experimental groups: reinterpretation, attention-diversion, somatization, and control. Her results indicated that all three cognitive strategies had an effect on pain experience but that the relevant/reinterpretive strategy was clearly superior in altering both subjective and behavioral measures associated with pain. The absence of long-term follow-up in this study leaves the question of enduring effectiveness unanswered.

The cognitive-behavioral perspective on pain control is an area that has provided promising preliminary results. Cognitive-behavioral and operant-behavioral techniques are being combined in efforts to enhance or potentiate the effectiveness of both. One of the major problems is the reliance on an inpatient setting, not to mention the expense involved and the large staff necessary for proper implementation. It has been suggested by myself[8] and others[39–43] that a properly coordinated outpatient program should be a viable alternative to inpatient approaches for pain management. In recent years there have been several attempts to treat and manage chronic pain problems on an outpatient basis and their early results are promising.

Outpatient studies

One of these programs is the psychophysical program for back pain developed by Sarno.[39] While the program was developed initially for inpatient treatment, its increasing use in outpatient management and its emphasis on outpatient follow-up warrants its review. Sarno assumes that most back pain problems are psychogenic in origin and he uses the term "tension myositis" to emphasize that back pain is most often a benign, reversible, essentially nonstructural disorder of the musculature. The treatment program consists of physical therapy, educational counseling, and psychotherapy. Actually, a combined PT-OT (physical therapy-occupational therapy) program is used consisting of therapeutic pool, hot moist packs, ultrasound and/or electrical stimulation, tasks to improve sitting and standing balance, and an exercise program to strengthen trunk musculature with special emphasis on the abdominal muscles. The educational part of the program is provided in daily sessions with the attending physician who provides information on the processes that culminate in a back pain problem. Psychotherapy provides a vehicle for exploring and working through the tensions that had previously been channeled into the back musculature.

Of the patients who have completed the program, 57 percent became pain-free and fully functional. Only 11 percent reported no change. Sarno has reported follow-up data of up to 24 months thus far. While this program, at least in its psychologic orientation, follows a more traditional psychodynamic model, it should be noted that it has essentially the same structure that has been used in some of the cognitive-behavioral programs; namely, educational information, therapeutic exercises, and psychotherapy which can be defined as a cognitive restructuring of attitudes and beliefs.

In two recent papers, Redden Jackson, and Braddom[40,41] have described an outpatient approach to chronic low back pain that focuses on self-control and cognitive modification. Using a cognitive-behavioral model consisting of educational information, relaxation and imagery training, attentional refocusing, relabeling of sensations, and coping skills training, patients were seen in group meetings for a total of seven sessions over a three-week period. Twenty-four patients with chronic low back pain were randomly assigned to immediate treatment or delayed treatment groups; their follow-up was for one year. The immediate posttreatment data will be omitted and emphasis will be placed on the follow-up data. In addition to interviewing the patients, and their spouses, significant others were interviewed as well. Seventy-eight percent were continuing to use the self-control strategies that they had learned. The 22 percent who discontinued the procedures reported recurrence of pain. Fifty-six percent reported less anxiety and 39 percent indicated less depression. Fifty percent reported less irritability while 74 percent were more active. Fifty-six percent indicated some continued use of prescription medication but 69 percent of the medication users reported less intake than prior to treatment. In general, there was a high concordance between the patient reports and the reports of spouses and significant others. It would therefore appear that this treatment program was effective in modifying chronic pain problems.

In a similar but smaller outpatient study, Khatami and Rush[42] studied the efficacy of a three-part program consisting of symptom control, stimulus control, and social system intervention with chronic pain patients. In this uncontrolled clinical study five of six patients completed the entire program. Symptom control consisted of relaxation training for three cases while two others used hypnosis and EMG biofeedback, respectively. Stimulus control involved cognitive therapy to modify perception of stresses as well as maladaptive self-references. Social system intervention involved sessions with the family to alter the contingencies for pain behavior. All five patients who completed the program reported significant decreases in pain, hopelessness, depression, and medication intake. These results were maintained on six-month and one-year follow-up.

Follick[43] has reported on an outpatient program for chronic pain that uses both behavioral and cognitive-behavioral components along with an exercise program. Usually an eight-week formal program with follow-up on a diminishing time schedule, combining the services of the family physician, a psychologist, a physical therapist, and a social worker are used to provide a program consisting of behavior modification, physical therapy, conjoint marital therapy, and cognitive restructuring. Follick has reported pre- and post-treatment data on activity levels, pain ratings, medication intake, and emotional and marital distress that suggest positive results for his first six successive admissions to the program. Follow-up data is not yet available.

A feature that Follick believes to be of particular importance is the outpatient focus. He proposes that since the patient must continue to function outside the hospital, there is greater opportunity for generalization of treatment results to the patient's natural environment. It is important to note that the application of cognitive approaches with their emphasis on self-control and self-maintenance of activity and health life-styles is a recent development and long-term follow-up is not yet available for many of these programs. However, outpatient programs such as the above do hold promise for a more efficient and cost-effective way of dealing with chronic pain.

Summary

This brief review presents an introduction to the contributions of operant behavioral and cognitive-behavioral theory to the assessment and management of chronic pain. The role of learning processes in relation to operant and respondent pain were discussed as well as the role of cognition in the overall view of pain experience. Operant conditioning or contingency management approaches to inpatient pain management are described. Individual and outpatient approaches that use concepts and strategies from both the operant and cognitive models have also been reviewed. The importance of the stress-inoculation paradigm, an approach consisting of an educational phase, a cognitive training phase, and a role-playing or rehearsal phase as a treatment that focuses on self-control of pain has been presented. The multidisciplinary nature of contemporary approaches to chronic pain management is noted, as well as the growing need for development of cost-effective, outpatient-based pain management programs.

Several directions are apparent. Early intervention is increasingly cited as important in deterring both physical and emotional chronicity. Contemporary approaches to pain assessment and management are increasingly multidisciplinary in nature; there is a growing emphasis on self-control and self-regulatory approaches. There also is a trend toward cost-effective outpatient programs. Finally, there is an increased awareness that chronic pain cannot always be alleviated and that effective management is equally important. Perhaps this idea is best stated in the following quotation from Greenhoot and Sternbach[44]: "We have learned that the only adequate measure of success or failure of pain relief is the patient's behavior. A patient who has no pain, but who does not function adequately, has had a 'bad result,' whereas another with complaints of pain, but who lives well, has been rehabilitated."

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Biofeedback and Hypnosis

In the management of pain

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The successful control and management of pain has been, and continues to be, one of the more perplexing and troublesome aspects of clinical practice. There has been a fair amount of evidence and observation suggesting that the perception of pain is not simply a function of physical sensation but that personality factors, level of anxiety, the cognitive view that the person has of the situation in which the injury occurs, suggestion, one's expectations, and other psychologic variables contribute to the overall experience of pain.[1-5]

The effects of suggestion on the perception of pain have been well known for centuries. Perhaps one of the oldest and most persistent uses for hypnosis in clinical practice has been for management of pain.[2] Wickramasekera[6] defines hypnosis as ". . . a set of instructional-situational manipulations which have a high probability of success with an identifiable group of people [highly susceptible] under conditions of high motivation to participate." It should be noted that interpersonal variables are as much a part of instructional-situational manipulation as are the many techniques and stimuli used in trance induction. As defined then, hypnosis and self-hypnosis are procedures that have been useful tools for patients with chronic pain[7] and also for those with terminal illnesses.[8-10] The uses of hypnosis in surgery, dentistry, obstetrics, and cancer are well

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known.[11-13] Recently, research has been focused on the use of hypnosis with severe burns,[14,15] cancer victims, and recurrent painful illnesses.[16]

Biofeedback is, in part, a process of physiologic learning that with the aide of electronic instrumentation allows subjects to be aware of selected physiologic events such as brain wave activity, surface skin temperature, and muscle tension in the form of electromyograph values. Biofeedback is essentially a training procedure, the key features of which are: (1) continuous and accurate monitoring of the chosen physiologic response; (2) immediate feedback to the subject of changes in that response; and (3) motivation to alter the response.[17] Theoretically, such training permits the subject to significantly modify the targeted physiologic response. Such an ability seems to provide subjects with a sense of control and effectiveness unavailable with other methods.[18]

EEG (electroencephalographic) biofeedback in the form of alpha training has been successful in modifying response to pain[19] and alpha and hypnosis together produced a significant decrease in both sensory and affective dimensions of pain in 58 percent of patients suffering chronic pain.[18] With lower back pain[20,21] EMG (electromyographic) feedback has been used, and has produced significant reductions in low back, leg, neck, shoulder and arm pain.[22] Most recently, EMG biofeedback has been used to facilitate work in the management of myofascial pain syndrome.[23] Relaxation, EMG biofeedback, and cognitive skills were utilized. Subjects trained in EMG experienced less subjective pain. A selective review of the literature reveals that little work with temperature biofeedback and pain control has been recorded.

Both hypnosis and biofeedback have been used in the treatment of "psychosomatic" illnesses. In her book, *Stress, and the Art of Biofeedback*, Barbara Brown[24] details many psychosomatic and organic disorders for which biofeedback has been useful. The focus here, however, will be restricted to the modification of pain in selected organic disorders, while cognizant of the importance that psychologic factors can have in such cases.

This article will illustrate and discuss three instances of utilizing biofeedback and hypnosis to alleviate pain. The first of these cases employed the use of hypnosis exclusively to alleviate and manage pain that resulted primarily from physical injury. The two other cases discuss the use of biofeedback in the management of pain resulting from organic disease or injury.

Clinical cases

Case 1. A 26-year-old, single, white male who had sustained pain from an industrial accident. Injuries at the time consisted primarily of physical trauma following a fall at work. He fell a vertical height of approximately four feet, landing on his extended right lower extremity, receiving the full weight on his right foot. He then slumped to his right side, striking his right shoulder. Since that time, he has complained of marked pain in his right foot, paralysis of his right foot, and severe pain and limitation in his right shoulder. No clear diagnosis was made. Psychologic trauma was also apparent. The incident happened early in the morning, while he was working the 11 to 7 A.M. shift, and he was admittedly quite frightened by the fact that there were few people around at the time of his accident.

He was referred to us approximately three months after his initial injury, after having been medically examined and found to have little in the way of any hard evidence of organic disease. There did appear to be definite pain, probably of a reflex sympathetic dystrophy or causalgia type. In short, symptoms seemed to be greatly exaggerated, although to him they were very real. Medical follow-up continued after the initial referral.

Background. This man's background included one year of college at the time of interview; and he was presently disabled from his job as a millworker at which he had been injured. He was the middle of three children, with strong interests in the area of arts and crafts, to the extent of

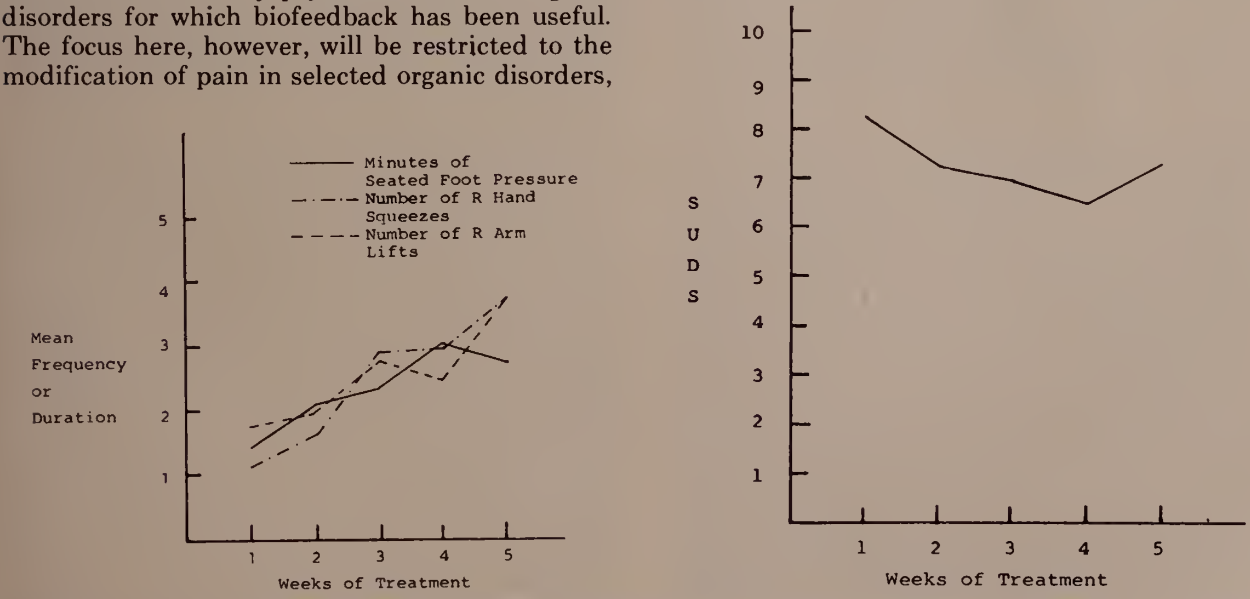


FIGURE 1. Case 1. (A) Weekly means for seated foot pressure, hand squeezes, and arm lifts. (B) Weekly mean subjective units of discomfort (SUDS).

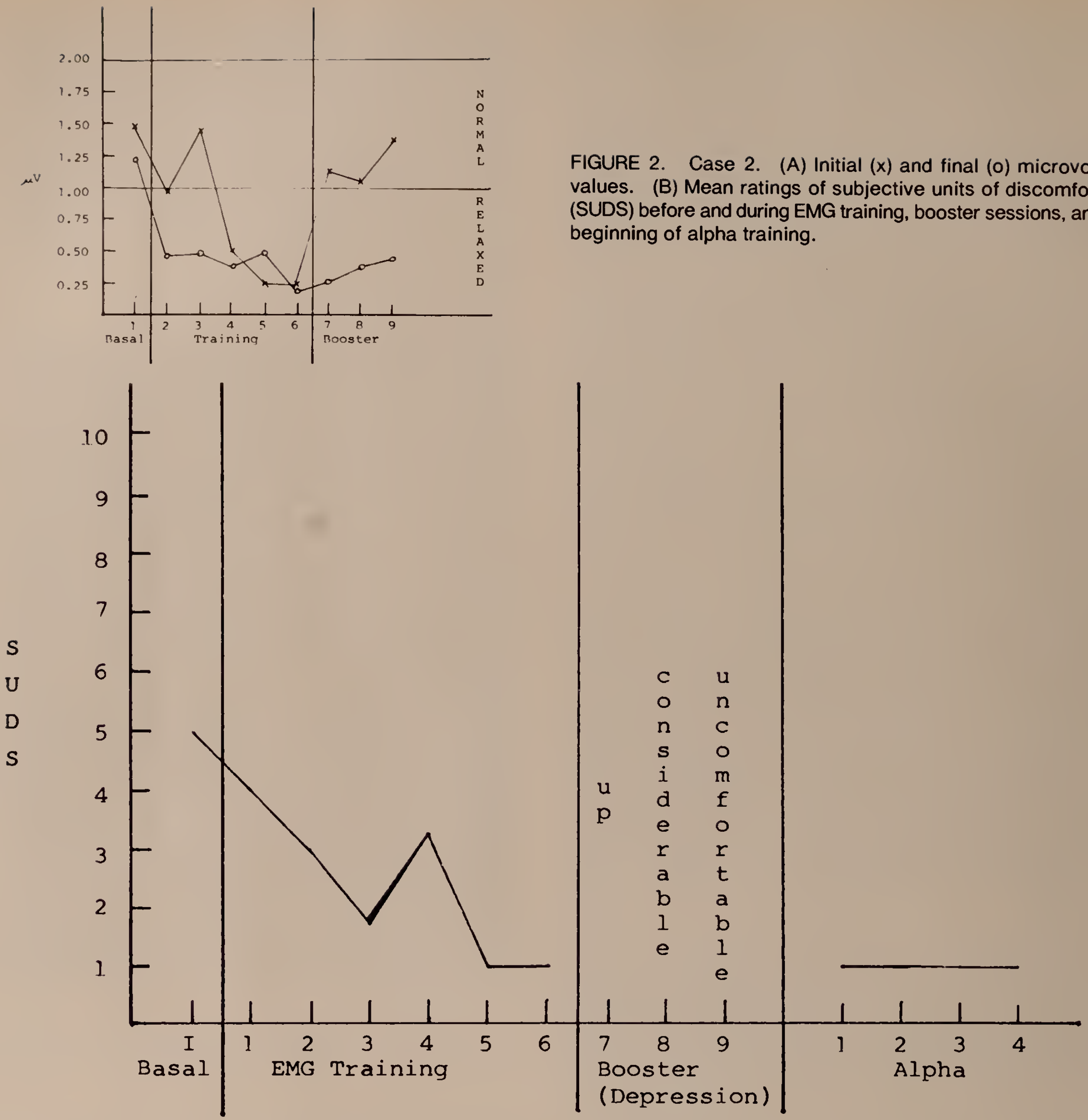


FIGURE 2. Case 2. (A) Initial (x) and final (o) microvolt values. (B) Mean ratings of subjective units of discomfort (SUDS) before and during EMG training, booster sessions, and beginning of alpha training.

having made his own furniture. He reported little difficulty in interpersonal relationships.

Intervention. Our intervention and initial approaches to this man's pain consisted of simple relaxation training efforts, involving controlled abdominal breathing and the use of relaxing imagery. This approach was followed by hypnotic intervention and the hypnotic strategies were augmented with behavioral procedures such as shaping and monitoring. The overall thrust of the intervention consisted of shaping the use of his right hand, arm, and foot in the form of simple exercises, consisting of right hand squeezes, right arm lifts, and seated as well as standing foot pressure. Prior to doing these exercises, he was trained in self-hypnosis and used imagery of warmth and lightness, as well as suggestions of increased self-control and feelings of success. Toward the middle of the course of treatment, he experienced severe personal stress, his father was terminally ill. His father finally expired which caused a hiatus in treatment.

Data provided from monitoring this patient's behavior are reflected in Figures 1A and B.

Figure 1A illustrates the minutes of seated foot pressure on the right foot over a five-week period of treatment. As can be seen, the amount of time that he was able to put pressure on his foot in a seated position increased from a mean of 1.43 minutes to a high of 3.07 minutes. This figure also shows a steady increase in the frequency of right hand squeezes of a tension spring, and the number of right arm lifts. Hand squeezes start at a mean of 1.14 and tripled to a final mean of 3.7. Arm lifts began at 1.7 and have more than doubled to 3.7.

Figure 1B presents the SUDS (subjective units of discomfort) averaged for each week of treatment. As can be seen his SUDS declined gradually over the weeks in treatment.

Evaluation. Analysis and evaluation reveal that improvement seemed to have occurred during the five weeks of treatment, both in terms of objective measures of foot

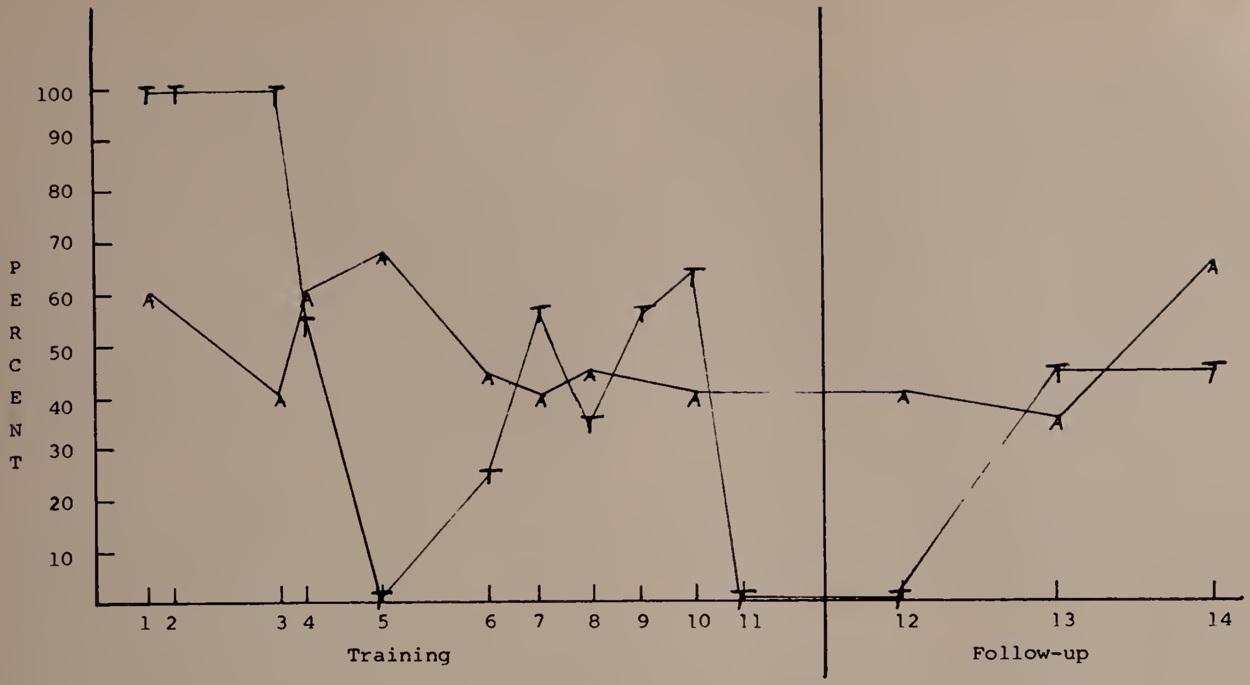


FIGURE 3. Case 2. Percent alpha (A) and percent of TNS use (T) for weeks of treatment and follow-up.

pressure, hand squeezes, and arm lifts as well as subjective ratings of units of discomfort. It appears that he was able to modify his perception of pain and also increase his sense of control, thereby alleviating the pain. It is noteworthy, too, that the treatment was abruptly discontinued after the fifth week due to his father's terminal illness. Psychologically it was hypothesized that his pain was being maintained and exacerbated by the event of his father's illness. These factors in his pain necessitate continued psychotherapeutic follow-up.

Case 2. This case was a woman who had not sustained any traumatic injury to her back but had developed a pain in the lower lumbar region, radiating into her right buttock, and down the right leg. Her first experience with the pain began on a trip when she was riding with her husband. The pain persisted and became worse after that time. Initial diagnosis was tendonitis and anti-inflammatory drugs were used resulting in unpleasant side-effects. She was also treated with a heating pad and hot-soaks but there was minimal change in her level of pain. She began to work with biofeedback approximately one year following the onset of the lower back pain. Biofeedback had been recommended by various sources and she was eager to begin.

Background. Her background revealed that she was a 51-year-old married female, mother of three children. She had been having periodic marital difficulties for most of her married life. She had completed two years of college. Her personality could be characterized as having a strong need to be in control, and to be extremely active. She is socially outgoing; however her interests are so varied that they are probably quite erratic. Her tendency is to be excessively demanding and quite dominant in her interpersonal relationships. Some of these personality characteristics are notably contributory to her marital difficulties. Her husband, age 53, presents similar difficulties in his interpersonal relationships; he, too, is a fairly dominant, aggressive individual for whom it is important to be in control.

Intervention. Our intervention and treatment began by working with EMG biofeedback, applied directly to the lower back region. Figure 2A and B presents EMG data for her during seven training and three booster sessions. Figure 2B illustrates the mean ratings of subjective units of discomfort (SUDS), before and during EMG training, during booster training, and at the beginning of alpha training.

This woman was seen for a total of seven EMG training sessions, during which time her subjective units of discomfort were reduced. She also showed evidence of considerable control over muscle tension in the lower back area. She was seen for three follow-up sessions, during which time she reported increasing discomfort, although she continued to be able to reduce her muscle tension when she had the information provided by the EMG equipment. These follow-up sessions were actually booster sessions. During the initial series of the EMG training program, she continued to use the TNS (transcutaneous nerve stimulator) to aid in pain reduction. It should be noted that during the period that she was reporting increased discomfort in the three follow-up sessions this was also, for her, a period of depression which she resolved toward the end of the third follow-up session.

Following the EMG biofeedback training and follow-up sessions, it was determined that she needed to continue with biofeedback because she was not easily hypnotizable. However, she seemed to have a negative feeling about EMG biofeedback. The utilization of EEG biofeedback was discussed and she was quite receptive to these ideas. Alpha training began and continued for 10 training sessions and 4 follow-up sessions. Percent alpha was measured for 1,000 second trials from the left temporal and left occipital lobes. Figure 3 presents the percent of alpha, defined as 8 to 12 hz. and approximately 50 to 90 microvolts, and percent of TNS use for weeks of treatment on follow-up.

During the training sessions, it is notable that although she was able to maintain alpha frequency for gradually decreasing periods of time, she did, nonetheless, achieve reduction in the use of her TNS device and for a period of approximately eight weeks she did not wear the TNS device at all.

Follow-up. Subsequent follow-up sessions revealed that she wore the TNS device approximately 50 percent of the time for a period of 12 weeks. In her last follow-up session, she reported that she felt satisfied that she was able to produce the alpha state on her own, without the use of the EEG biofeedback equipment. She also was able to remain free from taking oral pain medication.

In addition, she began conjoint psychotherapy, together with her husband, addressing issues having to do with their marriage relationship. One final note is that a little more than halfway through the period of alpha training sessions, she developed a myofascial pain syndrome in the region of her left shoulder. She was able to obtain reduction of that pain by using her alpha training.

Evaluation. On evaluation it appears that the number eight had great meaning for this patient in that it was the symbol or stimulus that she used to "zero in" on to produce the alpha state for herself when she was not on training equipment. This effort suggests that, for her, the sense of being in control of her pain was necessary for its effective management and consistent with her overall view of the world as well.

It is noteworthy to point out that this case reflects an integration of approaches, using not only two biofeedback modalities but also augmenting those methods with conjoint marital psychotherapy. It is noteworthy, too, that it appears that though her training session percentage of alpha production decreased slightly, her need for utilization of the TNS device also decreased as training continued. On the surface, these findings would appear to be contradictory, however, it seems that she had an increased sense of control over her pain by thinking of the number eight, which was most consistent with her expressed personality needs to "be in charge." It may be that it was more the sense of control, than the success at alpha training, that might have produced the positive results for her to reduce her use of the TNS stimulator and oral medication. This finding is consistent with a related observation made by Dumas.[25] His observation was that subjects who scored high on hypnotic susceptibility tests did not gain significant control over their EEG alpha but that subjects with moderate to low scores on hypnotic susceptibility tests did gain control of the EEG alpha.

Case 3. This case is a 59-year-old man with a history of depression of about 10 years duration. His personality could best be described as compulsive and overanxious, with periodic depressions during the previous 10 years.

Background. His background reveals that he had marital problems and a medical history of cardiac difficulties. He had sustained frostbite of both upper extremities along with alcohol intoxication about six months prior to referral for biofeedback. He was found lying in a snowbank, not wearing any gloves, and on admission to emergency care, his temperature was below 92°F. He was warmed up to 98°F.; his hands were treated for frostbite, and on discharge all portions of the fingers appeared to be viable. But he continued to complain of constant pain with heat and cold intolerance. Physical therapy was continued daily on discharge. A series of nerve blocks followed but did not appear to have any effect on reducing the pain or sensitivity in his hands. He was referred for biofeedback in order to improve skin blood flow by increasing surface skin temperature on the theory that such an effort would reduce the pain and sensitivity in his hands. On interview, he was very apprehensive as might have been evident from his extremely cold hands. He was also extremely aware of the coldness of his hands, insisting that they be touched in order to feel how cold they were. He indicated that he experienced pain in his hands that was seemingly correlated with a drop in body temperature. The lower the ambient temperature, the more he experienced pain. He indicated his left hand was more damaged by the frostbite than the right hand; and that gradually both hands were beginning to grow nails on all fingertips. The pain was localized to the fingertips in both hands. There was also increased sensitivity described as a cutting sensation when he picks up an object that has edges on it. He also indicated problems with irritability and lately had become more quick-tempered than he had been in a long time. This he attributed to his fingers having been frozen and the fact that he had been more-or-less disabled for the past few months after the occurrence.

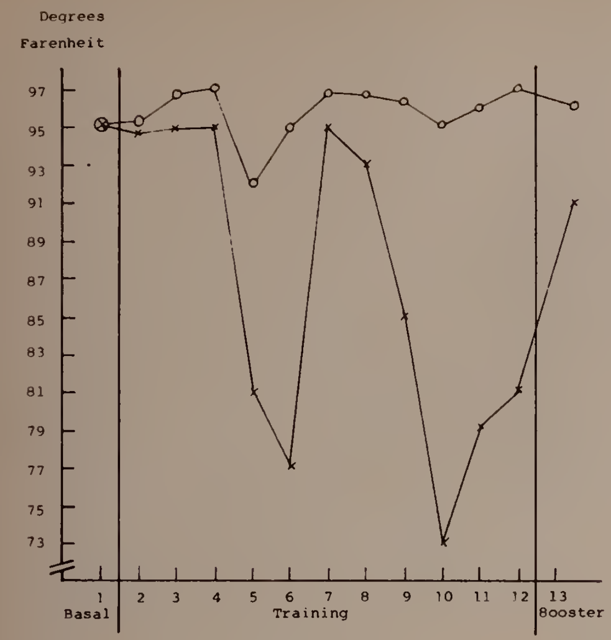
Intervention. Intervention began with temperature biofeedback training and continued for 13 sessions. Thermistors were attached to the middle finger of each hand and data obtained by averaging the actual temperature in degrees Fahrenheit of both hands for initial and final readings in each training session. Figure 4A illustrates the initial and final temperature values for basal, training and booster sessions. Figure 4B presents mean ratings of subjective units of discomfort during treatment. These ratings were obtained by having him estimate how uncomfortable his hands felt for each day during the training period. The ratings were then averaged to reflect a weekly SUD rating.

As can be seen in Figure 4A, there was evidence that he was able to obtain increased control over the amount that he could raise his temperature during the session. By the tenth session, he was able to raise his hand temperature on the average of 22°F. In terms of his subjective ratings of discomfort (SUDS) during the training period, these ratings gradually diminished over time until they were rated at one SUD toward the end of the training period.

Evaluation. On evaluation this patient shows that he had improved dramatically over his thirteen sessions of temperature training. He had been accustomed to wearing gloves during most activities almost regardless of ambient temperature. During follow-up, he reported wearing gloves only in their appropriate ambient temperature conditions (winter). Figure 4 indicates marked variability in initial temperature values for each session. Some factors that contributed to this variability included environmental conditions, ambient temperature in the training room, and amount of time spent in discussion before training. Again, the increased sense of control is apparent. Such a sense of control was coincidental with an improvement in the depressive symptomatology and in a reduction in use of antidepressant medication. Informal follow-up during the past 16 months since the final session indicates that the gains accomplished were well maintained.

Conclusions

The foregoing case discussions support the implicit assumption of this paper that biofeedback and hypnosis are useful tools in producing successful management of clinical pain. One of the issues that may be raised by the case discussed could be characterized as a pretreatment personality issue. In short, the most effective method for management of



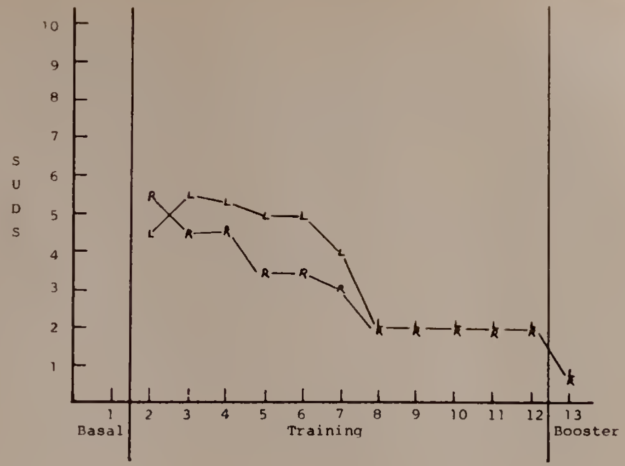


FIGURE 4. Case 3. (A) Initial (x) and final (o) temperature values for basal, training, and booster sessions. (B) Mean ratings of subjective units of discomfort (SUDS) in each hand over treatment sessions.

clinical pain seems, to a large extent, related to the way in which the person views the world, his cognitive view of his pain, his physical condition, and his overall style of living.

Certainly, perception of pain was altered significantly in each case. Explanations for such altered perceptions are variable, however. For Case 1, gradual successful experiences with the use of his injured arm seemed inversely correlated with ratings of subjective discomfort (his perception of pain). Hypnosis in this case seemed to function to reduce pain, directly when perceived pain was lessened while hypnotized and indirectly over a period of time when he began to achieve greater use of his arm and shoulder and foot.

The personality of this man was that of a fairly passive, unassuming individual who was quite responsive to hypnosis. Although no standard measure of hypnotic susceptibility was obtained, he was capable of entering moderate to deep hypnotic states. Self-hypnosis was also achieved, but to a lesser degree of depth.

Case 2 had a presenting personality that was quite different. She was socially outgoing with varied interests; she tended to be quite dominant in interpersonal relationships, and was excessively demanding at times. This was an individual for whom it was important to be in control. Although not tested on a standard scale of hypnotic susceptibility she was clearly low in hypnotizability. Her success with alpha training as a method of reducing pain was quite consistent with recent findings by Dumas[25] that suggest an inverse relationship between hypnotizability and alpha control. The data that she produced, however, was not consistent with the hypothesis that increased alpha production would result in decreased use of the TNS and lower ratings of subjective units of discomfort. Rather, alpha training reflected that she did as well in the first training session as she did in the final training session. There was a great deal of variability in alpha production in training sessions between the first and final ones. It did not seem that the alpha training had a tangible affect on either the clinical changes or the reported changes observed. It has been known for a number of years that one's sense of control functions to diminish the level of perceived pain[5] and the issue of control seems to be the variable producing the changes observed in this case.

Case 3 has been followed informally for the last 16 months during which time he had regained most of the function in his hands. In addition, he also appeared to be somewhat less compulsive and anxious and able to reduce his reliance on antidepressant medication. Could it be that the sense of control he gained from his biofeedback experience had affected other areas of functioning? In this case, biofeedback seems to have resulted in unexpected positive "side effects."

Summary

Clinical management of pain using biofeedback and hypnosis is discussed in three cases. The first case employed the use of hypnosis exclusively to change the perception of pain resulting from a traumatic injury. The second case involved the use of multiple biofeedback, as well as psychotherapeutic methods, in the management of persistent low back pain that was initially diagnosed as tendonitis. The third case discussed reduction of residual pain and increased sensitivity as a result of frostbite using temperature biofeedback. It was noted that individual personality factors in each case needed to be considered in developing an effective method for management of pain.

Hypnosis and biofeedback certainly seem to be effective tools in the control and management of pain, even pain that is the result of organic disease

or injury. Future research should focus on investigating the personality factors that seem to contribute to the relative effectiveness of pain management methods whether hypnosis, biofeedback, or a combination of several modalities.

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Swallowing newt proves fatal

Don't swallow a newt. It's poisonous. A newt is a small salamander. It is not meant to be eaten.

Perhaps it was merely a step beyond the fad of some years back of swallowing goldfish. A 29-year-old Oregon man, after putting away a half pint of whiskey, swallowed an eight-inch newt on a dare. By late afternoon, his college-type antic had cost him his life.

Certain newts possess a neurotoxin that can be fatal if ingested, according to an article in the July 17 issue of the Journal of the American Medical Association. Leading the pack is the *Taricha granulosa*, an Oregon rough-skinned newt that is dark brown with a bright orange ventral marking. Found in Oregon, California, and southern Alaska, the *Taricha* is 100 times as poisonous as its east coast cousin, the *Notolphthalmus* of the Carolinas.

Tetordotoxin, a nonprotein neurotoxin, is found in the skin and tissues of at least 40 types of puffer fish and newts. The toxin, when ingested, blocks nerve signals, causing the failure of muscle contractions. This condition leads to a reduction in blood pressure, muscular and respiratory paralysis and, ultimately, death.

The average *Taricha* contains enough toxin to kill 1,500 white mice. Man, it seems, is the only mammal willing to eat newts.

Victims of *Taricha* poisoning should be forced to vomit. Fluid intake should be increased and blood pressure monitored until medical attention arrives.

In a similar incident in Brookings, Oregon, a 26-year-old drinker swallowed five *Taricha*. One hour later he began vomiting and by the next day his only complaint was dizzyness when he turned his head.

Death is secondary to respiratory paralysis. With prompt medical attention, the outlook for survival with no lasting effects is good.

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Correlation Conferences in Radiology and Pathology

Bronx Municipal Hospital Center
Albert Einstein College of Medicine
The Bronx, New York
Editors
THEODORE R. SMITH, M.D.
Associate Professor, Department of Radiology
BOYCE BENNETT, M.D.
Professor, Department of Pathology

Dense Bones and Splenomegaly

Case history

A 65-year-old white male, whose chief complaint was fatigue, was otherwise asymptomatic and felt fairly well. On physical examination, the only pertinent positive finding was a fullness to palpation in the left upper quadrant of the abdomen, suggesting a nontender mass. On blood examination, the hemoglobin was 8.7 Gm. per 100 ml., hematocrit 25, and WBC (white blood-cell) count 12,400, with a marked shift to the left; nucleated and tear-drop red blood cells were present on smear, and the platelet count was 60,000.

The barium enema, GI (gastrointestinal) series, and intravenous pyelogram disclosed no abnormalities, except for a left upper quadrant mass which was presumed to be an enlarged spleen. The CAT (computed axial tomogram) scan revealed a very large spleen.

Dr. Kyunghee Cho*: A single posteroanterior view of the chest reveals a diffuse increase in bone density (Fig. 1A). There is no cardiomegaly and the lungs are clear. A supine film of the abdomen demonstrates a huge spleen displacing the gas-filled stomach medially (Fig. 1B). Again, there is diffuse sclerosis of the bony structures with coarse thickening of the trabeculae. There are no associated areas of lucency. An anteroposterior view from the GI series shows marked splenomegaly, pushing the stomach medially and displacing jejunum and splenic flexure of the colon downward (Fig. 1C). Intravenous urogram demonstrates a normal right kidney. The left kidney is compressed by the large spleen, resulting in enlargement of the renal silhouette and flattening of the calyces. The CAT scan of the upper abdomen confirms the presence of a huge spleen, filling much of the left upper abdomen (Fig. 1D). There is no evidence of other mass lesions or adenopathy.

In an elderly anemic patient with a uniform diffuse increase in overall bone density and splenomegaly, a prime diagnostic possibility should be agnogenic myeloid metaplasia (myelofibrosis), characterized by fibrotic or sclerotic bone marrow of unknown etiologic origin, and extramedullary hematopoiesis.[1–3] Clinically, agnogenic myeloid metaplasia affects middle-aged or elderly patients with no sex predilection. The history usually is that of fatigue, pallor, and abdominal fullness, the abdominal fullness being referable to the enlarged spleen. Commonly there is a bleeding tendency. Splenomegaly is almost always present, and hepatomegaly is seen in 40 percent of the cases,[2] with most patients showing anemia of varying degree. In the peripheral blood, there are often nucleated red cells present as well as young members of the neutrophilic series.[1] The WBC count ranges from extreme leukopenia to leukocytosis, so that leukemia may sometimes be suspected. Bone marrow biopsy often is unsuccessful due to thick sclerotic bone, which may be a diagnostic clue.[1]

Myelofibrosis may produce the following roentgenogram findings: (1) splenomegaly, (2) hepatomegaly, and (3) osteosclerosis; sclerosis of bone is present in about one half the cases. The involved bones are not expanded, and there is no change in their external contour; the sclerosis is due to the thickening of individual bone trabeculae of the spongiosa as well as to formation of new trabecula of bone; this increase in bone density is generally diffuse. Usually involved are the thoracic cage, dorsal and lumbar spine, pelvic bones, humeri, and femora. There sometimes may be uniform increased density associated with patchy areas of condensation or small rounded zones of radiolucency, which is considered to be due to myelofibrosis.[1,2]

Some other conditions that may produce a diffuse increase in bone density include diffuse osteoblastic metastases (as in some cases of prostatic carcinoma or breast carcinoma and occasionally lymphoma), fluorinosis, osteopetrosis, mastocytosis, Paget's disease, hypothyroidism, and, very rarely, chronic leukemia and treated sclerosed multiple myeloma. There are several entities that at times show splenomegaly in addition to osteosclerosis and that may be considered in the differential diagnosis. In most cases, there are radiographic and clinical features

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* Resident in Radiology.

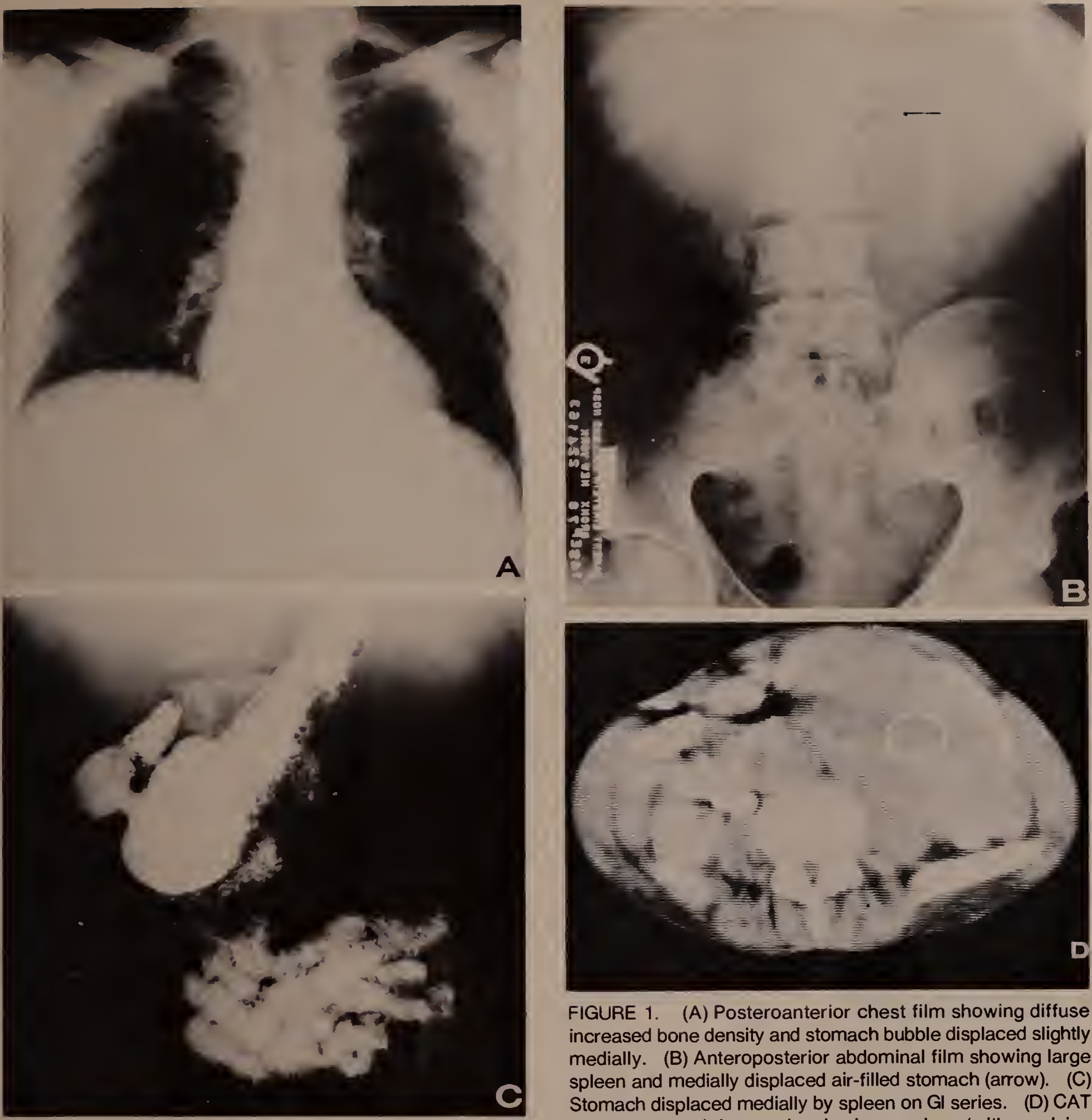

FIGURE 1. (A) Posteroanterior chest film showing diffuse increased bone density and stomach bubble displaced slightly medially. (B) Anteroposterior abdominal film showing large spleen and medially displaced air-filled stomach (arrow). (C) Stomach displaced medially by spleen on GI series. (D) CAT scan of upper abdomen showing large spleen (with overlying cursor).

that differentiate these conditions. When there are blastic metastases in Hodgkin's disease and lymphosarcoma, the sclerosis is usually localized in nature, involving only one or a few bones. Leukemia rarely can cause diffuse osteosclerosis. In some of the chronic hemolytic anemias, notably Cooley's anemia and sickle cell anemia, the pattern of bone changes is usually quite different[2]; the same can be said for osteopetrosis. In fluorinosis the increased bone density is due to thickening of the cortical-endosteal apposition of bone. There may be some periosteal excrescences and calcification of various ligaments, particularly in the paravertebral region. The clinical history, peripheral blood, and absence of splenomegaly would further differentiate these two conditions. Mastocytosis is sometimes radiologically similar to myelofibrosis, and anemia may be found in both conditions. Mastocytosis (urticaria pigmentosa) may show wide-spread bony sclerosis, characteristic skin lesions (50 percent of cases), and hepatosplenomegaly. The bone densities may be diffuse or spotty in nature.

Treatment of agnogenic myeloid metaplasia is symptomatic and supportive, including blood transfusions and steroids. In certain selected patients, splenectomy may be palliative, but this procedure is generally contraindicated. Busulfan (Myleran) has been used in a few cases.[1]

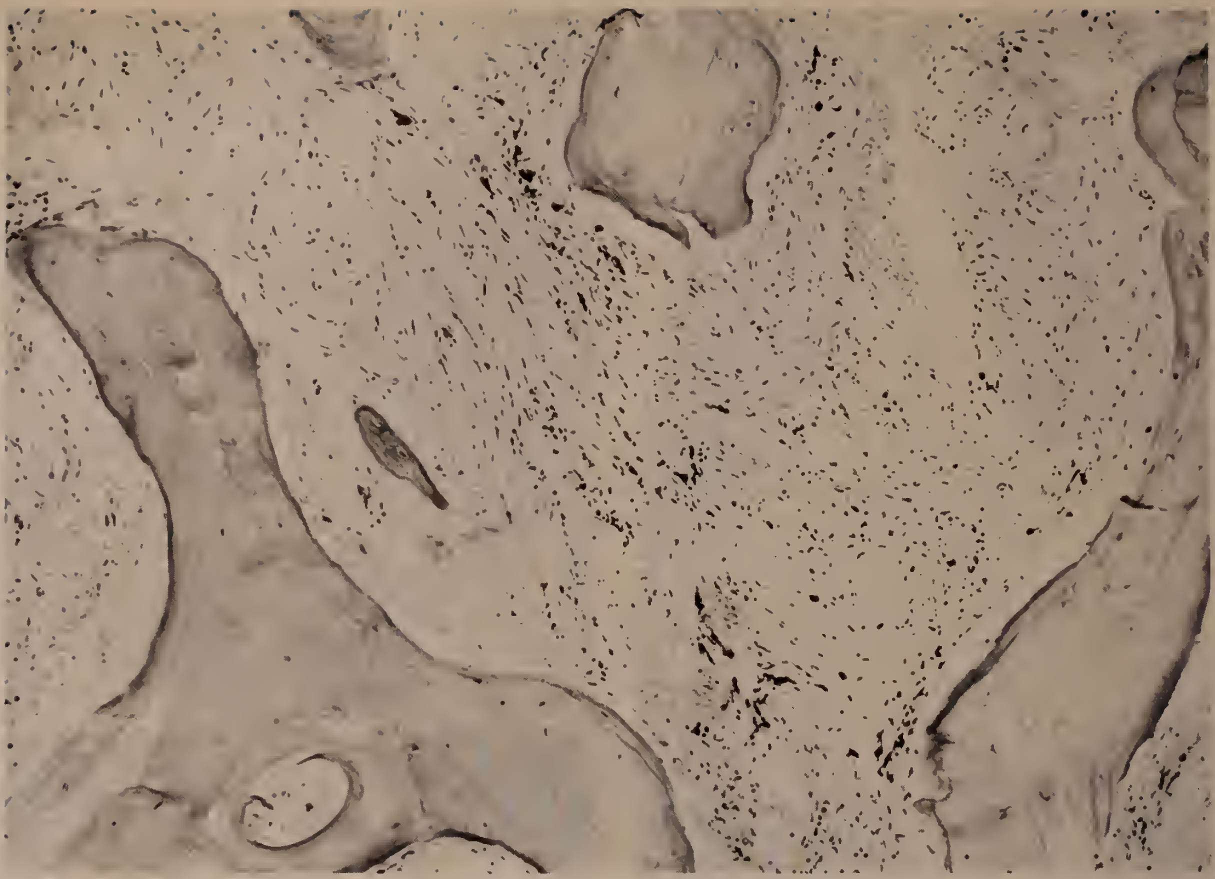

FIGURE 2. Photomicrograph of bone marrow biopsy showing replacement of marrow by fibrous tissue. Bone trabeculae are also broader than expected. Only occasional clusters of hematopoietic cells remain (original magnification X 125).

The prognosis of myelofibrosis is variable. Symptoms are usually present for a long time prior to the diagnosis. The duration of survival varies from a few months to many years, the average being in the range of 3 to 4 years.[2]

Pathologic discussion

Boyce Bennett, M.D.*: A bone marrow biopsy showed striking histologic abnormalities. The marrow itself was nearly entirely replaced by proliferating fibroblasts, and only occasional islands of hematopoiesis and widely scattered lipocytes remained (Fig. 2). The remaining hematopoietic elements were predominately erythroid in nature. In addition, the bony trabeculae, more numerous than expected, were considerably widened so that a greater portion of the marrow than usual was occupied by bone.

This biopsy therefore shows one stage in the evolution of the continuum of disease processes known as myeloproliferative disorders. This disease usually begins with diffuse hypercellularity of all hematopoietic elements, extramedullary hematopoiesis predominately in the spleen and liver, and pancytosis in the peripheral blood.[4]

Eventually fibrosis of the marrow occurs, with fibrosis alternating with hyperplasia of remaining hematopoietic elements. Finally, severe fibrosis of the marrow is seen, and at this stage the bony trabeculae become prominent enough to occupy more than a third of the marrow. The extramedullary sites become the primary hematopoietic tissues, but, despite this, polycythemia gives way to anemia, thrombocytopenia, and occasionally granulocytopenia.[5] Some of these cases progress to leukemia, although most of these appear to be correlated with the treatment of the myeloproliferative disease.[4]

Recent investigations have indicated that myeloproliferative disorders are diseases of hematopoietic stem cells and that all proliferating elements are monoclonal in origin.[6] Studies of the proliferating fibroblasts of the bone marrow, however, have indicated that the marrow fibrosis does not share the same monoclonal origin as do the hematopoietic cells, and therefore the fibroblasts are considered reactive rather than part of the myeloproliferative process.[7] The cause of these disorders remains unknown; hence a common name, agnogenic myeloid metaplasia (myelofibrosis), is given to this disease entity.

Final diagnosis

Myelofibrosis with myeloid metaplasia

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* Professor, Department of Pathology.

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Research further indites smoking in heart attacks

Although the health hazards of cigarette smoking have been well established for many years, researchers in medical schools and other centers throughout the world continue to build on the body of evidence.

In the August 21 Journal of the American Medical Association a Milwaukee research team report on further studies of smoking and heart attacks.

The work confirms that there is a strong relationship between smoking and coronary artery occlusion and myocardial infarction.

The Wisconsin project studied 3,997 men, age 35 to 65 years, who had undergone a diagnostic test for heart disease. The project was carried out at St. Luke's Hospital and Wood Veterans Administration Medical Center in Milwaukee.

Smoking adds nicotine stress to the heart by increasing blood pressure and heart rate, says Arthur J. Hartz, Ph.D., of the Medical College of Wisconsin, Milwaukee.

The body oxygen-carrying abilities are reduced, thus decreasing the oxygen supply to the heart. Carbon monoxide in the blood from smoking boosts the risk of clots that could block the heart. Smoking raises the heart's tendency toward wild, irregular beating.

In an accompanying editorial, William B. Kannel, M.D., of Boston University Medical Center, declares that the Wisconsin study provides some needed additional insights into the association between cigarette smoking and coronary heart disease. The risk increases progressively with the number of cigarettes smoked per day, Dr. Kannel says.

The Boston physician also points out that those who quit smoking have only half the risk of those who continue to smoke. Substantial immediate benefit can be obtained by giving up the habit, regardless of how long the smoker had indulged in "self-induced air pollution," Dr. Kannel declares.

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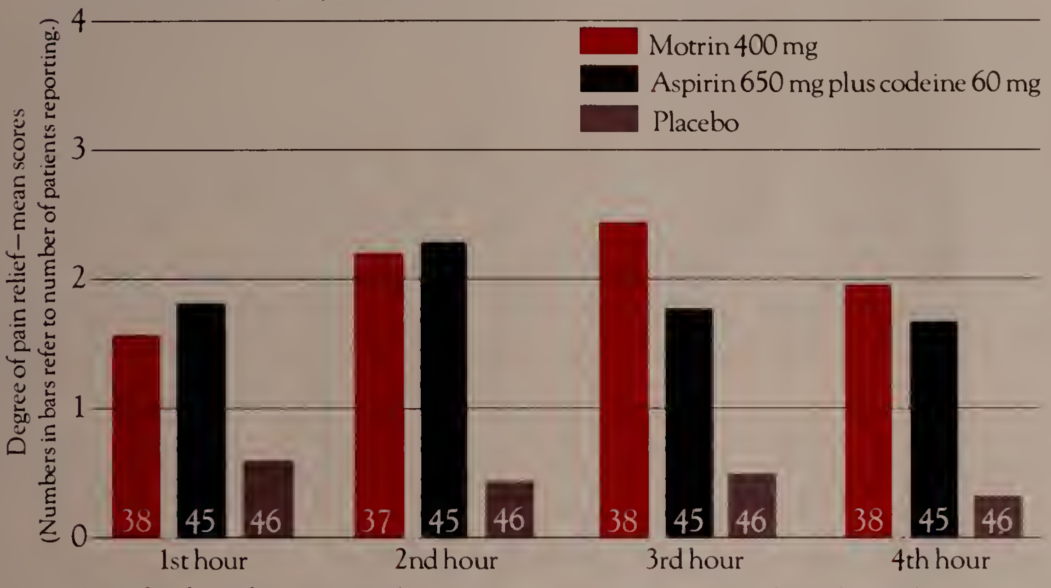
A *Motrin* 400 mg dose relieved postsurgical dental pain as effectively as a combination of 650 mg aspirin and 60 mg codeine (two aspirin-with-codeine No. 3 tablets) in a study of 129 patients. In this double-blind, placebo-controlled, randomized study, no statistically significant difference in relief of pain was noted at 1, 2, and 4 hours between the *Motrin* and aspirin-with-codeine groups… with *Motrin* being significantly more effective ($p = 0.03$) at the three-hour interval. Active treatment was significantly more effective ($p < 0.0001$) than placebo at all time intervals.

Comparison of pain relief
Motrin vs aspirin-codeine combination

4 = Excellent relief 3 = Good relief 2 = Fair relief 1 = Poor relief 0 = No relief



Time after drug administration (hours)

Data on file at The Upjohn Company.

One tablet q4-6h prn
For relief of mild to moderate pain:

Motrin® 400 mg TABLETS

ibuprofen, Upjohn

• Not a narcotic • Not addictive • Not habit forming • Nonscheduled • Acts peripherally • Relieves pain rapidly • Relieves inflammation • Indicated in acute and chronic pain • Well tolerated (The most common side effect with *Motrin* is mild gastrointestinal disturbance.)

Please turn the page for a brief summary of prescribing information.

Upjohn

Motrin® (ibuprofen)
now proved an effective analgesic for mild to moderate pain

Motrin® Tablets (ibuprofen, Upjohn)

Indications and Usage: Relief of mild to moderate pain.

Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin:* Used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy nor by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400, or 600 mg t.i.d. or q.i.d. Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain.

Do not exceed 2400 mg per day.

Caution: Federal law prohibits dispensing without prescription.

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MED B-4-S

More aggressive treatment urged for patients with prostate cancer

A large number of men with prostate cancer that has not spread beyond the original tumor site should be receiving curative radiation therapy or surgery, but aren't, according to the ACS (American College of Surgeons) and the American College of Radiology.

A Medical News report in the October 16 Journal of the American Medical Association states that findings from a 1979 ACS survey show that most of these patients are receiving either no treatment at all or treatments that offer relief from symptoms and slow the progress of the tumor but do not attempt a cure. These palliative measurements include removing part of the enlarged prostate to relieve urine retention, estrogen therapy, and removal of one or both testes.

More aggressive treatments, such as radiation therapy and removal of the entire prostate gland, are not being attempted as often as they should, say spokesmen for the two specialty groups.

One possible reason for the lack of aggressive therapy is that patients seem to do well without it. ACS figures indicate that, regardless of the type of treatment received, 75 percent of patients with the least serious stage of the disease are alive five years after diagnosis. Among patients with the most serious stage of the disease, 50 percent are alive after five years.

Side effects may be another reason for avoiding more curative treatment. Surgery is almost always followed by impotence and in 10 to 15 percent of cases by incontinence. Impotence follows radiation therapy in about 30 to 40 percent of cases.

In addition, most physicians think of prostate cancer as a slow-growing malignancy that occurs primarily in elderly men. They feel they must weigh the risks and side effects of radiation and surgery against the limited number of years naturally remaining to their patients.

Most men are living longer, however, so prostate cancer deaths are increasing, according to Gerald P. Murphy, M.D., director of Roswell Park Memorial Institute, Buffalo, N.Y. For that reason, physicians should think about treating the disease more aggressively, he says.

Radiologists contend that radiation therapy is the prime treatment for prostate cancer. They cite a higher survival rate after three years as compared with surgery, lower incidence of associated illness, and lower cost when compared to surgery.

Surgeons feel that more long-term studies—up to 10 or 15 years—are needed before a significant comparison of survival rates can be made.

Electrocardiograms of the Month

Montefiore Hospital and Medical Center
The Bronx, New York

Editors
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Head, Department of Electrocardiography
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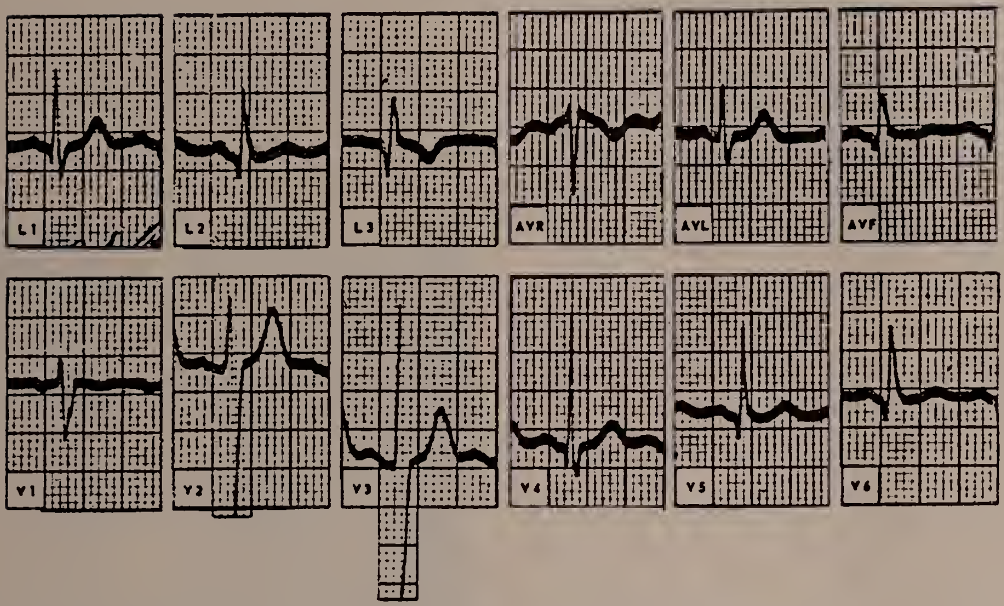
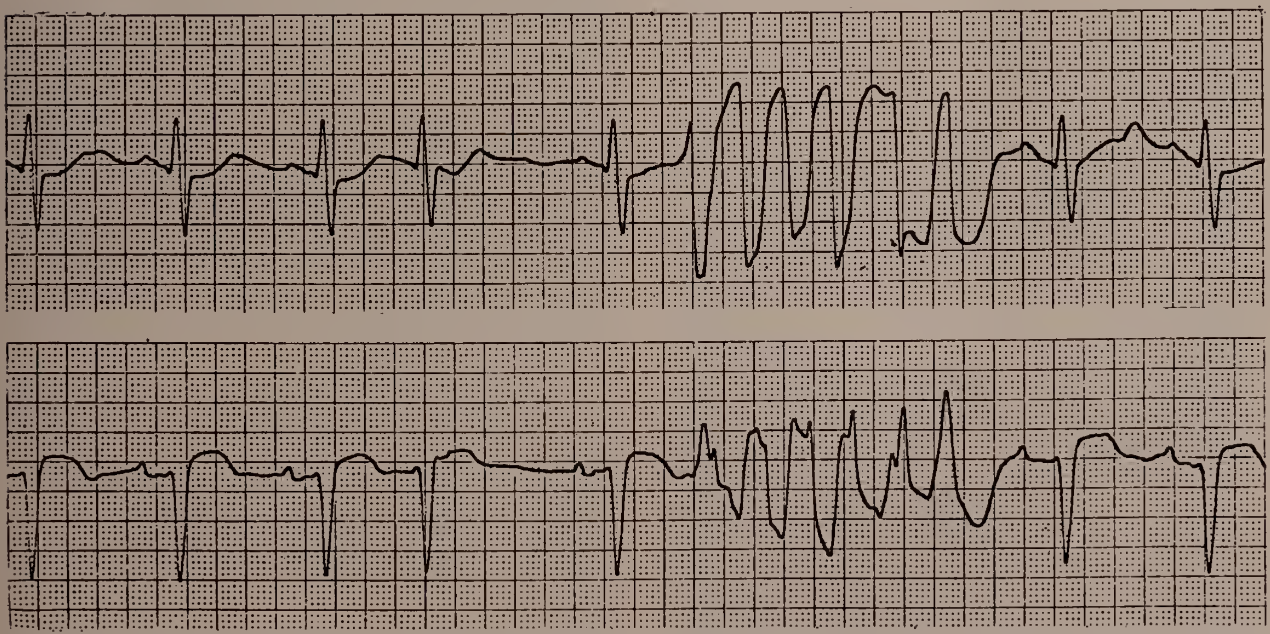


QUESTION 329. The tracing was obtained as a routine preoperative study on a 68-year-old man admitted for elective abdominal surgery. What is the diagnosis?



QUESTION 330. The tracing is a representative strip taken from a Holter monitor. The monitor tracing had been obtained because this 72-year-old man had recurrent episodes of dizziness and occasional bouts of syncope. What is the rhythm?

Electrocardiograms of the Month

ELUCIDATION

Question 329. The rhythm is sinus. The P-R interval is normal at 0.16 second. The QRS duration measures 0.10 second. There are small Q waves in leads II, III, and aVF. The S-T segment is slightly elevated with T wave inverted in lead III. These findings, while sometimes seen in a normal individual, may indicate an old inferior-wall infarction. Prominent Q waves are present in V_5 and V_6 which may be normal or could be the residue of a lateral wall myocardial infarction.

In interpreting a tracing of this sort, the electrocardiographer cannot make a definite statement as to the presence or absence of a myocardial infarction.

Question 330. The rhythm is regular sinus for the first three beats with a normal P-R interval of 0.20 second and a widened QRS duration of 0.14 second. Beat 4 is premature and is not preceded by a P wave. Its configuration resembles the usual QRS. The S-T segment following this QRS is notched, indicative of atrial activity. Measuring the previous P-P interval demonstrates that the notch after the QRS is the regular sinus P wave. Beat 4 is a junctional premature beat. It is followed by a sinus beat and then by a burst of six aberrantly conducted wide complexes at a rate of approximately 200 per minute. This is a salvo of ventricular tachycardia. Sinus rhythm then resumes. Short runs of ventricular tachycardia can cause dizziness and, if more prolonged, syncope. This arrhythmia may be a precursor of ventricular fibrillation and sudden death.

"Test-tube baby" technique called largely a failure

The so-called "Test-Tube Baby" approach to enhancing human fertility has been largely a failure and offers small chance to an individual couple of becoming parents.

This is the conclusion of a report from the pregnancy research branch of the National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, Md.

At the same time, Gary D. Hodgen, Ph.D., chief of the branch, reports on promising research with monkeys that offers hope of solving the problem by another approach. The report is in the August 7 Journal of the American Medical Association.

In recent years wide public attention has been focused on fertility experiments in Britain, Australia, and the United States. The approach is to remove the egg from the woman who desires to become pregnant but is prevented by blockage of the fallopian tube. The egg is combined in the laboratory with sperm from the father to be. Fertilization results, and the embryo is then transferred to the woman's uterus for continued growth, hopefully leading to normal birth.

The problem is that the rate of successful pregnancies leading to normal births has been so small the "Test-Tube Baby" projects have been largely a disappointment. A scattered few normal births from fertilization outside the mother have been recorded, but the failures have numbered in the hundreds.

Dr. Hodgen reports that the failures are caused by an inherent problem. The embryo fertilized in the test tube grows properly for some 24 hours only, he found. Thereafter the rate of growth slows considerably behind that of normally fertilized embryo. This slower growth rate effectively prevents the normal development of all but a rare few of the implanted embryos.

In the new technique worked out with monkeys, the egg is lifted carefully from its base, moved down past the point of blockage, and left alone. Fertilization then takes place by nature's method, sexual intercourse.

Success ratio with this method parallels natural fertilization from intercourse among individuals with no blockage problems, 16 percent, Dr. Hodgen says.

Perhaps as many as 500,000 American women are infertile as a result of fallopian tube dysfunction, the NIH scientist points out.

Dr. Hodgen stressed that his work has been performed only in animals to date. Results thus far appear promising to offer a better chance for motherhood to individuals with tube blockage, he says.

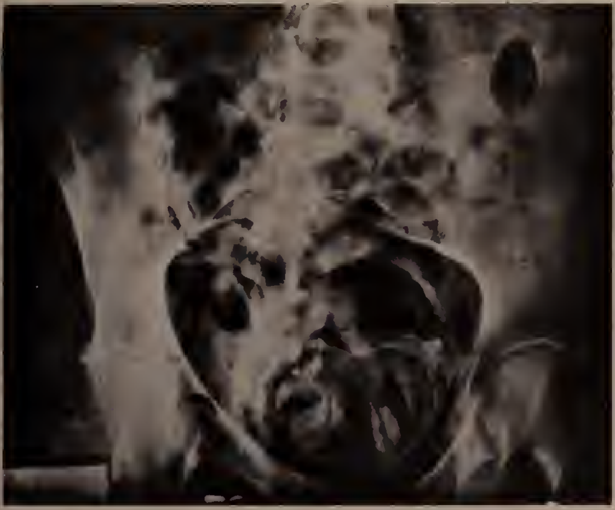
Radiologic Problem of the Month

Montefiore Hospital and Medical Center
The Bronx, New York

Editor

KAKARLA SUBBARAO, M.D.
Professor of Radiology at
Albert Einstein College of Medicine

Abnormal Shadow in Pelvic Cavity



X-ray film of a 48-year-old woman with complaint of dysuria of several months duration.

Elucidation

Anteroposterior view of the pelvis reveals nonspecific distribution of gas in the bowel. However, in the region of the bladder is seen a strange-looking structure with multiple arc-like lucencies alternating with dense septae. This laminated, gas-filled structure does not represent pneumatosis of the bladder because multiple curvilinear septae are found in between the gas lucencies. Emphysematous cystitis is not considered because the gas is not distributed either in bubbly form or in the form of peripheral lucency. This abnormal structure does not represent fecal material in the colon, nor does it resemble any familiar foreign body. The laminated appearance with alternate lucencies in the region of the bladder represents a "fungus ball," and this diagnosis should be considered strongly in the presence of history of dysuria.

"Fungus ball" of the urinary bladder is generally due to infection by *Candida albicans*. It assumes a round or oval shape and contains gas-filled pockets. Fungus balls are often encountered in women in their fifth and sixth decades. The source of infection in women is probably vaginal moniliasis.[1] The majority of these patients have diabetes mellitus. Candidiasis of the urinary tract may appear in three different clinical entities. The most common setting is chronic pyelonephritis, the second is bladder infection with a fungus ball, and the least common is ureteral obstruction.[2] *C. albicans* is frequently isolated from the feces, skin, mouth, or vagina of apparently healthy individuals and may cause no symptoms or produce only superficial inflammatory process. *C. albicans* is more an opportunistic infection, as encountered in debilitating diseases and in patients undergoing immunosuppressive therapy. In disseminated infection, the kidney is the organ most frequently involved. However, *C. albicans* can be the primary cause, in some instances, of urinary tract infection.

Guze and Haley[3] examined 1,500 randomly selected urine specimens that were subjected to bacteriologic study for fungi and found 15 of the specimens showed over 1,000 organisms per milliliter of urine. This was considered by the authors to be significant infection.

Pathologic study of infected bladders may demonstrate superficial "thrush-like" lesions or, occasionally, pseudomembrane formation. In longstanding cases, round fungus balls measuring up to 10 cm. in diameter may be encountered. The gross specimen is whitish-tan in color, leathery in consistency, and not attached to the bladder wall. The fungus ball is made up of mycelia and spores of *C. albicans*.

On radiologic film, fungus ball of the bladder presents a typical appearance. An oval or rounded opacity is seen with multiple arc-like lucencies, which represent gas pockets produced by the fermentation of sugars. High urinary sugar levels afford an excellent medium for fungal growth. Films of the bladder taken with a horizontal beam may demonstrate the free nature of the "fungus ball," but, generally the fungus ball of the urinary bladder does not move as freely as it does in a chronic cavity of the lung.

In the differential diagnosis, a laminated calculus and an echinococcal cyst may be considered. A calculus often shows dense laminated calcification. Echinococcal cysts of the urinary bladder that are confined to the lumen are extremely rare.

Treatment includes removal of fungus ball, alkalization of urine, and local use of fungicides. Recurrences have been reported.

Diagnosis

Fungus ball of urinary bladder due to *Candida albicans*

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Post-war stress affects 1.5 million Vietnam Vets

The first U.S. attack on North Vietnam began July 30, 1964. During the nine years that the war raged, 57,002 Americans forfeited their lives in the rice paddies and jungles of Indochina. For them, the suffering has ended. But for hundreds of thousands of others, the agony continues.

Researchers believe that as many as 1.5 million Vietnam veterans may need psychiatric help for war related stress, according to an article in the August 14 Journal of the American Medical Association.

Even though symptoms are well-defined, the unusual characteristics of the war, coupled with negative public opinion, have created a hesitancy in vets to talk about their problems. This hesitancy has caused many to turn elsewhere for help, often with disastrous results, says John Ingram Walker, M.D., psychiatrist at Duke University Medical Center and the Veterans Administration Medical Center, Durham, N.C.

A total of 2,769,000 men served in Vietnam. The number of these veterans currently hospitalized for alcohol-related problems more than doubled from 1970 to 1977, moving from 13 percent to 31 percent of all treated. Vietnam vets account for 39 percent of the 10,000 inpatients and 55 percent of the 13,000 outpatients being treated for drug abuse in U.S. VA hospitals.

Approximately 29,000 Vietnam vets are currently in state or federal prisons, 37,500 are out on parole, 250,000 are under probationary supervision, and 87,000 are awaiting trials. The suicide rate for Vietnam vets under the age of 34 is 23 percent higher than that of nonveterans in the same age group, Dr. Walker says.

The post-traumatic stress suffered by the vet often takes a backseat to more immediate problems such as drug or alcohol abuse, making diagnosis difficult. Because of their extreme reluctance to talk about the war, vets must often be quizzed and cross-examined before the physician is able to pry definite symptoms out of them.

Sufferers of post-traumatic stress often experience mental flashbacks and intensified memories of wartime experiences. They complain of recurrent dreams and being seized by the feeling that the war is still going on. Veterans wives often report husbands who wake in the middle of the night screaming or striking out at them while they sleep, he writes.

Further characteristics of post-traumatic stress include feelings of alienation and a diminished interest in events, exaggerated startle response, sleep disturbance, survival guilt, difficulty in concentrating and avoidance of memory jarring experiences.

The unusual nature of the Vietnam war, the longest in American history, is partially to blame for the vet's inability to cope with his problems. Unlike soldiers of other wars, individuals rather than units were moved and rotated throughout the war, causing feelings of isolation in the soldier. The lack of home support, the absence of well-defined front battle lines, and almost consistent inability to distinguish between enemy combat troops and civilians produced feelings of cynicism and mistrust, Dr. Walker declares.

Vets suffering from post-traumatic stress may seek help from one of the 86 "storefront" counseling centers throughout the U.S. The centers, established with the help of a $9.9 million grant from Congress, are staffed both by medical professionals and Vietnam vets, providing a link between the individual who needs counseling and the VA hospital for more serious cases.

Postpartum Myocardial Infarction

Associated with normal coronary arteries

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Myocardial infarction is rare in young women and rarely complicates pregnancy or the puerperium.[1,2] We report here the case of a 34-year-old woman who suffered an acute anterior myocardial infarction four days after a normal delivery. She subsequently underwent cardiac catheterization and coronary arteriography. To our knowledge she is the third case reported in the English literature in whom hemodynamic and angiographic studies were obtained after a postpartum myocardial infarction.[2,3]

Case report

This 34-year-old white woman of Italian descent delivered her third live child uneventfully on May 11, 1978. Her previous health had been excellent. Her pregnancy had been uncomplicated. Blood loss at the time of delivery was no more than 300 ml. She was given methylergonovine maleate 0.2 mg. every four hours, for six doses, and chlorotrianisene 72 mg. every 12 hours for four doses, immediately following delivery. She was discharged home on the morning of May 15, 1978.

At 5 P.M. on May 15, 1978, while preparing dinner, she experienced the sudden onset of severe retrosternal pressure-type pain associated with pain and tingling in the right arm. There was no associated shortness of breath, dizziness, syncope, diaphoresis, or vomiting, but she did have some nausea. Because of persistent chest pain, she was brought to the emergency department at 5:55 P.M. An acute myocardial infarction was suspected and the patient was admitted to the coronary care unit.

There was no prior history of myocardial infarction, angina, hypertension, diabetes, hyperlipidemia, or cigarette use. She had documented thalassemia minor. She had been on hydroxyprogesterone caproate weekly for four weeks early in her first trimester. There was no history of estrogen use between her previous pregnancies.

The family history was significant for hypertension in her younger sister, mother, and maternal grandmother. There was no family history of angina, hyperlipidemia, or dissecting aneurysm. Her maternal grandfather had had a myocardial infarction in his 80s.

Findings on review of the systems were unremarkable except for some bilateral calf tightness and bilateral scant pedal edema after her delivery.

On examination the patient was alert and in pain. She was slightly pale but not in any respiratory distress. Her pulse was 90 and regular; blood pressure 160/110; and her temperature normal. Findings on funduscopic examination were normal. Cardiovascular examination results were normal except for a prominent fourth heart sound and a short soft systolic ejection murmur, heard best at the lower left sternal border and apex; and the peripheral pulses were normal. There was slight pitting edema of the ankles, but no physical evidence for deep vein thrombosis.

Her hemoglobin was 9.4, hematocrit 29.9, and white blood cell count 13,300 with 87 percent neutrophils, 1 percent eosinophils, 7 percent lymphocytes, and 5 percent monocytes; initial aspartate aminotransferase was 52; lactic dehydrogenase was 232; and creatine phosphokinase was 258. The creatinine phosphokinase peaked at 800 with a positive MB fraction. Arterial blood pH was 7.45, pCO_2 30 torr, pO_2 80 torr, and bicarbonate 21 mEq. per liter. Serial electrocardiograms confirmed an acute anterior wall myocardial infarction (Fig. 1). Findings on chest x-ray films were normal. Other laboratory results are shown in Table I.

The patient developed acute left ventricular failure six hours later which responded well to digoxin and furosemide. She developed frequent premature ventricular contractions which could not be controlled with lidocaine hydrochloride, but which responded to intravenous procainamide hydrochloride.

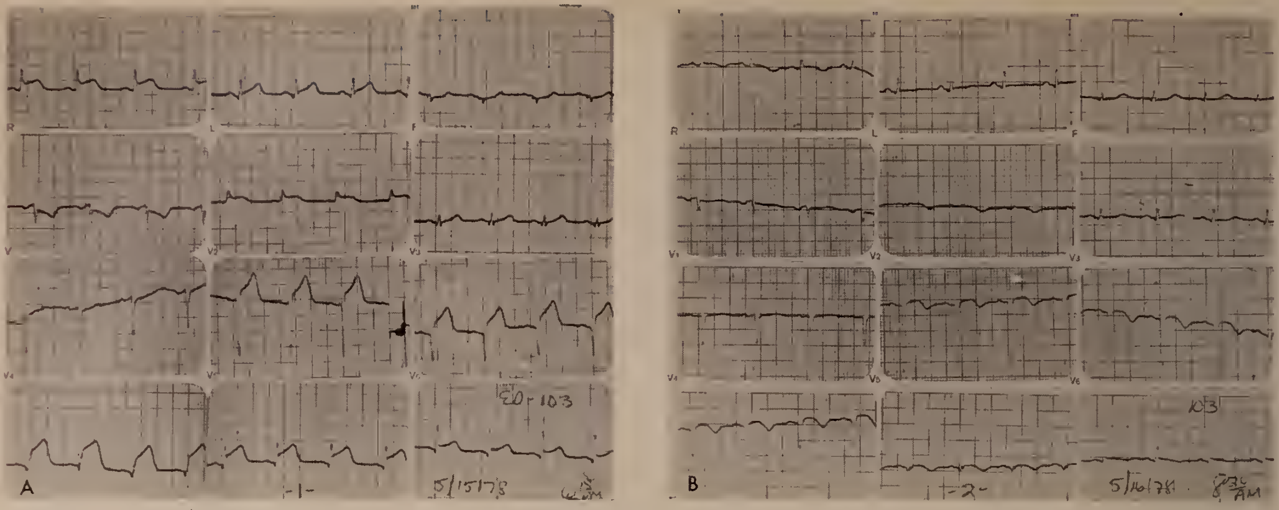

FIGURE 1. Electrocardiograms. (A) On admission showing acute injury current. (B) On second hospital day showing evolutionary ST-T abnormalities and development of pathologic Q waves diagnostic of transmural anteroseptal myocardial infarction.

TABLE I. Laboratory Data

Diagnostic Tests	May, 1978	June, 1978	September, 1979
Hemoglobin Gm./dl.	9.4	8.9	10.7
Hemoglobin electrophoresis	A_1 93%, A_2 7%	. . .	. . .
White blood count × 10^3/mm.^{3}	13.3	4.5	4.4
Platelet count	211,000	. . .	. . .
Reticulocyte count (percent)	1.5	1.2	2.2
Erythrocyte sedimentation rate mm./hr.	85	50	27
Prothrombin time (normal 11 to 14 sec.)	12	. . .	. . .
Partial thromboplastin time (normal 20 to 30 sec.)	30	. . .	. . .
Circulating platelet aggregates (by the method of Wu and Hoak) normal 0.8 to 1.0	0.81	. . .	. . .
Spontaneous platelet aggregation	none	. . .	. . .
Rapid plasma reagin	neg.	. . .	. . .
Lupus erythematosus cell	neg.	neg.	neg.
Rheumatoid factor	neg.	. . .	. . .
Antinuclear antibody titer	1:160	1:520	1:80
Quantitative anti-DNA antibody (normal 0 to 15 percent)	. . .	12	. . .
Immunogram	normal	. . .	. . .
Cholesterol mg./dl.	186	. . .	147
Triglycerides mg./dl.	186	. . .	58
High density lipoprotein mg./dl.	. . .	49	59
Cholesterol/high density lipoprotein/ratio	. . .	3.8	2.5

Serial chest x-ray films showed no increase in heart size or persistent congestive heart failure. Ventilation-perfusion lung scans showed no evidence for pulmonary emboli. M-mode echocardiography on May 16, 1978, demonstrated a very small anterior and posterior pericardial effusion and there was no evidence for asymmetric septal hypertrophy, chamber enlargement, intracardiac tumor, or valvular pathology.

As indicated in Table I, there was no evidence for a coagulopathy, and aside from the rather nonspecific finding of a positive test result for antinuclear antibody, there was no convincing evidence for a collagen vascular disease.

The patient had no recurrent chest pain and was discharged home on digoxin, sulfinpyrazone, folic acid, and ferrous sulphate. The patient has had no further cardiovascular symptoms. Results of a maximal treadmill exercise test on May 31, 1979, were negative. Because of the patient's interest in knowing her long-term prognosis, and her physician's interest in knowing her coronary anatomy to help in her management, cardiac catheterization with coronary arteriography was recommended.

On August 13, 1979, the patient underwent diagnostic cardiac catheterization, which revealed the following data: aorta 125/80 mm.Hg, aorta mean 100 mm.Hg, left ventricle 125/12 mm.Hg, left ventricular and diastolic pressure (post contrast) 16 mm.Hg, pulmonary capillary wedge mean 4 mm.Hg, pulmonary artery 25/16 mm.Hg, pulmonary artery mean 20 mm.Hg, right ventricle 25/4 mm.Hg, right atrium mean 4 mm.Hg, cardiac output 3.8 L. per minute, cardiac index 2.2 L. per minute per square meter of body surface, systemic vascular resistance 25 U, total pulmonary resistance 9 U, pulmonary vascular re-

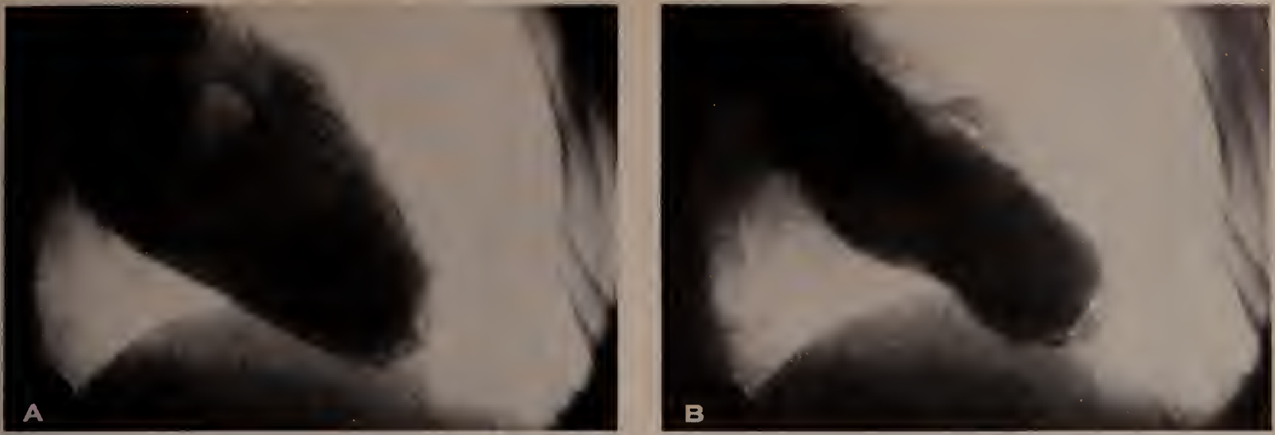

FIGURE 2. Left ventriculographic frames showing moderately large antero-apical akinetic segment with probable intracavitary thrombus. (A) End diastolic. (B) End systolic.

sistance 1.6 U, end diastolic volume 221 ml., end diastolic volume in millimeters per square meter 128, systolic volume 102 ml., and ejection fraction .46. Right heart catheterization demonstrated a slightly elevated pulmonary artery mean pressure, a somewhat low cardiac index, and no evidence by diagnostic oximetry of an intracardiac shunt. A right atrial angiogram performed during the Valsalva maneuver failed to reveal a right-to-left interatrial shunt. Findings on left heart catheterization demonstrated a normal left ventricular end diastolic pressure. The left ventricular end diastolic pressure after contrast was elevated. Left ventriculography demonstrated a moderately large anteroapical akinetic segment with probable intracavitary thrombus formation (Fig. 2). Selective coronary arteriography using Judkin's technique, without prior nitroglycerin administration, demonstrated a widely patent left coronary artery system and a normal dominant right coronary artery (Fig. 3). Since the patient had no symptoms or electrocardiographic signs of Prinzmetal's variant angina, no effort was made to produce coronary artery spasm by means of drugs. The procedure was uncomplicated and the patient was discharged. Digitalis was continued. Long-term anticoagulation was not employed.

Comment

Myocardial infarction almost always is the result of obstructive epicardial coronary artery disease.[4,5] When performed at the time of acute myocardial infarction, selective coronary arteriography has always shown occlusion or severe obstruction of at least one of the three major coronary arteries.[6] When performed after healing of an acute myocardial infarction, selective coronary arteriography only rarely has demonstrated a normal coronary artery tree.[7–9] Acute myocardial infarction has also been associated with normal coronary anatomy at necropsy,[10] but again very uncommonly.

Our patient is the third case of a woman having a well-documented postpartum myocardial infarction in whom coronary arteriography was performed. The pathogenesis of acute myocardial infarction in our patient with a normal coronary artery tree is uncertain. The diagnostic possibilities in patients with myocardial infarction and normal coronary arteries are: missed coronary lesion,[11] small vessel coronary artery disease,[12,13] profound arterial hypotension,[14] blunt chest wall trauma,[15] pulmonary embolic disease,[16] syphilis,[17] connective tissue disease,[18,19] polycythemia,[20] anemia[21–23] platelet disorders,[24–26] and red cell metabolic abnormalities.[27,28] There may be not only anatomic but functional reasons for myocardial infarction in patients who have no angiographic or necropsy evidence for atherosclerotic epicardial coronary artery disease.

There was no clinical or laboratory evidence for any of these recognized causes of acute myocardial infarction except for coronary embolization with subsequent complete recanalization or severe coronary artery spasm.

Coronary artery spasm can produce angina, arrhythmia, and death.[29] Severe or prolonged coronary artery spasm can produce acute myocardial infarction in patients with variable degrees of coronary artery obstructive disease. Oliva and Breckenridge[30] studied patients suffering from acute myocardial infarction associated with coronary artery disease and found spasm superimposed on high-grade atherosclerotic obstructive lesions in 40 percent of their 15 patients. Maseri et al.[31] described eight patients in whom coronary vasospasm was a possible cause of myocardial infarction. One patient had two-vessel coronary artery disease. This patient had a 90 percent lesion in the left circumflex coronary artery. Spontaneous spasm was observed superimposed on this fixed lesion and was reversible. Fifteen minutes after reversal of spasm, this patient experienced another episode of chest discomfort and pseudonormalization of the T wave. A repeat coronary artery injection demonstrated vasospasm indistinguishable from that previously observed. Despite sublingual nitroglycerin, intracoronary nitroglycerin, a continuous nitrate infusion, morphine,

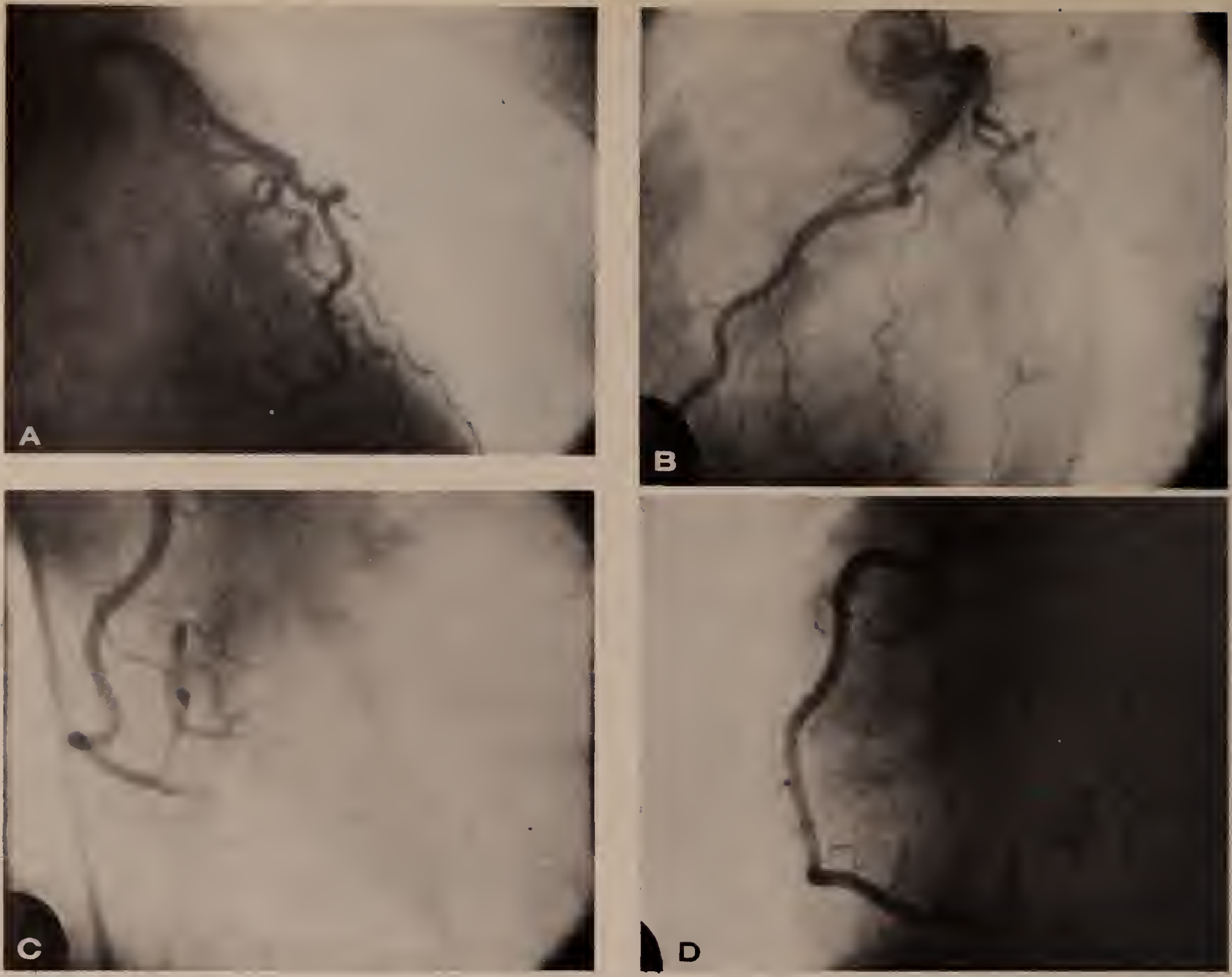

FIGURE 3. Coronary arteriograms showing normal left coronary artery. (A) Right anterior oblique. (B) Left anterior oblique. (C) Normal dominant right coronary artery in right anterior oblique, and (D) Left anterior oblique.

and dipyridomole, persistent ST segment elevation was noted in the lateral precordial leads. The patient developed pulmonary edema and died six hours later. At postmortem no fresh coronary occlusive thrombi or platelet aggregates were observed. Thus, it seems very likely that coronary vasospasm precipitated the fatal myocardial infarction in this patient with two-vessel coronary artery disease.

Patients with normal coronary arteries are also at risk for ischemic episodes associated with coronary artery spasm. Cheng et al.[32] reported catheter-induced left circumflex coronary artery spasm resulting in a transmural myocardial infarction in a patient shown to have a normal coronary arteriogram three months later. Maseri et al.[31] described a 24-year-old white woman with a normal coronary arteriogram who suffered a myocardial infarction 15 days after an episode of reversible coronary vasospasm. These data suggest that coronary artery spasm can result in myocardial infarction in the absence of obstructive coronary artery disease.

Coronary artery spasm has been provoked by ergonovine maleate, methacoline, hyperventilation, and immersion of the hands in cold water.[29,33,34] Coronary artery spasm provoked in such a manner has usually been reversed by nitrate administration but, in rare cases, has been associated with severe chest pain, serious arrhythmias, hypotension, and death.[29]

Benedict and Robertson[35] described a case of a 48-year-old woman who died suddenly four hours after an episode of chest tightness and jaw pain, thought to be angina, complicating treatment of her migraine headache with ergotamine tartrate. This patient had normal coronary arteries at necropsy and no evidence of acute myocardial infarction. The authors postulated that coronary vasospasm due to the ergotrate might have caused the angina-like chest pain and sudden death.

Ergotrates have been used in obstetrics as uterine contractants. Two of the 11 previously reported women with postpartum acute myocardial infarction were treated with ergot alkaloids.[2] In our patient, methylergonovine maleate was used for 24 hours, 3 days before the clinical onset of acute myocardial infarction. It is unlikely that the ergotrate used three days before our patient's infarction could have caused coronary spasm and infarction since this ergot alkaloid ordinarily has a duration of action of no more than several hours.[36]

Coronary artery thrombosis or embolism with subsequent lysis or recanalization is another explanation for acute myocardial infarction in patients with normal coronary arteries.[37] Acute myocardial infarction is statistically more likely in patients with thrombocytosis and in patients treated with oral contraceptives and noncontraceptive estrogens.[38,39] Coronary embolization is not rare, and is usually associated with known heart disease such as mitral stenosis with atrial fibrillation, cardiomyopathy, endocarditis, or intracardiac shunt.[40,41] Our patient had none of these. Moreover, coronary embolization resulting in acute myocardial infarction has, to our knowledge, not been described in patients with an otherwise normal heart. Further, our patient had no predisposition to de novo thrombus formation.

Conclusions

The occurrence of myocardial infarction in a patient with normal coronary arteries angiographically is a rare event. To our knowledge, our case represents the third patient reported in the English literature to have suffered a postpartum acute myocardial infarction and to have angiographically normal coronary arteries. The etiology of our patient's acute myocardial infarction remains unclear. The known causes of myocardial infarction with normal coronary arteries, were excluded in our patient. Coronary embolization with subsequent lysis and recanalization is obviously one possible explanation for our patient's myocardial infarction, but it seems unlikely in the absence of risk factors for thrombosis or embolism, and we believe spasm to be a more likely explanation. We believe all patients with postpartum myocardial infarctions should undergo complete evaluation including cardiac catheterization and coronary arteriography, and be investigated for factors that might induce coronary spasm or thromboembolism. The role of provocative manuevers for induction of coronary artery spasm in asymptomatic patients with normal coronary arteries after myocardial infarction is not yet defined. Further investigation and a national, large-scale, organized follow-up of these patients may help to determine the exact incidence, etiology, and natural history of postpartum myocardial infarction with normal coronary arteries. Further, the careful study of myocardial infarction when it occurs postpartum, or in pregnancy, may well shed light on the pathogenesis of coronary vasospasm, angina pectoris, and myocardial infarction in other patients in whom the coronary arteries are anatomically normal.

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New treatment techniques help the unborn fetus

Medical science's ability to treat birth defects in the unborn child has now reached the stage where the fetus is on the threshold of becoming a patient.

This is the conclusion of Michael R. Harrison, M.D., of the Fetal Treatment Program of the University of California at San Francisco, in a report in the August 14 Journal of the American Medical Association.

"In considering the ethical problems raised by fetal therapy, one clearly positive aspect is that prenatal diagnosis of a fetal malformation may now lead to treatment rather than abortion," Dr. Harrison declares.

The JAMA report follows accounts in the press of prenatal surgery performed by the San Francisco group on a male fetus three months before birth. The child was delivered alive and well, after correction of a birth defect that could have killed him. Surgery on a fetus also was reported earlier at the University of Colorado Medical School.

Fetal anatomy, normal and abnormal, can now be accurately assessed by ultrasonography, a technique that does not require surgery or the inserting of a device into the mother, he points out. This "noninvasive" technique appears safe for fetus and mother.

"Until recently, the only question raised by the prenatal diagnosis of a fetal malformation was whether to abort the fetus. Other therapeutic alternatives are becoming available. These include changing the timing of delivery, changing the mode of delivery, and even treatment before birth."

Most correctable malformations that can be diagnosed "in utero" are best managed by appropriate medical and surgical therapy after delivery at normal term, Dr. Harrison explains. Knowledge that a fetus has a defect allows for preparation for appropriate care at birth and immediately thereafter.

Sometimes the defect is such that it would become much worse if the pregnancy were allowed to proceed to normal delivery time. Thus the physicians might elect to induce premature delivery or utilize caesarean section to lessen the damage of the defect.

Some fetal defects can be treated inside the mother before birth. In respiratory distress (a common problem with the newborn) medications can be given to the mother that will improve the fetus' ability to breathe. A fetus with a problem involving vitamin B12 deficit can be treated by giving the mother massive doses of the vitamin. Thyroid hormone can be injected into the fetus' amniotic sac to treat congenital low thyroidism and goiter.

Surgery also is possible to correct certain conditions prior to birth. In the recent California surgery the corrected defect was urinary blockage.

Most fetal malformations do not directly threaten the mother's health, yet she must bear some risk from the procedure, he points out. She may choose to accept the risk to aid her unborn baby, increase his prospects for a normal life, and alleviate her own burden in carrying and preparing to raise a child with a severe malformation.

In addition to sonography, which carries no known risk, fetal diagnosis also is done by amniograph, which poses an increased risk of radiation exposure, and by puncture of the amniotic cavity to draw off fluid for laboratory analysis, which poses a small risk of fetal injury or loss, he declares. All of these procedures can be performed with acceptable risk, including the actual drawing of a blood sample from the fetus for lab studies.

In an accompanying editorial, John C. Fletcher, Ph.D., of the National Institutes of Health, Bethesda, Md., says that there are now 32 congenital defects in the fetus that are treatable.

"Fetal therapy," says Dr. Fletcher, "may represent one example where treatment is indeed prevention. Early treatment could reduce some of the lifetime costs of disease and thereby contribute to a future state of affairs when economic considerations would not be the overriding reason for medical decisions."

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Fungus Balls in Renal Pelvis

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Candida albicans is a human saprophyte that may become pathogenic. There has been a marked increase in systemic and genitourinary fungal infections over the past 20 years.[1] Clinically significant fungal infections are associated with prolonged antibiotic treatment, use of corticosteroids and other immunosuppressive drugs, diabetes mellitus, heroin addiction, indwelling urinary and intravenous catheters, leukemia, and lymphoma. Many physicians attach little significance to the isolation of *Candida* from the urine, often regarding it as a contaminant. Nevertheless, severe and symptomatic *Candida* infection of the urinary tract does occur.[2,3] If undetected and inadequately treated, such *Candida* infections are potentially lethal. Fungus balls in the renal pelvis are one type of genitourinary candidiasis. The treatment of this form of renal candidiasis is controversial, as demonstrated by two patients with fungus balls of the renal pelvis to be presented. The experience gained from their management may be useful.

Case reports

Case 1. In September, 1977, a 52-year-old black male with a long history of heroin addiction and diabetes controlled by oral antidiabetic drugs appeared with gross, total, painless hematuria. IVP (intravenous pyelogram) showed a possible filling defect in the right renal pelvis. Results of an extensive urologic investigation, including cystoscopy, right retrograde pyelogram, and brushing of the right renal pelvis and middle infundibulum in November, 1977, were negative.

In October, 1978, he again appeared with gross painless hematuria. IVP showed the same irregularity in the right renal pelvis as well as a possible filling defect in the left lower ureter. Left ureteral catheterization, and cultures and cytologic studies of the urine gave negative results. Gross intermittent hematuria persisted. Another IVP in January, 1979, showed a large filling defect in the left renal pelvis, occupying most of the calyces and pelvis, and he was readmitted. Urinalysis showed 55 to 65 white blood cells, 3 to 5 red blood cells, pH 5.5, and a moderate amount of yeast. Cystoscopy showed a small amount of whitish debris floating in the bladder. Left retrograde pyelogram, left renal washing and brushing, and right ureteral catheterization confirmed the presence of a large lucent filling defect occupying the whole left renal pelvis, with irregularity of the upper calyces (Fig. 1). The pathology report on the brushing was "fungal organisms—*Candida* species, no tissue present." Cytologic studies of the urine showed abundant monilial spores and hyphae and no malignant cells. Urine culture showed 10,000 colonies of *C. albicans* and 100,000 colonies of enterococcus. He was then placed on flucytosine, 1.5 Gm. orally four times a day. Despite a 10-day course of the medication the patient continued to be febrile.

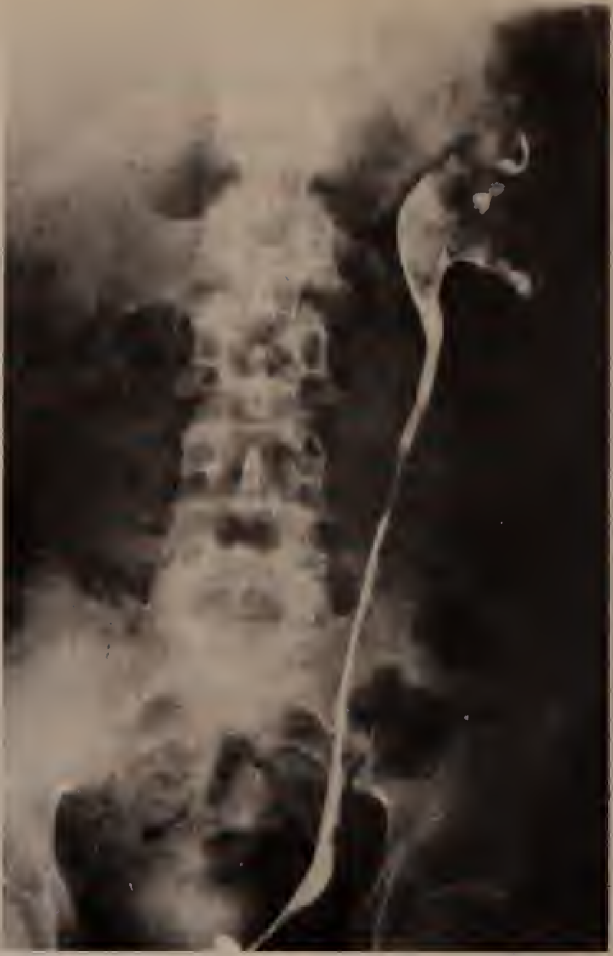

FIGURE 1. Case 1. Left retrograde pyelogram showing a large lucent filling defect occupying entire left renal pelvis and irregularity of upper calyces.

Irrigation of the left renal pelvis with amphotericin

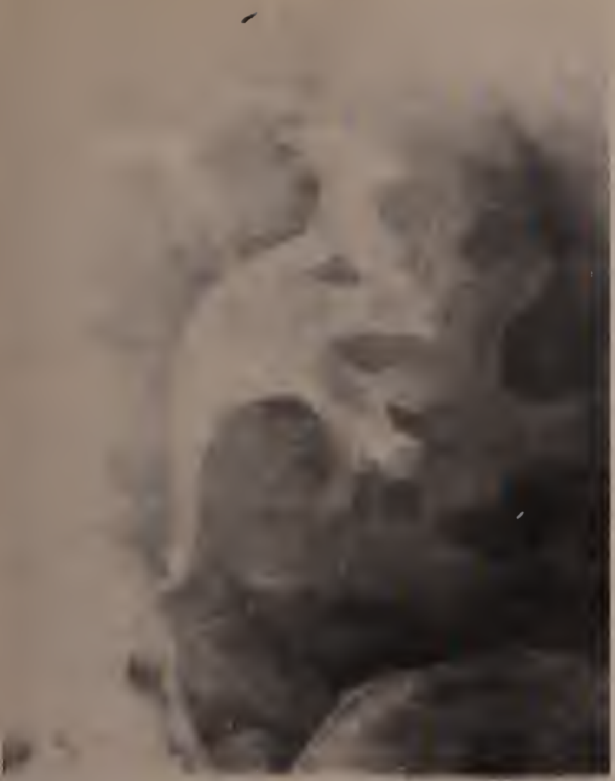

FIGURE 2. Case 2. Intravenous urogram showing a 3 by 3 cm. lucent filling defect in right renal pelvis.

B (50 mg. in 1 L. of 5 percent dextrose in water every 24 hours) by way of an 8F ureteral catheter was then started. Despite seven days of oral flucytosine and irrigation with amphotericin B, there was no change in the size of the filling defect in the pelvis. The patient continued to be toxic and febrile. Therefore, a left pyelotomy with evacuation of fungus balls and a left nephrostomy was performed. Postoperatively he was treated with intravenous amphotericin B and oral flucytosine for 32 days, when repeat IVP and nephrostogram showed complete disappearance of the filling defects. The urine analysis and cultures were negative for *Candida* as well. The nephrostomy was removed on the thirty-third postoperative day. Nine months later, he was asymptomatic, with normal findings on IVP and negative urine cultures.

Case 2. A 52-year-old Russian male was admitted in November, 1978, with a one-day history of gross total painless hematuria. IVP showed an 8 by 7 cm. left lower pole mass, which appeared solid on sonography. Angiography showed abnormal neovascularity. Cytoscopy, surprisingly, showed bloody efflux from the *right* ureteral orifice. A right retrograde ureteropyelogram showed a round, lucent 1 by 1 cm. filling defect in the right midureter. Results of ureteral brushing were inconclusive and cytologic studies of the urine showed no malignant cells. Right renal angiogram showed entirely normal blood vessels.

At surgery, the right midureter was opened but no lesion could be identified. Nevertheless, because the cause of the hematuria from the right remained obscure, a left heminephrectomy, rather than a radical nephrectomy, was performed. Histologic study of this specimen showed a well-differentiated renal cell carcinoma.

Two days postoperatively, because of persistent drainage of large amounts of urine from the left flank, left ureteral catheterization was performed and the patient was placed on cephalothin sodium and gentamicin sulfate. An IVP done two days later showed a leak from the transected lower infundibulum and a 3 by 3 cm. lucent filling defect in the right renal pelvis (Fig. 2). Seven days later this urinary fistula closed completely. Another right renal angiogram confirmed the presence of multiple filling defects in the right renal pelvis.

Three days later the patient developed severe right flank pain with chills and fever to 103°F. An emergency IVP showed only a right nephrogram. Cystoscopy and right retrograde ureteral catheterization were performed. Thick, whitish, flocculent urine was drained from the right renal pelvis. Cytologic studies of the urine showed monilial spores and hyphae. Urine culture grew between 10,000 and 100,000 colonies of *C. albicans.* Amphotericin B irrigation (50 mg. in 1 L. of 5 percent dextrose in water every 24 hours) was started via the 8F ureteral catheter. Six days later a retrograde pyelogram showed that the filling defects had disappeared completely. An IVP showed normal findings, as did another IVP performed one year later. Results of urinalyses, urine cultures, and IVP are now all normal, and the patient is asymptomatic.

Comment

Renal candidiasis was first reported in 1953.[1] Approximately 30 other cases of primary renal candidiasis have been documented since that time.

C. albicans is a saprophyte normally occurring in the oral cavity, respiratory tract, skin, external genitalia, and intestinal tract. It is a dimorphic fungus occurring in a generally saprophytic budding yeast (Y) phase and a panacitic mycelial or pseudomycelial (M) phase.[4] Both forms, however, are invariably present in *Candida* lesions.

The incidence of urine cultures positive for fungi has been reported to range from 0 to 4.8 percent.[4] Although there has been some controversy as to what constitutes "true candidiasis," Wise, Goldberg, and Kozinn[5] have stated that colony counts greater than 15,000 per milliliter in urine specimens properly obtained (clean catch, midstream, or single catheterization) suggest a positive renal pathologic condition secondary to renal infection. *Candida* colonization is favored by many factors. In our cases, several of these, namely, heroin addiction, prolonged antibiotic therapy, diabetes, the presence of malignancy, and repeated instrumentation of the urinary system were present.

Renal candidiasis may originate in the urinary tract or it may be secondary to systemic candidiasis.[6,7]

Systemic candidiasis occurs in debilitated patients and is a very rapidly progressing infection affecting most major organs. The kidneys are diffusely involved in 85 percent of their patients.

The absence of candidemia or other organ involvement characterizes primary renal candidiasis. Its causes are as yet controversial. Hurley and Winner[6] have suggested that it may be secondary to a mild candidemia. However, others have postulated that upper urinary tract infections may be established via the ascending route.[7]

The clinical manifestations of renal candidiasis, including fever, loin pain, hematuria, dysuria, urgency, and ureteral colic, may be indistinguishable from those of bacterial infection. Although serodiagnostic tests may be of ancillary help in the diagnosis of deep-seated infections,[8] intravenous and retrograde urography are usually diagnostic. Either a marked decrease or an absence of renal function is seen. The presence of filling defects caused by the fungus balls and sloughed renal papillae can usually be demonstrated. Obstruction with hydronephrosis may occur as well.

The suggested treatment of renal candidiasis has varied widely from only surgical to only medical. Some have advocated a combination of both.

The three drugs currently available for the treatment of renal candidiasis are amphotericin B, flucytosine (5-fluorocytosine, or 5-FC), and miconazole.

Amphotericin B is a polyene derived from *Streptomyces nodosis* that affects cell wall permeability. It has been used topically and parenterally. Topical irrigation has been done by way of ureteral or nephrostomy catheter. The agent precipitates in saline solution and should therefore be dissolved in dextrose and water. It must be protected from light. Significant toxicity includes anaphylactoid reactions, gastrointestinal upset, renal toxicity, electrolyte imbalance, and bone marrow depression. For treatment of disseminated or parenchymal infections it must be given for several weeks.

Flucytosine is an antifungal drug administered orally for the treatment of systemic candidiasis. No serious toxicity has been noted and high urinary levels may be obtained. There have, however, been only a few reported cases of successful management of renal candidiasis with it.[9] The occurrence of resistant strains of fungi, especially at low concentrations, seems to be a major problem. Hence, a daily dose of 150 mg. per kilogram per day should be used.

Miconazole is a new synthetic antifungal agent, effective against severe systemic fungal infections, including candidiasis. The recommended dosage is 600 to 1,800 mg. per day, diluted in 200 cc. of normal saline solution. Side-effects include phlebitis, nausea, vomiting, and fever. There is still too little experience with it to advocate its routine use in uncomplicated renal candidiasis.

As demonstrated by our two reported cases, surgical intervention to relieve obstruction or to remove a large fungus ball may be necessary. Whereas 30 years ago nephrectomy was the only hope of curing renal candidiasis, today nephrectomy is only indicated if medical therapy fails.

The overall mortality rate from renal candidiasis in the earlier reported cases was 30 to 40 percent. A high index of suspicion in patients with appropriate predisposing factors should aid in making an earlier diagnosis. Prompt aggressive treatment by the methods described should lead to an improved rate of survival.

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Lymph Node Metastases from Basal Cell Carcinoma

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The common BCC (basal cell carcinoma) is generally the only cancer confronted with serenity by the patient's physician. This is the most common skin neoplasm and is considered easily curable, usually by surgical extirpation. Diagnosis of metastasis from this skin cancer, however, signals the need for a careful therapeutic plan because of the ominous prognosis.

Case report

A 76-year-old white business man had a 2.8-cm. BCC removed from the anterior left side of the upper chest skin in 1973 (Fig. 1). Three years later, recurrence in the scar of previous excision was removed with primary skin closure. At age 81 he was admitted to the Medical Center at Princeton because of an enlarging indurated nodule in the scar of the recurrent BCC excision site. At operation in May, 1978, a wide excision of skin, fat, and muscle was carried out, and the defect was closed with a split-thickness skin graft. The pathology report read: "Infiltrating basal cell carcinoma of the skin in skin cicatrix and subcutaneous tissue, no tumor is seen at the resected margins. The tumor extends to the fascia but does not infiltrate attached portions of skeletal muscle" (identical to histologic appearance of tumor in Figure 1).

Seven months later the patient returned with massive left arm swelling. An easily palpable 4-cm. lymph node in the left axilla was biopsied. This pathology report read: "Metastatic basal cell carcinoma to fibrous tissue, probable replacement of a lymph node." The patient was readmitted to the Medical Center at Princeton in January, 1979, for left axillary dissection with removal of grossly involved nodes and sharp dissection of a tumor mass from the adventitia of the axillary vein. In the specimen were BCC metastases to 18 of 24 axillary lymph nodes (Fig. 2).

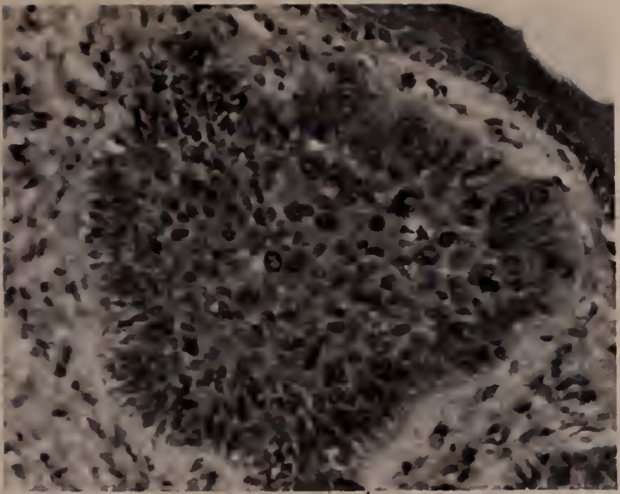
FIGURE 1. Histologic appearance of typical basal cell carcinoma of skin showing tumor nest extending downward from epidermis (hematoxylin and eosin stain, original magnification ×500).

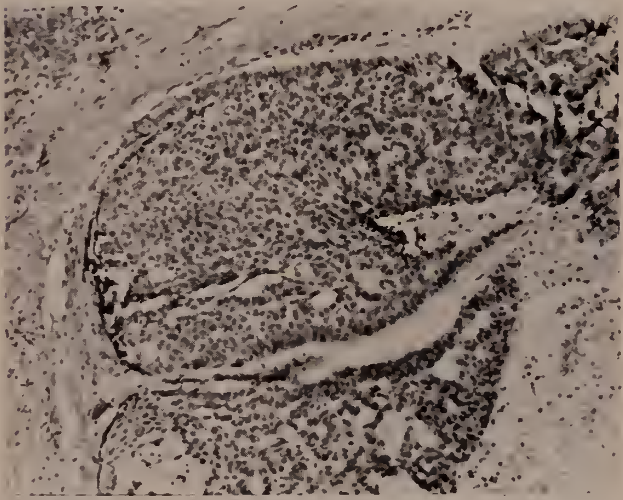
FIGURE 2. Axillary lymph node obliterated by metastatic basal cell carcinoma and connective tissue proliferation. Histologic pattern of secondary tumor is similar to that of primary skin lesion (hematoxylin and eosin stain, original magnification ×200).

Results of bone scan and other laboratory tests have remained normal. The patient has been well to the present and has no left arm swelling or palpable residual or recurrent cancer.

Comment

After Beadles[1] and Krompecher[2] described the first and second cases of metastatic BCC in 1894 and

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in 1900, there were only 18 other cases reported through the time of the literature review by Lattes and Kessler in 1951.[3] The excellent review by Safai and Good[4] published in June, 1977, summarized the literature, added a case report, and included 17 cases previously reported but not counted in other reviews, bringing the total of reported metastatic BCCs to 109. In 1977, Goldberg, Pratt-Thomas, and Harvin[5] added four cases, Gricouroff et al.[6] reported one case, Albrecht, Ogbuihi, and Spiert[7] added a case, and Mikhail et al. [8]reported two cases. A bony metastasis from BCC was reported by Jager, Weiner, and Howell,[9] and a case of pulmonary metastasis was reported by Sakula.[10] The next year Guillan and Johnson[11] reported one case; two cases were added by Christensen et al.,[12] and another case of BCC pulmonary metastasis was reported by Kuten, Kaufman, and Kaufman.[13] In 1979 Sworn, Hammond, and Buchanan[14] reported one case of metastatic BCC of the vulva. Scanlon et al.[15] reported in 1980 on five cases of metastatic BCC which they believed were best explained by embolic spread of the cancer by way of interstitial fluid; Larson, Gillespie, and Parsons[16] cited an instance of metastatic BCC to the lung, and Sarma[17] reported one case of metastasis to an axillary lymph node.

Surveys by Paver et al.[18] and Cotran[19] report that BCC metastasis occurs in from 0.0028 percent to 0.1 percent of cases. The time interval from skin appearance to metastasis is from 7 to 43 years.[19] This interval was probably at least seven years in the case reported here. The mean survival time after discovery of metastases has been said to be 14 months, and there have been no reported survivors with metastases to multiple sites.[19] Metastatic routes primarily are lymphatic and blood vessels, with regional lymph nodes involved in 70 percent of cases.[20-22] Bony metastases occurred in 25 percent of the reported cases, 20 percent had metastases to lungs or pleura, and 18 percent to the liver.[20] Virtually every site in the body has been involved, and in 1958 Pickren and Katz[23] postulated that pulmonary metastasis could arise from a BCC invading naso- or oropharynx, with aspiration and implantation of the cancer in the lungs. Guillan and Johnson[11] discussed this interesting concept in their case report.

The criteria set forth by Lattes and Kessler[3] and by Cotran[19] have been accepted in diagnosing metastases from BCCs. These are:

1. The tumor must arise from skin and not from mucous membrane.
2. Metastasis may not contain squamous-cell component.
3. Metastasis must not be from direct extension of the primary lesion or implantation at the time of excision of the primary lesion.
4. The histologic appearance of both primary and secondary tumors must be identical.

Christensen and his associates[12] emphasize that numerous slides of each portion of tumor removed must be reviewed to exclude the basosquamous carcinomas. This recommendation was followed in the current case report.

In treatment of this rare condition, immunotherapy has been useless and systemic chemotherapy disappointing.[4,15] As illustrated by this most recent case, where applicable, an aggressive surgical approach has been useful. Resection of a single metastatic pulmonary lesion can be quite rewarding.[16,24] Larson's patient has shown no recurrence over two years after thoracotomy.[16] Most of the other reports of metastases discuss the use of irradiation therapy; this has been useful only for control of bone pain.

Summary

Although basal cell carcinoma is the most common of all skin cancers, only 132 cases of metastatic BCC, including the one presented here, have been reported. Literature review reveals a generally grim prognosis when the disease becomes metastatic. In the case reported, the patient is now 84 years old and seemingly free of cancer two years after axillary dissection and removal of many involved nodes. An aggressive surgical approach to the management of metastatic basal cell carcinoma is recommended, where feasible.

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Drop in foreign physicians coming to U.S. causes staff shortages

Declining numbers of FMGs (foreign medical graduates) practicing in the U.S. may mean a temporary shortage of physicians in some cities and in some medical specialties, says an article in the August 21 Journal of the American Medical Association.

However, the mounting output of U.S. medical schools may fill the gap in another decade.

Foreign medical graduates, particularly the foreign-born, accounted for as much as 50 percent of the staff at many city, church, and VA-operated hospitals throughout the U.S. in 1975. This ratio has since declined. If the trend continues, many urban areas, particularly New York, will have trouble filling staff vacancies, the report indicated.

Louis L. Goodman, Ph.D., and Lorna E. Wunderman, M.P.H., of the AMA's Center for Health Policy Research, cited several provisions of the Health Professions Educational Assistance Act as major causes for the dropping level of FMGs. The 1976 Act increases the requirements necessary for FMG admittance. Particularly difficult for the foreign physicians was the Visa Qualifying Examination, one of only several requirements.

The shortage of FMGs will hit New York City and some other urban areas the hardest. Requirement waivers, issued to FMGs sponsored by accredited hospitals when a need for service is exceptional were most often requested by New York in the past. In 1978, 54 percent of those requests came from New York. In 1979 the number had climbed to 77 percent and preliminary figures released for 1980 indicated an even greater increase.

While the number of foreign-born FMGs in the U.S. decreases, U.S. citizens with foreign degrees doubled between 1975 and 1979. However, most U.S. FMGs settle in the Sun Belt, Colorado, or on the West Coast, giving the eastern cities little relief.

Specialty areas that will feel the decline of FMGs include internal medicine, general surgery, psychiatry, pediatrics, pathology, obstetrics-gynecology, and family practice. While U.S. FMGs are filling many of these vacancies, overall shortages will still exist in urban areas, they said.

The latest report from the Department of Health and Human Services and the Graduate Medical Education National Advisory Committee predict a physician surplus in ten years. The researchers felt that the reduction in FMGs will cause health care delivery to suffer for a short time, but will help in the long run. In addition to reducing the number of physicians, the stricter requirements may ease strained international relations by reducing the "brain drain" many countries have been feeling due to a high number of physicians emigrating to the U.S.

Left Cervical Aortic Arch

Diagnosis by radioisotope and ultrasound techniques

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A cervical aortic arch is a developmental variant in which the arch lies very high above the lung cupola, more frequently on the right than on the left. Embryologically, the arch normally arises from the fourth branchial arch. It is theorized that in this variant, the arch arises in a more cephalad location from the second or third branchial arch, resulting in a high position. The anomaly is usually innocuous, but its appearance may be confusing, and dire misadventures may follow incorrect diagnoses.

The cervical aortic arch may first be detected incidentally on chest x-ray. It appears as an unusual mass, a vascular shadow, or an unidentified density in a mediastinal location, high toward the neck, above the usual aortic arch level. Its appearance may lead to suspicion of neoplasm or aneurysm. Although rare, especially on the left, it may be recognized by those alert to the anomaly. While usually first appearing as a right-sided supraclavicular mass in early childhood, there are sporadic reports of its detection in asymptomatic adults. Although aortography is diagnostically conclusive, the condition is innocuous, and hazard-free procedures, including radionuclide angiography and sonography, are more appropriate initial diagnostic measures.

Case Reports

Case 1. A 62-year-old hypertensive female was found to have an unexplained density in the left apical region on routine chest x-ray (Fig. 1). The patient denied a history of prior ill health but did recall being told at another hospital that she had a "lung tumor." A curvilinear calcification was detected within the density, and the diagnosis of aneurysm was entertained. Neither a pulsatile mass nor a bruit were present.

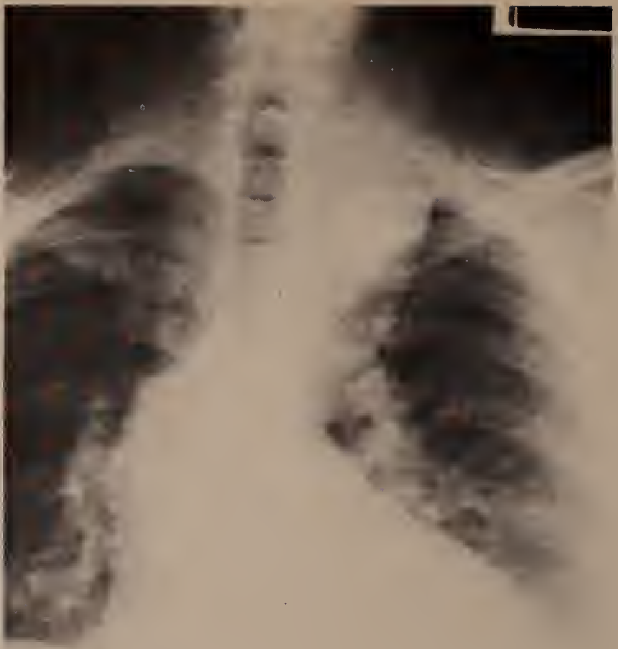

FIGURE 1. Case 1. Chest x-ray demonstrates left apical soft-tissue density.

The heart, aorta, esophagus, and mediastinum were examined in multiple projections by x-ray as well as by fluoroscopic examination. The aorta could be seen arching upward into the left pulmonary cupola. In its descent, it coursed downward on the left side of the spine to the level of the fifth thoracic vertebra where it crossed the midline behind the posteriorly compressed esophagus.

Radioisotope blood flow studies and ultrasonography were performed. Fifteen mc (millicuries) of technetium-99^m pertechnetate injected into a right antecubital vein by bolus technique revealed rapid flow through the right side of the heart with the aortic arch visualized in the left apical region above the level of the right subclavian vein (Fig. 2). The left supraapical mass was identified as a cervical aortic arch.

Ultrasonography was performed with the transducer placed in the left first intercostal space and directed posteriorly and to the left through the soft-tissue density. Two lumens were identified, representing the anterior and posterior limbs of the aortic arch; this further supported the diagnosis of cervical aortic arch. The patient has remained well.

Case 2. A 51-year-old female was admitted because of vaginal bleeding. Routine chest-x-ray revealed a density in the left superior mediastinum (Fig. 3). There were no cardiovascular or cerebral symptoms. A grade 2/6 left supraclavicular bruit was noted.

An aneurysm was suspected. A radionuclide angiogram was performed by injecting a bolus of 15 mc of technetium-99^m pertechnetate into a right antecubital vein. This study revealed a left cervical aortic arch with its most superior position above the level of the right subclavian vein (Fig. 4). Retrograde arch aortography confirmed the presence of a left cervical aortic arch with normal branching (Fig. 5).

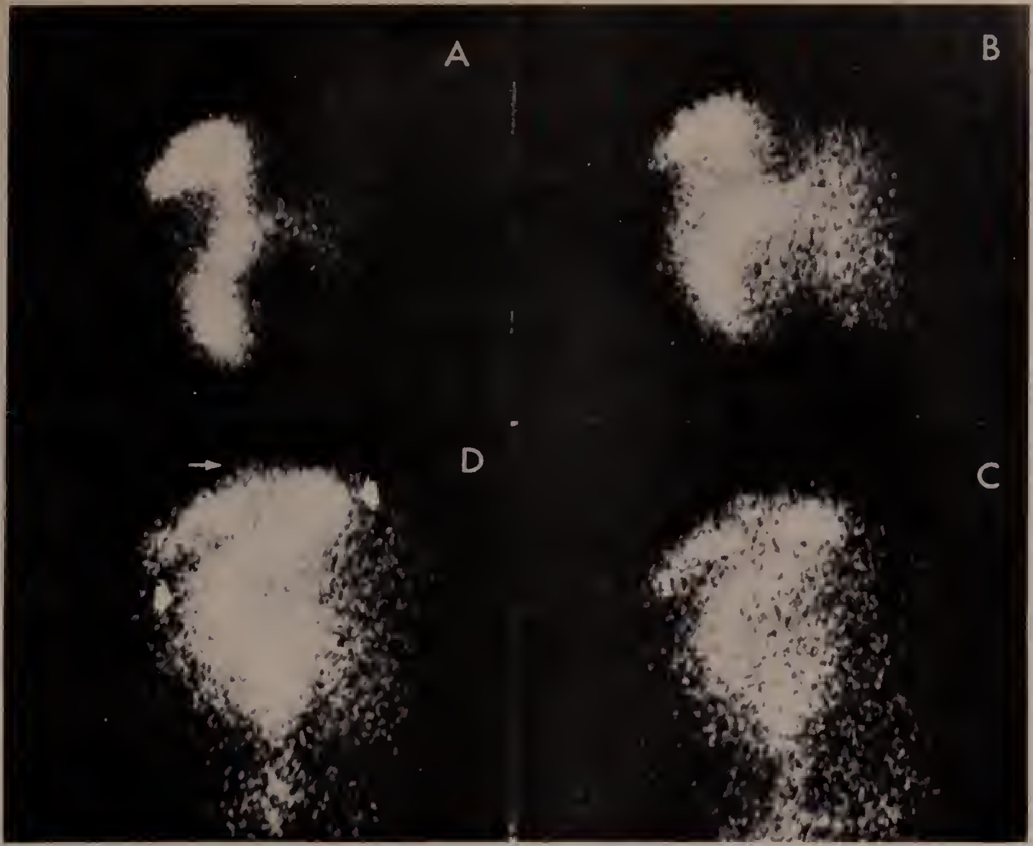

FIGURE 2. Case 1. (A) Early phase of isotopic angiogram reveals flow through right subclavian vein, superior vena cava, right atrium, and pulmonary artery. (B) Pulmonary parenchymogram phase of isotopic angiogram. (C,D) Aortic arch, between closed arrows, with most cephalad extent of aorta above level of retained isotope in right subclavian vein (open arrow).

Comment

The aortic arch normally lies at a level representing its origin at the fourth branchial arch. It is postulated that the cervical aortic arch arises more proximally from the second or third branchial arch, explaining its unusually high location.[1] With left cervical aortic arch, the branching pattern of the great vessels may be normal or there may be separate origins of the left external and internal carotid arteries with an aberrant right subclavian artery.[2,3] The aorta may descend on the left side or may cross the midline posterior to the esophagus and descend on the right.[1,3] In most cases of right cervical aortic arch, the right internal and external carotid arteries arise as separate vessels from the aorta. Occasionally, the carotids arise fom a common trunk.[1] In all the reported cases of right cervical aortic arch, the left subclavian artery originated from the retroesophageal segment of the aorta as the last branch of the aortic arch.[1]

Virtually all the cases of cervical aortic arch reported in the literature have been in infants or children.[1,3] The majority of these children were asymptomatic and first appeared with a pulsatile mass in the supraclavicular region. Because of the retroesophageal position of the aorta and the frequent occurrence of an aberrant subclavian artery, a vascular ring is often present. This may result in symptoms of tracheal or esophageal compression. Thus, approximately one third of the children reported had dyspnea, stridor, cough, or dysphagia.[4,5]

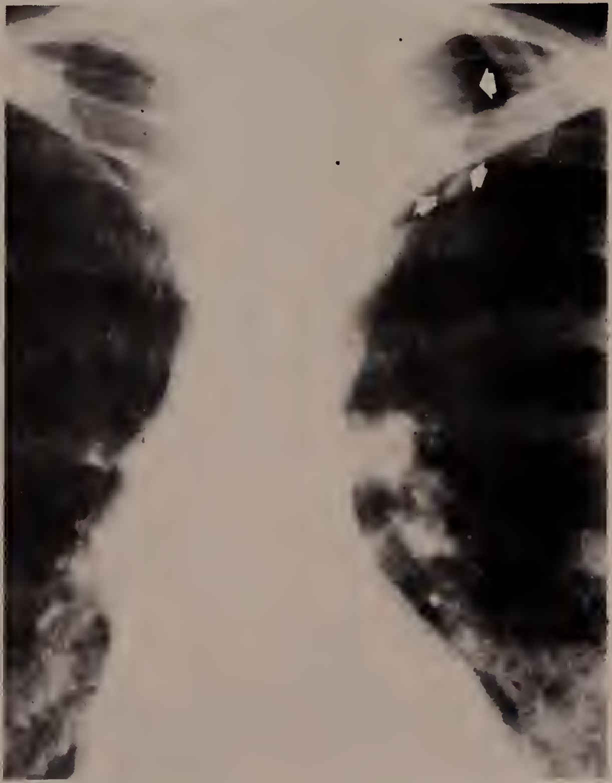

FIGURE 3. Case 2. Chest x-ray demonstrates soft-tissue mass (arrows) in left apex.

A left cervical arch has been reported in two adult patients in the fifth and sixth decades of life.[4,6]

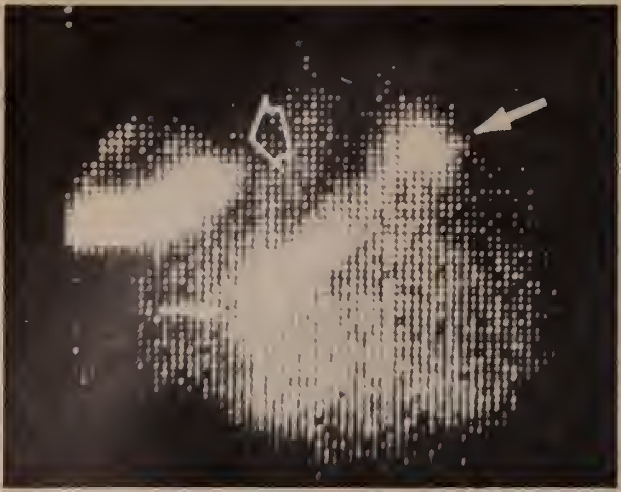

FIGURE 4. Case 2. Levo-phase of isotopic angiogram demonstrates cervical aortic arch (closed arrow) superior to retained isotope in right subclavian vein (open arrow).

These patients were asymptomatic and showed a palpable left supraclavicular mass in one case, and an abnormal shadow on chest radiography in the other case. Compression of the pulsatile mass while simultaneously observing a decrease in the femoral pulse may help to clinically distinguish a cervical aortic arch from an aneurysm of the great vessels originating from the aorta.

Seen on x-ray film, widening of the mediastinum may be the only detectable abnormality. Other findings include forward displacement of the trachea by the retroesophageal position of the aorta and absence of the shadow of the normal aortic knob. The sharp interface of the cervical aortic shadow with the lung may identify it as mediastinal in origin and thus lead to the suspicion of a vascular structure. Barium esophagography shows a posterior compression defect from the retroesophageal position of the distal arch. Aortography is a definitive study and will show an aorta that ascends into the neck on either the right or left side, makes a sharp turn, and usually crosses the midline in the midthorax to descend adjacent to the spine on the side opposite the arch.[4] The branching pattern of the great vessels also may be discerned.

Plain chest film studies, along with barium esophagography, radionuclide angiography, and ultrasound will usually suffice to conclusively identify the mass as vascular in origin and differentiate it from mediastinal or lung tumor. A cervical aortic arch may resemble an aneurysm of the inominate, subclavian, or carotid arteries and may be ligated with fatal results.[7] Radionuclide angiography should, in most instances, be adequate to differentiate these two entities. A more difficult problem may arise in attempting to distinguish a cervical aorta from pseudocoarctation of the aorta, which is a kinking or buckling of the aorta. This is a congenital condition that often appears in the second or third decade of life before atherosclerosis has become manifest, and in which the arch of the aorta is elongated and indented. Pseudocoarctation is benign and asymptomatic, but it produces a shadow on chest x-ray similar to that seen with the cervical aortic arch. An indentation of the descending thoracic aorta at the site of pseudocoarctation may occasionally be seen. Definitive diagnosis and differentiation from a cervical aortic arch usually depends on aortography.

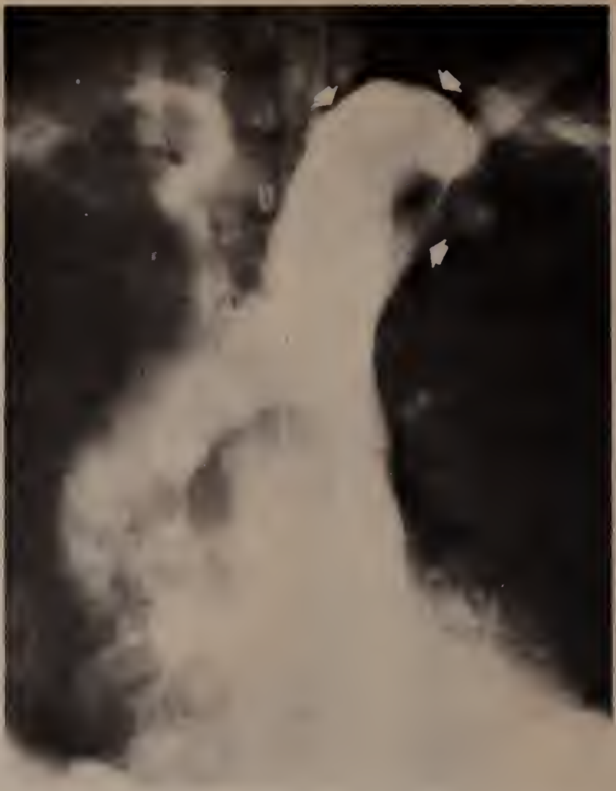

FIGURE 5. Case 2. Aortic arch injection shows left cervical arch (arrows) extending above level of clavicles.

The cervical aortic arch is an anomaly that may mimic other vascular abnormalities or may be mistaken for a lung neoplasm. The diagnosis may be suspected by plain chest film and barium swallow studies. Confirmation may be obtained by radionuclide flow studies. Aortography is the definitive procedure and will delineate the exact anatomy of the aortic arch and the origin of the head vessels. This study should be performed if any surgical intervention is contemplated.

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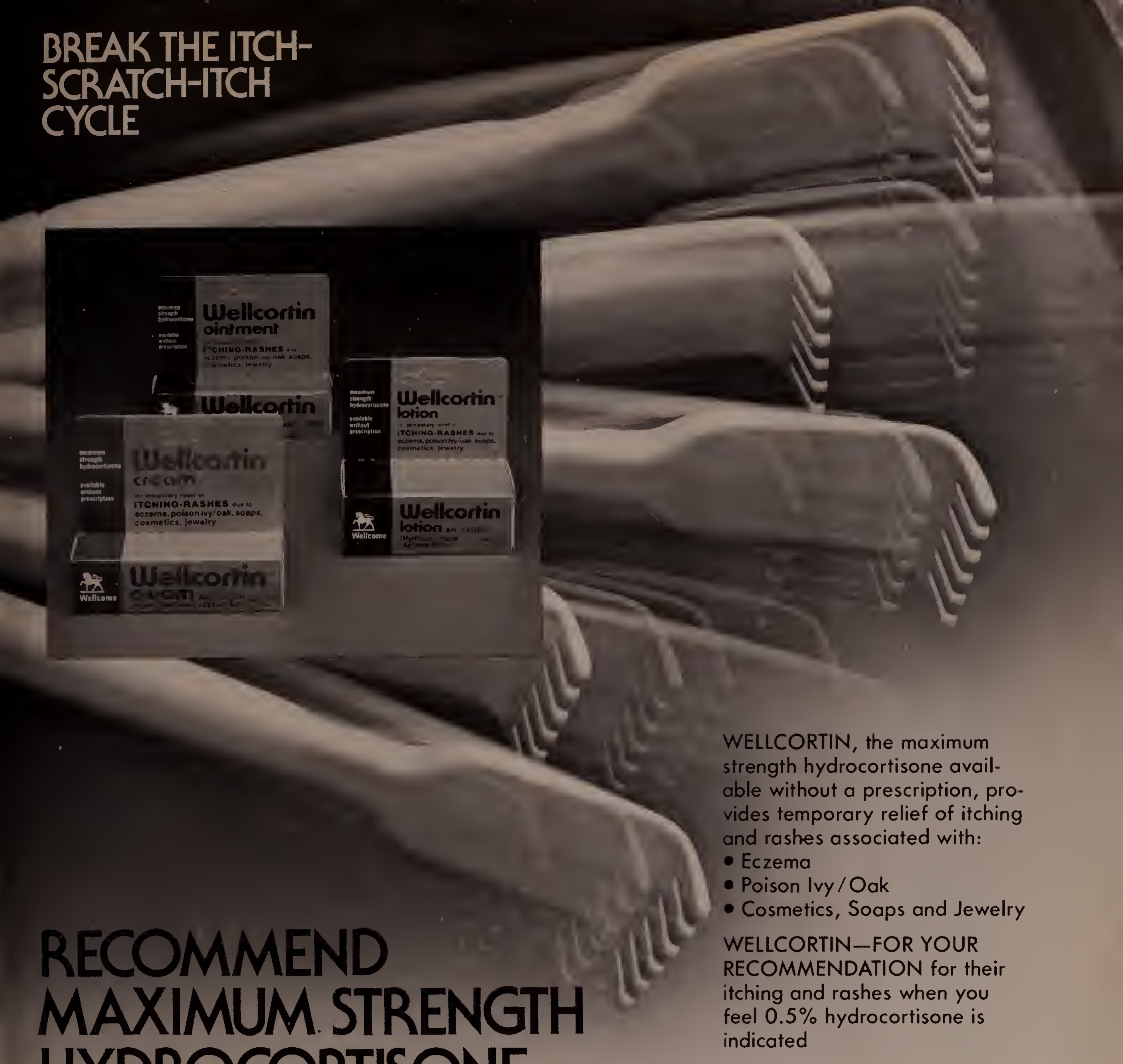
BREAK THE ITCH-SCRATCH-ITCH CYCLE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Pseudo-Speed

Look-alikes or pea-shooters

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In central New York, the most commonly abused drugs by adolescents rank in order: alcohol, marijuana, and pseudo-speed. Pseudo-speed is the generic term given to capsules and tablets containing various combinations of noncontrolled drugs, such as phenylpropanolamine hydrochloride, caffeine, and ephedrine. In 1980, there came on the scene over-the-counter preparations such as Dietac, Dexatrim, and Control, containing relatively low amounts of phenylpropanolamine hydrochloride and caffeine, which appeared to be directed toward the adult population interested in a nonprescription appetite suppressant. As the legal amphetamine prescription distribution has become progressively more constricted over the past decade, there has been a continuing search for easy, obtainable, and effective diet pills. The amphetamines have seen a 10-year decrease in legitimate production from a 12-billion peak in 1971 to less than 2 million in 1981 by way of the nation's leading amphetamine-producing pharmaceutic companies.

Enterprising "garage" laboratories found that there is a ready market in "look-alikes" or "pseudo-speed"; they mass produce capsules and tablets that look exactly like legitimately produced pharmaceutic amphetamines, but contain, instead, varying amounts of phenylpropanolamine hydrochloride, caffeine, and ephedrine. These drugs have been advertised in various bulletins and magazines directed toward the youthful drug-consuming public. Some of these capsules are offered for as little as $10 per thousand. Many of these appear to be coming out of the state of Pennsylvania. Any person, regardless of age, can send cash or a money order to a number of different companies advertising their wares and obtain very quickly, by return mail, capsules that look exactly like the legitimate amphetamines. Because these capsules and tablets are so inexpensive, the amateur drug consumer assumes that they, therefore, are less harmful than the true amphetamine capsules and tablets which, when sold on the street, would cost $1 to $3 per dose. It is not at all uncommon to find teenagers swallowing five to six of these tablets or capsules at a time to get a "high." As a result of this naiveté and unsophistication, there has been a variety of complications as a result of taking these legally obtainable substances.

Phenylpropanolamine hydrochloride is an amphetamine-like substance, widely available in over-the-counter preparations for relief of cold and influenza symptoms; it is a centrally active drug that can cause severe hypertension, hypertensive crises, and possible renal failure. Medical literature has reported several cases of psychotic episodes in patients taking even relatively small amounts of phenylpropanolamine hydrochloride. Symptoms are said to range from mild anxiety, agitation, and increased respiratory and pulse rate to hallucinations, vertigo, and, in some cases (reported in New Mexico and Illinois), fatal cerebral vascular accidents. Ephedrine sulfate, another common ingredient in the pseudo-speed, is legitimately used in the treatment of bronchospasm and is known to cause agitation and restlessness when used for legitimate purposes, and, therefore, often is combined with barbiturate-like agents to reduce these side-effects. Caffeine is a xanthine derivative that has long been associated with sleep disturbance, anxiety, heart disease, gastrointestinal irritation, and ulceration. Additionally, patients taking more than 350 mg. of caffeine per day can have true withdrawal symptoms on cessation of caffeine consumption; this amount would be contained in three and one-half to four cups of coffee per day. Caffeine withdrawal headaches or weekend headaches are commonly mislabeled as migraines in patients who consume large quantities of caffeine-containing coffee during the work week, then abstain from coffee ingestion on the weekends.

Most of the 13- to 25-year-old subjects interviewed indicated that pseudo-speed gave them a rush, not quite as good as cocaine, but sufficient to produce an adequate buzz or high when combined with alcohol. Many patients in their 20s were found to abuse pseudo-speed to enable them to continue to work 60- to 80-hour work weeks and meet the demands of their two jobs; taking the pseudo-speed produces an apparent form of extra energy, unhealthy physiologically.

The Drug Enforcement Administration feels that the "look-alikes, pseudospeed or pea shooters," fall into a jurisdictional gray area since the agency only operates under the Controlled Substance Act of 1970; the ingredients of the pseudo-speed capsules and tablets are, thus far, not under this act. They cause all sorts of problems if a facsimile is passed off as true amphetamine, but the entrepreneurs who reap the profits from these "look-alikes" appear to be quite careful in their advertising not to make erroneous claims. When their advertisements state that they are selling the "most powerful stimulant available without a prescription," they are, in fact, stating the truth. A real and serious risk that a young pseudospeed abuser could encounter is when he inadvertently ingests, or injects, or snorts (as some do with these capsules) a legitimate correct chemical amphetamine preparation and thus would be very apt to "overamp" and perhaps even die from a cardiac arrhythmia or a hypertensive episode.

Case reports

Case 1. Sally is a 24-year-old divorcee who has legal custody of her two- and four-year-old children. She finds that the only way she can make ends meet, as the result of her previous husband's unwillingness to cooperate and pay child support, is to work two full-time jobs per week, averaging 50 to 60 hours per week. By consuming between 12 to 20 pseudo-speed capsules per day in combination with alcohol, she has been able for the past 18 months to continue her employment. She requested inpatient treatment at the rehabilitation unit because both employers have remarked that her job performance has begun to deteriorate over the past three months. Additionally, she has noticed that her level of anxiety has increased. She has been markedly agitated on several occasions over the past several weeks, and, in three or four instances realized that the voices she was hearing were, in fact, auditory hallucinations. She also feels that over the past several months her "recall" memory of recent events has begun to deteriorate.

Case 2. Kevin is a 14-year-old white male who has been a drug abuser since the age of 12. He has become, at the age of 14, a drug dealer as well as a consumer. He buys, in response to advertisements in drug magazines, large quantities of pseudo-speed. On rare occasions, he drinks alcohol and also smokes marijuana, a few joints a week. He has noticed, however, that his psychologic dependence on pseudo-speed over the past year has resulted in his increasing the quantity of these agents to 20 capsules per day to get the desired high and to be able to continue to attend school and continue his drug dealing. He is referred for treatment to the adolescent drug unit by the school drug counselor, as the result of failing grades, absenteeism from classes, and continual tardiness at school.

Case 3. Dave is a 17-year-old white male who has been a resident of a local drug rehabilitation facility for the last 30 days. Prior to that, he was in a county jail for 17 days on charges of possession of stolen property and also has two charges pending for forgery and for second degree petit larceny; he is now on probation for the first forgery charge. His problems are with both drugs and alcohol. He admits to using 1 to 1½ ounces of marijuana per week, which he has been using for the past four years. He has used speed for the past one and one-half years, consisting of "robin's eggs," "RJ8s," "black beauties," and "pink footballs" (pseudo-speed), using from three to six per day. He relates that the only effects he felt from that was feeling as if he had a rapid heartbeat. He has also taken crystal methamphetamine-hydrochloride (Methedrine), snorting 2 Gm. per week for three months. He admits to drinking 12 to 24 bottles of beer a day, along with occasional hard liquor, sometimes up to 1 quart, and has been doing this for five years. He complains now of "kidney pain" on the right side.

Comment

There is no doubt that, nationally, pseudo-speed has become a multimillion dollar business. One only has to look at past issues of *High Times*, at the many pages loaded with advertisements for legal stimulants, to realize that this has become very big business indeed. With the number of young drug abusers now consuming these agents, and with their documented potential for serious harm and even death, one would feel that it is now time for a federal and/or individual state agency to take a hard look at their continued sale. At least one state (Delaware) has amended its Uniform Controlled Substance Act to specifically include counterfeit controlled substances. According to Section A1, a person convicted of delivery or attempted delivery of a noncontrolled substance as a controlled substance, or under such circumstances that would lead a reasonable person to believe that the substance was a controlled substance, could be imprisoned for up to 10 years and/or fined up to $10,000.

9429 Woodlawn Drive
Brewerton, New York 13029

Mind-Body Disorders

Classification

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In 1891 the International Statistical Institute met in Vienna to develop a standard nomenclature of causes of death. The 1893 report of the "International Classification of Causes of Death" was adopted by a number of countries and became the forerunner of the ICD (International Classification of Diseases). Revised at approximately 10-year intervals, the ICD evolved into a classification of both morbidity and mortality conditions.

It was not until 1948 that a separate section on mental diseases was included in the ICD. The unsuitability of ICD-6 (1948) for compiling statistics on the diagnostic characteristics of patients with mental disorder, or for indexing medical records in psychiatric treatment facilities,[1] prompted the American Psychiatric Association to publish a Diagnostic and Statistical Manual of Mental Disorders in 1952, commonly referred to as DSM-I. This represented the first attempt to systematically classify mental disorders and to offer a glossary of descriptive diagnostic categories so that researchers and clinicians might have a common language in making diagnoses. In 1980 the third edition, the DSM-III, appeared with a revised classification that has offered a substantially new viewpoint. A number of new concepts have been introduced and a number of new diagnostic categories have been added.

The purpose of this review is to elucidate the diagnostic categories introduced in the DSM-III as they relate to the mind-body continuum. In the previous edition, the DSM-II, published in 1968, there were a limited number of diagnostic categories to describe patients who use physical symptoms to express emotional turmoil: hysterical neurosis (conversion type), hypochondriacal neurosis, and the psychophysiologic reactions involving specific organs.

In the two previous editions of the diagnostic manual, etiologic viewpoints were implied by the use of the terms reaction and neurosis. In DSM-III a new term, disorder, which shifted the emphasis to a more descriptive format, has been introduced; therefore, a number of new categories have appeared in the diagnostic manual to describe patients in whom physical signs or symptoms are present in the absence of somatic pathologic factors.

Those disorders without somatic pathology can be subdivided into three major categories based on the degree of the patient's ability to control behavior and produce symptoms at will (Fig. 1). Psychosomatic disorders, having specific pathologic findings, will be considered separately.

Disorders

Somatoform. In the somatoform disorders the patient does not have conscious control over symptom production and is unable to control the maladaptive behavior. Grouped under the broad category of somatoform are five disorders: (1) somatization, (2) conversion, (3) psychogenic pain, (4) hypochondriasis, and (5) atypical somatoform.

Somatization. In the somatization disorder, the patient has multiple somatic complaints of several years' duration without a recognizable organic disorder. This is an early onset illness that usually starts before the age of 30, is frequently associated with a histrionic personality disorder or antisocial personality disorder, and is frequently associated with substance abuse. Somatization disorder has not been previously described in the diagnostic nomenclature, but in the literature had been called either hysteria or Briquet's syndrome. In 1859, Paul Briquet, a French physician, described a syndrome of hysterical paralysis of the diaphragm with dyspnea and aphonia. The term had fallen into disuse but was reintroduced to describe a syndrome found mainly in women of recurrent symptoms in many organ systems, including various pains, menstrual disorders, sexual maladjustment, and headaches. In somatization disorders the symptoms are not adequately explained by disease or physical injury and are not side-effects of medication, drugs, or alcohol. The report of symptoms by the patient is sufficient

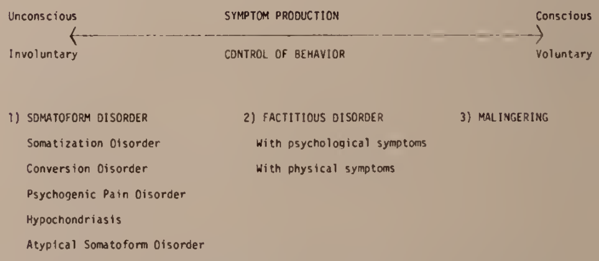

FIGURE 1. Classification of three major categories of somatic symptom production.

to fulfill the diagnostic criteria, and the symptoms need not actually be present. Those symptoms most commonly reported are pseudoneurologic, gastrointestinal, psychosexual, and those involving the female reproductive system.

Conversion. The conversion disorder had previously been known in DSM-II as "hysterical conversion reaction." In this disorder there is a disturbance of function that involves primarily the voluntary nervous system or sense organs and does not follow known pathophysiologic pathways. Symptoms are usually associated with emotionally charged situations and have symbolic meaning to the patient.

Psychogenic pain. The psychogenic pain disorder is described as a severe and prolonged episode of pain for which no organic pathway can be demonstrated; it had not previously been described with any great frequency in the psychiatric literature, and it had not been included in previous diagnostic manuals. Psychologic factors are believed to be etiologically involved in pain disorder when an emotional conflict is related in time to the onset of the pain, or the pain enables the patient to avoid a noxious activity, or when the pain enables the patient to gain environmental support not otherwise forthcoming. The pain may have some symbolic significance to the patient.

Hypochondriasis. This disorder was called "hypochondrical neurosis" in DSM-II. Hypochondriasis is a preoccupation with the fear or belief that one has a serious illness. This unrealistic fear or belief persists despite thorough physical evaluation and despite medical reassurance, and ultimately results in impaired social or occupational functioning.

Atypical somatoform. The final category listed under somatoform disorders is atypical somatoform disorder; it occurs when the symptom or complaint is not explainable on the basis of organ pathology but is apparently linked to psychologic factors. This diagnostic category can be used for the patient who is preoccupied with an imagined defect in physical appearance, one out of proportion to the actual physical abnormality.

Factitious. The factitious disorders are a new diagnostic category in DSM-III. In this illness the patient chooses the disease or, voluntarily, ingests certain medications such as anticoagulants or thyroid medications, injects such substances as insulin, or causes self-inflicted injuries such as skin excoriations, and is incapable of controlling this behavioral pattern.

Psychologic symptoms. In factitious disorders with psychologic symptoms, the production of serious psychologic symptoms suggestive of mental disorder is the main presenting symptom. A form of this has previously been described in the literature as Ganser syndrome.

Physical symptoms. Factitious illness associated with physical symptoms has been described in the literature as Munchausen's syndrome, feigned illness, or polysurgical addiction.

Malingering. The DSM-III has separated factitious illness from malingering quite clearly. There is an intrapsychic need to maintain the sick role in factitious illness. In malingering the patient chooses the illness and can control it at will. The malingering patient has a recognizable goal, such as obtaining financial compensation or avoiding a specific duty such as military service, or avoiding criminal prosecution. The goal of compensation or avoidance is obvious to the observer.

The three major categories of somatic symptom production can be viewed as exisitng on a continuum. The somatoform disorders at one end are both unconsciously produced and unable to be controlled. In malingering, at the other end of the spectrum, both symptom production and symptom control are under conscious influences (Fig. 1).

Psychosomatic disorders

Those disorders in which psychologic factors either initiate or exacerbate a physical condition or symptom complex, commonly termed psychosomatic diseases, were never adequately described in DSM-I or DSM-II.[2] In both classifications these conditions were listed under the broad heading of "psychophysiologic disorders" and further subdivided according to the organ system affected. In the new classification of DSM-III, the psychophysiologic classification has been dropped and a broad category entitled "psychological factors affecting physical condition" has been introduced.

DSM-III, a multiaxial classification, lists the primary psychiatric diagnoses on axis I and associated physical disorders and conditions on axis III. Therefore a diagnosis of a psychosomatic disorder will now be classified on axis I as "psychological factors affecting physical condition" and on axis III the specific pathologic or physiologic entity, such as ulcerative colitis, for example, will be identified.

It is hoped that the new classification will enhance communication between psychiatrists and nonpsychiatric physicians since it is more specific than the previous vague term of psychophysiologic disorder.

Comment

Psychiatric nomenclature is an evolutionary process designed to give clinicians and researchers common ground in the description of psychiatric conditions. At the same time, dissemination beyond the psychiatric community is necessary so that other specialities might become aware of the criteria used to identify psychiatric conditions. The current emphasis on phenomenologic descriptions is a departure from the previous diagnostic manuals in which dynamic and etiologic factors were implied. This change was adopted to accommodate the various schools of psychiatric thought and, simultaneously, to enable nonpsychiatric physicians to utilize these ideas more readily. Further evolution in psychiatric nomenclature is expected as familiarity with the new manual broadens and as its usage illustrates the advantages and disadvantages of the current changes.

Summary

The development of the DSM (Diagnostic and Statistical Manual of Mental Disorders) published by the American Psychiatric Association has been briefly discussed and the new classifications of disorders—somatoform, factitious, malingering, and psychosomatic—are presented. Wider dissemination of psychiatric nomenclature will facilitate increased understanding and utilization of these diagnostic categories and will provide the basis for future evolution of psychiatric classification.

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Lack of concentration ability may be a treatable disorder

Have trouble concentrating?

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Perhaps you are suffering from ADD. And perhaps medical help is at hand.

Physicians are now learning that many adults are victims of ADD (Attention Deficit Disorder). Sometimes the difficulty in concentrating is so intense that it leads to neurotic and phobic behavior that often is misdiagnosed as schizophrenia or some other psychosomatic disorder.

ADD occurs frequently in small children, and can be treated successfully with small doses of stimulant drugs, particularly amphetamines.

In the July 10 Journal of the American Medical Association, researchers from the University of Utah College of Medicine summarize findings from six years of research on adult ADD.

Writes Paul H. Wender, M.D.:

"The gist of our findings is that a substantial group of persons exist who had ADD in childhood, continue to manifest those symptoms into adult life, and in many instances respond to the same medications (primarily stimulant drugs) that are effective in children.

"Like children, our patients do not become euphoric while receiving small doses of stimulant drugs and do not (at least up to periods of three years) seem to manifest tolerance to them."

Dr. Wender, together with MDs Fred Reimherr and David Wood, first reported on adult ADD several years ago in another AMA publication, Archives of General Psychiatry. The same journal will soon publish still another report from the Utah group.

A series of articles dealing with problems in aging

Geriatrics

IRVING S. WRIGHT, M.D., Editor

Prescribing for the Elderly. Peter P. Lamy, Ph.D. Littleton, Massachusetts, P.S.G. Publishing Company, Inc. 1981. Hardcover, 696 pp.

Peter P. Lamy is the Chairman of the Department of Pharmacy Practice and Administrative Science of the School of Pharmacy of the University of Maryland. He has been interested in problems of the elderly for over a decade and has written this book to bring the clinician information about the various factors which can influence the drug response of elderly patients.

The author considers so many factors as able to influence this drug response, that the focus for the clinician is periodically obscure. The chapters on health care expenditures (6) or deceleration of aging (5) repeat interesting statistics or anecdotes, but appear unrelated to how the elderly respond to drugs.

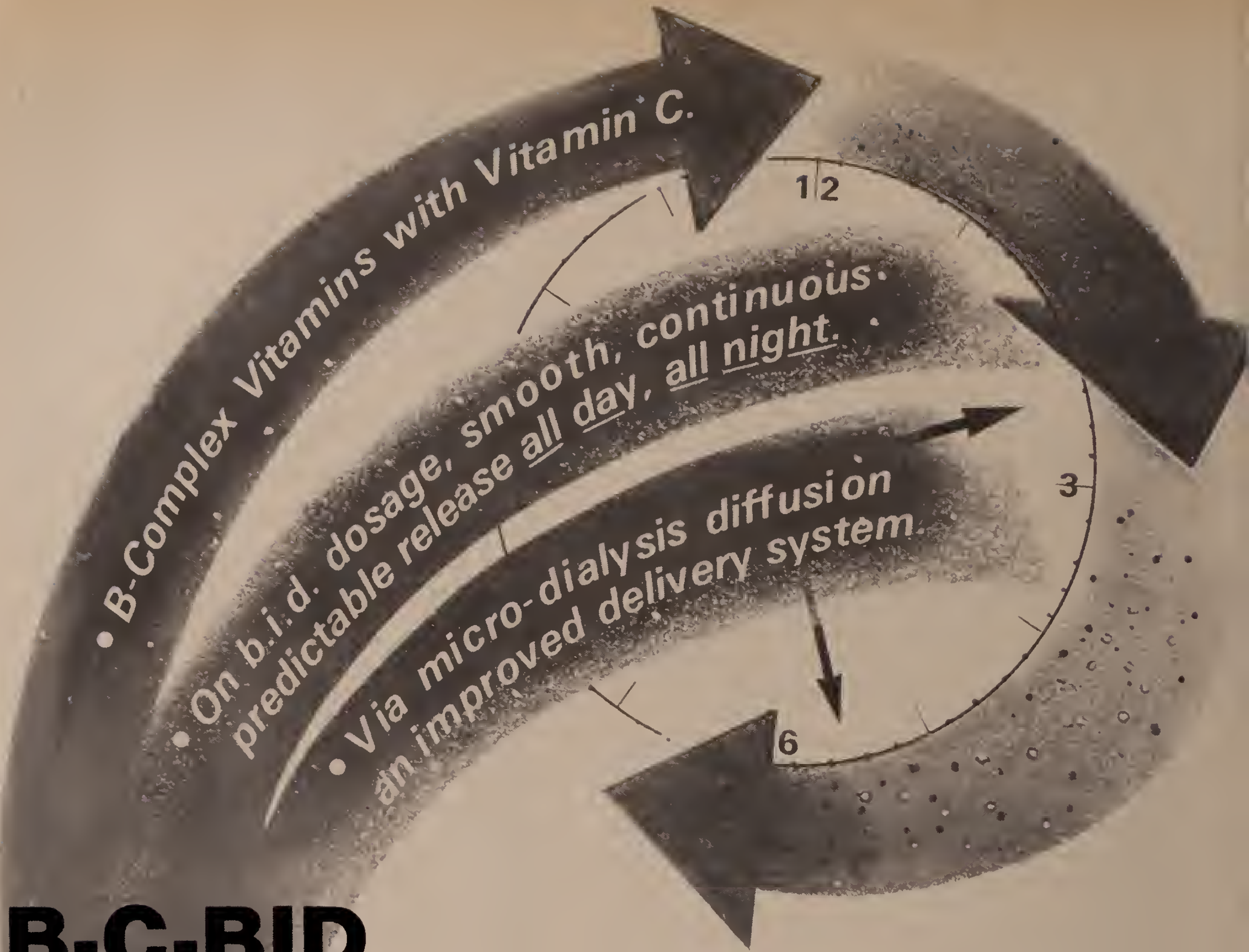
A case is presented on page 97 of a woman of 80 years-of-age who has a history of hypertension, heart failure, diabetes, edema and obesity that were treated with diet, an oral hypoglycemic agent, an oral nitrate, nitroglycerine, a thiazide, and antacids. This treatment is criticized with the statement that only two drugs were justified. The diuretic drug is one and, presumably, the drug for hyperglycemia treatment is the other. The author then states "If diabetic control is significantly impaired by the thiazide diuretic, consideration should be given to the substitution of insulin for the oral hypoglycemic agent although it is not clear whether the patient needs any hypoglycemic agent." No further discussion of this is given but later digitalis therapy is recommended, presumably for the edema, and potassium supplements are also suggested. While this appears to be a hypothetical case, and useful for undergraduate teaching, it is handled too superficially to be helpful for a clinician.

One of the major factors that modifies the response of elderly persons to many drugs is the age-associated decline in renal function. While this is mentioned, no mention is made of the age-associated decline in creatinine formation rate that must be considered in interpreting serum creatinine values for evaluating renal function. The equations of Cockcroft and Gault, or the nomogram of Siersgard-Nielsen, would have been most helpful. Instead, there is the suggestion to measure creatinine clearance without any consideration of the problems of complete urine collection or residual urine in the elderly.

Conclusion

In general, this book is a compilation of much information that may be of interest to clinicians, but probably will not help them very much in their day-to-day care of the elderly.

MARCUS M. REIDENBERG, M.D.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Medicine at Turn of Century

Perspectives from press

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Milwaukee, Wisconsin

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Reporting of medical news in the press not only records the major developments in medicine but also provides insights into public attitudes toward medicine.

In 1981 the American public is abundantly supplied with medical news. New discoveries and new techniques and research findings are amply depicted in the major media. Some touted discoveries are reported even before they are established facts. This broad coverage reflects intense public interest in medical events and also parallels the huge investment of money in medical care and research.

In contrast, medical reporting in Wisconsin was very different at the start of the twentieth century. The *Milwaukee Sentinel*, a daily newspaper since 1836, was the major source of news for the state of Wisconsin. This newspaper's microfilms were searched for the first three months of 1901, the year that was generally regarded as the first one in the twentieth century, and 46 medical articles were found. This treatise examines those articles.

As expected, there was a wide variety of stories, covering a broad range: a medical obituary ("OD Wolcott died 3/17/01 at age 99"); a purported breach of medical ethics; suspected and infectious disease outbreaks (typhoid and plague especially); and a medical economics story about physicians' efforts to form an unofficial union to augment their fees. Aside from these routine events, there were several articles of considerable interest.

Background

In Wisconsin, the medical practitioners had followed the heavy flow of new arrivals, attracted by many agricultural and industrial opportunities. Although many persons continued to rely on home remedies for various medical problems, most persons were increasingly turning to physicians for professional advice; he was a highly respected person in the late nineteenth century. As one of the most educated persons in the community, he was often involved in civic affairs as well as in medicine.[1] Most physicians lived well, and not infrequently had business ventures on the side, especially in the areas of land speculation and farming.

By 1900 Milwaukee had a population of 295,000, with 411 physicians, after a sudden expansion from the 204,968 population and 180 physicians in 1890.[2] Most of the older physicians had been educated elsewhere; some had been taught medicine in Europe before their emigration, most had attended eastern medical schools, and a few had proceeded north from Chicago. Milwaukee had lagged considerably behind Chicago in providing its own citizens with local medical education, but by the 1900s many dozens of graduates of the two Milwaukee medical schools were making important contributions to the rising physician population.

Over the years in Milwaukee, many professional associations had been established; some were informal and transient.[1] Among the formal ones that have endured are the Wisconsin and Milwaukee County Medical Societies, founded in 1846, or two years before Wisconsin was admitted to the Union. The Milwaukee Academy of Medicine was organized in 1886. By 1900, several hospitals were extant, the oldest being St. Mary's Hospital, founded in 1857.[1]

Mortality data for 1900

The *Milwaukee Sentinel* printed mortality figures for Wisconsin in the year 1899[3]; at that time, the overall rate was 13.7 per 1,000 persons. Had the readers of the paper had access to the national mortality figures for 1900, they would have concluded that life in Wisconsin was no more hazardous than life anywhere else in the United States, and possibly was less hazardous.[4] The mortality figures in Wisconsin and the United States are listed in Table I.

The categories of causes of death in Wisconsin were quite similar to the national mortality figures, with somewhat different ranking (Table I).[4] The large number of other causes in both series suggests that completeness and accuracy of reporting may have been suboptimal. Nevertheless, it is small wonder that the public held the infectious diseases, specifically, in great awe, since they may have con-

TABLE I. Mortality data—Wisconsin versus United States nationally in 1900*

Leading Causes of Death	Number of Deaths	Wisconsin Percentage of Deaths	Deaths per 100,000	U.S.A. (11 states) Percentage of Deaths	Order of Rank
1. Diarrhea	459	11.4	139	8.1	3
2. Tuberculosis	369	9.2	194	11.2	1
3. Pneumonia	296	7.4	174	10.1	2
4. Organic heart disease	227	5.7	116	6.7	4
5. Cancer	196	4.9	64	3.7	7
6. Bronchitis	178	4.4	52	3	8
7. Accidents	151	3.8	51	3	9
8. Apoplexy	139	3.5	111	6.5	5
9. Convulsions	136	3.4	...	...	...
10. Brights' disease	121	3	81	4.7	6
11. Other	1,741	44	738	44	...
TOTALS	4,013	100	1,720	100	...
Per 1000,000	1,371	...	1,720	...	...

* U.S. figures from the U.S. Department of Commerce, Vital Statistics in the U.S.A. 1900–1940; Wisconsin figures from the *Milwaukee Sentinel*, January, 1901 (data from 1899).

tributed to perhaps 39 percent of deaths in Wisconsin.

Medicine and law

Three articles dealt with medicine and the law. One bill submitted to the legislative committee on health sought to ban all cigarettes in Wisconsin[3]; its proponents argued that cigarette use among the young often lead to opium use, and weaken their wills and minds. Several educators were cited as viewing cigarette smokers to be behind in their studies, whereas opponents successfully argued that freedom of personal choice was paramount. No comment on any possible adverse health consequences was printed. The bill was consistent with notions that undesirable behaviors could be effectively curtailed by legislative prohibition, particularly that involving alcohol and narcotics; these sentiments were gaining strength in the early twentieth century. It is noteworthy that the argument was in opposition to cigarettes, not to tobacco in general. Also, it is notable that the argument that cigarettes were a stepping stone en route to the use of other more dreaded and addictive drugs was to reappear again, especially in the cannabis controversy in the mid- to latter twentieth century.

Another bill to license procedures for osteopathic physicians was ultimately set up in 1940. The third bill purported to establish procedures for licensing medical school graduates by means of examinations.[3] The Wisconsin medical students vigorously and successfully opposed the bill on the grounds that having graduated from a Wisconsin medical school was sufficient in itself; furthermore, they pointed out that their examiners were very likely to be their old teachers anyway, a point in their favor. The students approved of a section requiring all candidates who had learned medicine outside of Wisconsin to pass an examination before licensing.[3]

William Osler review of medical accomplishments in nineteenth century

Osler, M.D., F.R.S.,[5] and professor of medicine at Johns Hopkins University, wrote a long article summarizing the major accomplishments in medicine during the nineteenth century; he contrasted medical care, and its philosophic bases at the beginning and the end of the century. In 1800 he cited the influence of Hermann Boerhaave, M.D., William Cullen, M.D., of Edinburg, and Albrecht von Haller, M.D., of Bern, as being most influential in the fledgling republic, which had only three medical schools (Harvard, Dartmouth, and Pennsylvania, but omitting Columbia which had been instructing off and on since 1769). There were only two main hospitals: New York and Philadelphia. By the end of the century, with the development of steam and electric energy, together with many improvements in living arrangements and styles, medical practices had enormously changed.

He viewed as most important in this process the rise of experimentation as the means by which discoveries were made, with the most important specific advances in infectious diseases. Fever was not better characterized (malarial, typhoidal, eruptive, and so forth), and many infections were being accurately diagnosed. Laboratory detection of organisms permitted not only better diagnoses, but also enhanced personal hygiene, isolation techniques, and sanitation procedures, and other preventive health measures also had resulted.

Also noted was the rapid development of specialization among medical practitioners, as medicine increased in complexity. The treatment of the insane was much more humane, and the favorable contributions in dietary practices, faith healers, massage, and exercise were recounted. Regarding alcohol, Osler[5] advised moderation. One might take "four to five drinks daily, but in the 4th or 5th decade

Bacchus asks the price in terms of arteries, liver or general breakdown."

Surgical advances in nineteenth century

William Williams Keen, M.D., LL.D F.R.C.S.,[6] professor of surgery at Jefferson Medical College, Philadelphia, wrote a lengthy treatise on the surgical advances to complement Osler's article on the medical advances. Keen[6] cited great strides in teaching (155 medical schools contrasted with the 3 in 1800). He did note the uneven quality of instruction, however, describing many as being poorly equipped, as well as substandard. Hospitals were larger and more numerous, and included diagnostic laboratories where microscopy and bacteriology could be used in patient management and where surgeons could learn from cadavers. Medical libraries were mentioned as an important depository of medical information.

Keen[6] recounted the major advances in (1) anesthesia (chloroform, ether, and nitrous oxide, particularly), which allowed for meticulous surgery to take the place of speed, (2) antiseptic techniques, after the major contributions of Joseph Lister, M.D., and Louis Pasteur, Ph.D., reduced the problems of wound infections, (3) the newly discovered x-ray techniques disclosed lesions not otherwise perceptible, (4) many improvements in surgical instruments, and (5) much assistance from the nursing profession. Finally Keen[6] listed numerous operations that had been developed during the century, singling out for special notice surgery of the intestines, gallbladder, goiters, tumors, and hernias.

Comment. Keen[6] was a well-known surgeon, author of an important text book on surgery (1896), and was mentioned in Garrison[7] for his contribution to treating typhoid fever, central nervous diseases, and, especially, for craniotomies. Osler[5] is well known for his diagnostic acumen, his bedside teaching, his textbook of medicine, and for ushering in the modern era of medical education.

With the advantages of 80 years of perspective on the nineteenth century, today one might add other aspects of medicine for emphasis. It was an era of great bursts of knowledge in physiology, cellular histology, parasitology, and particularly cell pathology. The use of microscopes following the lead of Rudolf Virchow, M.D. (1821 to 1902), and others produced enormous information of value in medicine. Also, the development of communications systems permitted many speciality fields in medicine to flurish simultaneously on many isolated centers. Unquestionably, this rapid spread of knowledge stimulated advances in ophthalmology, gynecology, orthopedics, otology, and so forth.

Neither Osler[5] nor Keen[6] was aware of the importance of the revolutionary discoveries of two German physicians, Gregor Mendel, M.D. (1822 to 1844), and Sigmund Freud, M.D. (1856 to 1939). Mendel's work (1866) lay dormant for over 35 years before it was rediscovered, a landmark in the dynamic field of genetics. There were some indications of the importance of genetics in the work of Englishmen Charles Darwin (1808 to 1882) and Thomas Huxley, M.D. Freud had just published his *Traumdeutlung* (1900), and its influence was slow to take hold. Thus it would have been difficult to have realized that major changes in psychiatry and human development theories were under way in 1900.

Smallpox epidemic

The largest number of articles (18) were devoted to an epidemic of smallpox in January 1901; 339 persons were affected, with only one death occurring. Most of the reporting described outbreaks of the dreaded disease in previously unaffected communities, interspersed with overly optimistic articles describing the waning of the epidemic.

One detail merits further comment. A. Rodermond, M.D., of Appleton, Wisconsin, announced that he did not believe in the contagious aspects of smallpox. To demonstrate his viewpoint, he rubbed his body with lesions from smallpox patients and then disappeared. The press reported and, doubtless, increased the public's anxieties over a possible transmitter of smallpox at large somewhere. Multiple rumors of his being seen were reported and ultimately followed by positive identifications in Chicago and Milwaukee. The public had extensive fears of his spreading the disease on streets, railroad stations, trains, and so forth, which were alleviated by his capture in Milwaukee and sequestration in the "Pest House." The newspaper described a febrile illness on admission, and later announced that the physicians did not believe Dr. Rodermond had ever had smallpox. It is remarkable that the public reacted with such vigor to the tale of one person in their midst with a contagious and dreaded disease, despite the lack of documentation that he had the disease.[7]

Medical schools in Milwaukee in 1900

The WCPS (Wisconsin College of Physicians and Surgeons) was described, with a photograph of the school's building and a listing of the faculty, which included professors of anatomy, medicine, physiology, pharmacology, surgery, mental disease, pediatrics, obstetrics, and so forth; the reporter supplied few other details.[3]

The WCPS was founded in 1893, the first in Milwaukee after many previous false starts, with 42 students, and it awarded its first medical degree the next year. Instruction took place in the school's building, with some clinical exposure at the nearby St. Joseph's Hospital (founded in 1883). In 1904 Sperry cited three members of the original faculty of WCPS in his small list of distinguished Milwaukee physicians, that is, Amos Clarke, M.D., A. H. Levings, M.D., and W. H. Washburn, M.D. The Flexner report[8] described WCPS, after a site visit in 1909, as having 60 students, mostly from Wisconsin, and subsisting solely on student fees. The school was found to have spotty laboratory and wretched clinical facilities, and clinical instruction was sporadic—held in an amphitheater in an adjacent surgically oriented hospital.[8] In 1913 the WCPS was merged into Marquette University.

The other Milwaukee medical school, MMC (The Milwaukee Medical College), received a lengthier article under the headline "a free clinic for medical care; a study in humanity." [3] It reported that about 5,000 persons received annual treatment at the affiliated Trinity Hospital (founded in 1890). The school building was pictured and a list of the faculty, which had a similar array of professorships as the WCPS, was included.

The reporter commented on the instructors' and students' failure to pay much attention to the medical or moral idiosyncrasies of the patients who "fall into their hands," being much more interested in the relations the individuals bring to the "study of surgery or medicine . . . (although) they . . . occasionally can see the humor or the pathos." [3] This criticism of medical instruction was to recur many times during the twentieth century. Apparently, some clinical teaching was carried out in an amphitheater arrangement. The reporter was impressed by the specialists' views of hypochondriac patients. Since they lacked disease, they were not unwelcome, and could be turned over to the students without harm. Even some good could arise, since many of these patients mostly wanted to talk about their symptoms to a sympathetic and scientific ear. On the other hand, the babies in the hospital dismayed the reporter, who termed them pathetic, being most affected by hare lips, club feet, crooked spines, weak eyes, and blotchy skins."

The MMC was founded in 1894 and initially attracted about 90 students. Its standards of education were considered to be low by the medical community, since the county medical society brought suit in 1902, alleging that the MMC education was substandard and inefficient; students were allegedly poorly prepared and prematurely graduated. The suit also averred that MMC was a menace to the reputation and good standing of the medical profession. Heard in New Orleans before the American Association of Medical Colleges, the suit was sustained. Initially, a fine was levied, but later the sentence was reduced to a letter of "severe censure." When the MMC was visited by the Flexner Commission in 1909, many of the criticisms leveled at the WCPS were repeated; it had 168 students mostly from Wisconsin, and subsisted on student fees. It required but could not substantiate all entrants to have completed high school. The laboratories were termed weak and meager, with slight equipment, and the clinical instruction was extremely weak.[8] In 1907, MMC became part of Marquette University, and was merged with WCPS in 1913.[2]

The contretemps between the MMC and the Milwaukee County Medical Society is unexplained. Efforts to obtain data from local institutions were unavailing, usually because they did not possess records at all in the 1902 era. Since the libel contention was disallowed, presumably the allegations were established. If the MMC improved its instruction, it merely brought it up to the level of the Wisconsin College of Physicians and Surgeons, which was judged quite substandard in the Flexner report.

Summary

The readers of the *Milwaukee Sentinel* in 1901 were exposed to several illuminating articles on medicine. A smallpox epidemic was amply described and a variety of medical miscellanea. They were exposed to mortality data in Wisconsin and to the two Milwaukee medical schools. Two outstanding physicians, Osler and Keen, described the major achievements in medicine and surgery in the nineteenth century, as the new century began.

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Clinical Clues

—In this age of food faddism, it should be recognized that massive protein overloading, per se, has been reported to cause sharply elevated urea levels (more than 150 mg. per deciliter) in the absence of renal disease (Richards, P., and Brown, C. L.: Urea metabolism in an azaetemic woman with normal renal function, Lancet **2:** 207 (1975)).

—Tetracycline should not be given to patients with diminished renal function because of the brisk rise in urea level, which follows such therapy (Edwards, O. M., Huskisson, E. C., and Taylor, R. T.: Azotaemia aggravated by tetracycline, Brit. Med. J. **1:** 26 (1970)).

—After prolonged heavy exercise, there may be an increase in the blood urea level as a consequence of protein catabolism (Refsum, H. E., and Strömme, S. B.: Urea and creatinine production and excretion in urine during and after prolonged heavy exercise, Scand. J. Clin. Lab. Invest. **33:** 247 (1974)).

—Probably the most common cause of a high serum urea nitrogen level is hypoperfusion of the kidney, which occurs in congestive heart failure (Morgan, D. B., Carver, M. E., and Payne, R. B.: Plasma creatinine and urea: Creatinine ratio in patients with raised plasma urea, Brit. Med. J. **2:** 929 (1977)).

—Serum urea levels as high as 300 mg. per deciliter have been reported in advanced dehydration without any evidence of renal disease (Hoffer, E. P.: Blood urea nitrogen of 300 due to volume depletion: case report, J. Urol. **110:** 9 (1973)).

—Before a raised serum urea level can be used as an index of decreased renal function, both protein loading and decreased renal perfusion must first be ruled out as contributory factors.

—More than 50 percent of the nephrons must be ablated before the serum urea level exceeds the upper limits of normal.

—Serum creatinine levels offer significant advantages over serum urea levels as indicators of renal dysfunction. Serum creatinine is formed as a concentrate and is little influenced by diet. Virtually all the creatinine that is formed is filtered by the glomeruli.

—Because the serum creatinine level may be increased in conditions of decreased perfusion, its predicted value for renal disease is less than optimal, but still better than that of a serum urea level (Rickers, H., Brøchner-Mortensen, J., and Rødkro, P.: The diagnostic value of plasma urea for assessment of renal function, Scand. J. Urol. Nephrol. **12:** 39 (1978)).

—If a serum creatinine level greater than 2.8 mg. per deciliter is encountered, the probability of intrinsic renal disease becomes 90 percent (Morgan, D. B., Carver, M. E., and Payne, R. B.: Plasma creatinine and urea: Creatinine ratio in patients with raised plasma urea, Brit. Med. J. **2:** 929 (1977)).

—The serum creatinine level may be spuriously high in the absence of renal disease, with elevated ketones, especially in acetoacetic acid, primarily in diabetic ketoacidosis (Molitch, M. E., Rodman, E., Hirsch, C. A., and Dubinsky, E.: Spurious serum creatinine elevations in ketoacidosis. Ann. Intern. Med. **93:** 280 (Aug.) 1980).

—The minor increment in serum creatinine levels, following strenuous exercise in normal individuals, is not clinically important (Ward, P. C.: Renal dysfunction. 2. Proteinuria, Postgraduate Med. **69:** 93 (June) 1981.

—Increased tubular secretion of creatinine has been demonstrated in a few patients with advanced renal disease, causing serum levels to be curiously (and spuriously) low (Kerr, D. N., and Davison, J. M.: The assessment of renal function, Brit. J. Hosp. Med. **14:** 360 (1975)).

—An increase in MCV (mean corpuscular volume), in the range of 115 cubic microns or greater, is clinically significant, even in the absence of anemia, which warrants further investigation. In fact, an MCV greater than 100 cubic microns should be regarded with suspicion (McPhedran, P., et al.: Interpretation of electronically determined macrocytosis, Ann. Intern. Med. **78:** 677 (1973)).

—Any condition associated with an increase in erythrocyte production of premature release of erythrocytes from the bone marrow may be associated with an increase in the MCV or the appearance of macrocytes in the peripheral blood.

—Thus, acute blood loss, or hemolysis, is often accompanied by an increase in the MCV and the appearance of macrocytosis in the peripheral blood.

—In these instances, the macrocytes are often also polychromatophilic (bluish-tinged), and round, as opposed to oval or egg-shaped, as in the megaloblastic macrocytic anemias.

—The most common cause of megaloblastic macrocytic anemia is Vitamin B_{12} and folic acid deficiency.

—The causes of nonmegaloblastic anemia are acute blood loss, hemolysis, myelophthisis states, liver disease, postsplenectomy state, and sideroblastic and chronic refractory anemias.

—Dog bites have great infection potential because the wound is a crush injury, and because the average dog's mouth harbors at least 64 species of pathogenic bacteria (Callaham, M.: Dog bite wounds, J.A.M.A. **244:** 2327 (Nov. 21) 1980).

—The risk of infection in dog bites increases with the depth of the wound, the age of the patient, and the time elapsed before the wound is treated.

—Bites on the face develop infection at a low rate regardless of treatment, but those on the hand have rates as high as 30 percent.

—Antibiotic prophylaxis may be helpful, particularly for high-risk wounds. The initial drug of choice should be penicillinase-resistant penicillin, or cephalexin, with erythromycin estolate, or tetracycline, used for patients allergic to penicillin.

—The principal cause of sudden, unexplained death in young competitive athletes was found to be hypertrophic cardiomyopathy (Maron, B. J., et al.: Sudden death in young athletes, Circulation **62**: 218 (Aug.) 1980).

—Other defects included anomalous origin of the left coronary artery from the right sinus of Valsalva, idiopathic concentric left ventricular hypertrophy, coronary artery disease, and rupture of the aorta.

—Echocardiography is a means of identifying patients with hypertrophic cardiomyopathy without obstruction in patients with aortic root dilatation at risk of rupture.

—It is important to emphasize that sudden death in patients with IHSS (idiopathic hypertrophic subaortic stenosis) is not limited to patients with severe obstruction. Indeed, some patients with mild or even no obstruction at all, and the basal state, can die suddenly, without ever manifesting functional limitation or preexisting symptoms.

—Sudden death in patients with IHSS apparently results from ventricular arrhythmia, and attempted prevention of a second fatal arrhythmia is the treatment of choice for patients who have been resuscitated from an episode of cardiac arrest.

—Embolization is relatively common in patients with infective endocarditis, and patients with echocardiographic evidence of vegetation are at higher risk than are patients without vegetations (Stewart, J. A., et al.: Echocardiographic documentation of vegetative lesions in infective endocarditis: clinical implications, Circulation **61**: 374 (Feb.) 1980).

—Thirty percent of patients with evidence of vegetations experienced embolic events, whereas these occurred in only ten percent of the group without echocardiographic-documented vegetations (Circulation **61**: 374 (Feb.) 1980).

—Successful bacteriologic cure does not preclude the subsequent appearance of emboli. Patients who have had successful medical treatment may go on to convalescence with remaining vegetative lesions. The presence of vegetative lesions does not imply that the patients have valve leaflet destruction; therefore, surgery based solely on the detection of such lesions is felt to be unwarranted (Circulation **61**: 374 (Feb.) 1980).

—It is not clear why vegetative lesions develop in some patients with infective endocarditis, but not in others, (Circulation **61**: 374 (Feb.) 1980).

—Vegetative lesions may be detected after the onset of symptoms, or may develop after antimicrobial therapy has begun (Circulation **61**: 374 (Feb.) 1980).

—Approximately one half the patients with clinical criteria for endocarditis manifest lesions on echocardiography; however, when clinical criteria are uncertain, echocardiography may play a more critical role in diagnosis.

—Although patients with vegetative lesions have a higher risk of complications, these can also occur in patients without such lesions.

—The mere presence of vegetations alone does not imply the need for surgical intervention; this will depend more on a combination of factors, especially on the presence of refractory congestive heart failure.

—Normal echocardiogram findings do not exclude the possibility of infective endocarditis; in about half the patients with a clinical presentation compatible with infective endocarditis, vegetations are not visualized.

—Patients with infective endocarditis, but without evidence of vegetations or bowel disruption on echo, are a relatively low risk of complications, and rarely require cardiac surgery.

—The most important criteria for surgery for infective endocarditis are congestive heart failure, persistent sepsis, and recurrent embolic phenomenon.

—Echocardiographic study of patients with endocarditis may reveal involvement of another valve, which has not been suspected.

—Primary hyperthyroidism usually results in the overproduction of both T_4 (thyroxine) and T_3 (triiodothyronine).

—In approximately 4 percent of patients with hyperthyroidism, only serum T_3 levels are raised, so-called T_3–thyrotoxicosis (Schimmel, M., and Utiger, R. D.: Thyroidal and peripheral production of thyroid hormones. Review of recent findings and their clinical implications, Ann. Intern. Med. **87**: 760 (1977)).

—Hyperthyroidism with selected elevation of T_4 with normal T_3 is much less common (Birkhauser, et al.: Diagnosis of hyperthyroidism when serum–thyroxine alone is raised, Lancet **2**: 53, (1977)).

—This condition is not easily distinguished from euthyroid individuals with various nonthyroidal illnesses who may have normal, or reduced T_3, as well as alterations in free T_4 levels.

—T_3 values of hyperthyroid patients may be abnormally low due to intercurrent, chronic, nonthyroidal illness (Birkhauser, et al.: Diagnosis of hyperthyroidism when serum–thyroxine alone is raised, Lancet **2**: 53 (1977)).

—Free T_4 levels may occasionally arise in severe illness in association with reduced thyroxine-binding globulin.

(TBG) capacity and a low total T_4 (Burr, W. A., et al.: Serum triiodothyronine and reverse triiodothyronine concentrations after surgical operation, Lancet **2**: 1277 (1975)).

—T_3 is produced as a result of a peripheral conversion of thyroxine.

—In Grave's disease, there is a disproportionate overproduction of T_3 relative to T_4. Studies have demonstrated some reduction in T_3 levels to T_4 levels in old age. (Rubinstein, H. A., et al.: Progressive decrease in serum triiodothyronine concentrations with human aging: Radioimmunoassay following extraction of serum, J. Clin. Endocrinol. **37**: 247 (1973)).

—Atypical thyroid hormone levels in a patient with suspected hyperthyroidism may be clarified with the use of the TRH (thyrotropin-releasing hormones) through the use of the TRH stimulation test. This test is most reliable in the identification of the hyperthyroid state. Excess circulating thyroid hormone suppresses release of TSH at the pituitary. Stimulation with TRH results in the flat TSH response characteristic of hyperthyroidism. (Snyder, B. J., and Utiger, R. D.: Response to thyrotropin releasing hormone (TRH) in normal man, J. Clin. Endocrinol. Metab. **34**: 380 (1972)).

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Self-instruction means success for some U.S. medical students abroad

A small number of U.S. students in foreign medical schools are finding that they learn more by reading on their own than by following their school's curriculum.

That was the experience of David A. Loiterman, M.D., and Robert M. Pickoff, M.D., two New York City physicians who practiced self-instruction during their two-year basic science program at a Mexican medical school. They did not use the school's lectures as a principal means of learning. Instead, they divided their time into blocks for studying specific subjects, chose their own supplementary textbooks, and worked at their own pace.

According to their report in The Journal of the American Medical Association (October 16), the method of independent study they devised enabled them to learn 87 percent of the subjects taught during the same period at the Mount Sinai School of Medicine, New York. If they had followed only the Mexican school's program, they would have covered only 57 percent of the traditional American curriculum, they calculated.

The authors are careful to point out, however, that there is no agreement among medical educators on what constitutes a minimum core curriculum in the basic sciences and that differences exist even among medical schools in the United States.

According to one study, half of the U.S. students in foreign medical schools who apply for transfer to a U.S. school fail the required examination given by the NBME (National Board of Medical Examiners). Among the half who pass, however, there seems to be no significant difference in the NBME performance of independent studiers compared with students in traditional classes, say Loiterman and Pickoff.

The authors claim that forming independent study habits early may benefit these students later. "It may help medical students develop the habit of self-education—a skill the physician must practice throughout his career if he is to remain up-to-date and provide the best possible care for his patients," they say.

Obituaries

Jacob Altman, M.D., of New York City, died on October 19 at the age of 77. Dr. Altman graduated in 1933 from Rush Medical College. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James H. Barnard, M.D., of New York City, died on October 11 at the age of 81. Dr. Barnard graduated in 1927 from Syracuse University College of Medicine. He was a consultant in allergies at The Roosevelt Hospital. Dr. Barnard was a Diplomate of the American Board of Internal Medicine (Allergy), a Fellow of the American College of Physicians, and a member of the American Academy of Allergy, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Linn John Boyd, M.D., of New York City, died on October 4 at the age of 86. Dr. Boyd graduated in 1918 from the University of Michigan Homeopathic Medical College. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Bernard Marvin Curtis, M.D., of Wantagh, died on October 27 at the age of 58. Dr. Curtis graduated in 1946 from the University of Cincinnati College of Medicine. He was an attending pediatrician at Nassau County Medical Center and a staff pediatrician at Long Island Jewish-Hillside Medical Center. Dr. Curtis was a Diplomate of the American Board of Pediatrics and a member of the American Academy of Pediatrics, the Nassau Academy of Medicine, the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Aaron Davis, M.D., of Penfield, died on August 11 at the age of 82. Dr. Davis graduated in 1922 from McGill University Faculty of Medicine. He was a member of the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jennette Evans, M.D., of Ithaca, died on August 24 at the age of 89. Dr. Evans graduated in 1922 from Cornell University Medical College. She was a member of the Tompkins County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry A. Feigenbaum, M.D., of Jamaica, died on September 13 at the age of 68. Dr. Feigenbaum received his medical degree from the University of Geneva in 1936. He was chief of proctology at Jamaica Hospital and a staff surgeon at Parkway Hospital. Dr. Feigenbaum was a Fellow of the International College of Surgeons and a member of the American Society of Colon and Rectal Surgery, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Edmund W. Frede, M.D., of Albany, died on September 3 at the age of 64. Dr. Frede received his medical degree from the University of Munich in 1942. He was a family practitioner at Memorial Hospital. Dr. Frede was a member of the American Academy of Family Physicians, the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Louis L. Golden, M.D., of Flushing and Rego Park, died on October 17 at the age of 80. Dr. Golden received his medical degree from the University of Leipzig in 1927. He was a member of the American Geriatrics Society, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

George Thomas Heller, M.D., of Lake Success, died on September 17 at the age of 71. Dr. Heller received his medical degree from the University of Szeged in 1938. He was an anesthesiologist at Hempstead General and Manhasset Medical Center Hospitals. Dr. Heller was a Fellow of the American College of Anesthesiologists, a Fellow of the International College of Surgeons, and a member of the New York State Society of Anesthesiologists, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Morris Freund Heller, M.D., of Hampton Bays, died on October 11 at the age 76. Dr. Heller graduated in 1931 from Yale University School of Medicine. He was an associate, off service, otolaryngologist at The Mount Sinai Hospital. Dr. Heller was a Diplomate of the American Board of Otolaryngology and a member of the American Academy of Otolaryngology, the New York Academy of Medicine, the New York Rhino-Otolaryngological Society, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Nathan M. Jaret, M.D., of Middle Village, died on September 23 at the age of 68. Dr. Jaret graduated in 1942 from Anderson College of Medicine, Glasgow, Scotland. He was an associate in medicine at Physicians Hospital. Dr. Jaret was a member of the American Academy of Family Physicians, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Theodore P. Koszalka, M.D., of South Jamesport, died on September 28 at the age of 80. Dr. Koszalka graduated in 1929 from New York Homeopathic Medical College and Flower Hospital. He was a member of the Suffolk County

Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jay Arnold Lehrer, M.D., of Corona, died on October 2 at the age of 53. Dr. Lehrer received his medical degree from the University of Munich in 1956. He was a staff ophthalmologist at Parkway Hospital and a consulting ophthalmologist at Creedmoor Psychiatric Center. Dr. Lehrer was a Diplomate of the American Board of Ophthalmology and a member of the American Ophthalmological Society, the Pan American Association of Ophthalmology, the New York Society for Clinical Ophthalmology, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Miriam Lending, M.D., of New York City, died on September 18 at the age of 54. Dr. Lending graduated in 1949 from the University of Virginia School of Medicine. She was an attending pediatrician at Flower and Fifth Avenue and Metropolitan Hospitals. Dr. Lending was a Diplomate of the American Board of Pediatrics and a member of the American Academy of Pediatrics, the American Public Health Association, the Society for Pediatric Research, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James Joseph Morrissey, M.D., of Long Island City and Astoria, died on September 8 at the age of 73. Dr. Morrissey graduated in 1935 from Georgetown University School of Medicine. He was director of surgery at St. John's Queens Hospital. Dr. Morrissey was a Fellow of the International College of Surgeons and a member of the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Donald Dunn Posson, M.D., of Rochester, died on October 8 at the age of 79. Dr. Posson graduated in 1929 from the University of Rochester School of Medicine. He was an associate, emeritus, in pediatrics at Strong Memorial Hospital and a consulting pediatrician at Rochester General Hospital. Dr. Posson was a Diplomate of the American Board of Pediatrics and a member of the American Academy of Pediatrics, the Rochester Academy of Medicine, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles S. Rand, M.D., of Jamaica, died on September 3 at the age of 73. Dr. Rand recevied his medical degree from the University of Vienna in 1934. He was a staff general practitioner at Hillcrest General Hospital. Dr. Rand was a member of the New York Academy of Medicine, the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Algernon Beverly Reese, M.D., of New York City, died on October 19 at the age of 85. Dr. Reese graduated in 1921 from Harvard University Medical School. He was a consulting ophthalmologist at The Presbyterian, Lenox Hill, and Roosevelt Hospitals, and at the New York Eye and Ear Infirmary and the Manhattan Eye, Ear and Throat Hospital. Dr. Reese was a Diplomate of the American Board of Ophthalmology, a Fellow of the American College of Surgeons, and a member of the American Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, the New York Ophthalmology Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edward Patrick Ryan, M.D., of Glens Falls, died on August 14 at the age of 77. Dr. Ryan graduated in 1930 from Georgetown University School of Medicine. He was a consulting ophthalmologist at Moses Ludington and at Glens Falls Hospitals. Dr. Ryan was a Diplomate of the American Board of Ophthalmology and a member of the American Academy of Ophthalmology and Otolaryngology, the Warren County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Robert Wade Speir, M.D., of New York City, died on October 18 at the age of 52. Dr. Speir graduated in 1956 from Columbia University College of Physicians and Surgeons. He was an assistant physician at The New York Hospital. Dr. Speir was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Weinstein, M.D., of Brooklyn, died on October 27 at the age of 83. Dr. Weinstein graduated in 1923 from Cornell University Medical College. He was a consulting otolaryngologist at Jewish Hospital and Medical Center of Brooklyn. Dr. Weinstein was a Diplomate of the American Board of Otolaryngology, a Fellow of the American College of Surgeons, and a member of the American Academy of Ophthalmology and Otolaryngology, the American Academy of Facial Plastic and Reconstruction Surgery, the Medical Society of the County of Kings, the Medical Society of the State of New York, and the American Medical Association.

1981 Albion O. Bernstein, M.D. Award

The Medical Society of the State of New York is accepting nominations for the 1981 ALBION O. BERNSTEIN, M.D. AWARD until March 1, 1982.

This national award is given to a physician, surgeon, or scientist who has recently made a widely beneficial scientific discovery in medicine, surgery or the prevention of disease. Recent winners include Rosalyn S. Yalow, Ph.D., Solomon A. Berson, M.D., Baruch S. Blumberg, M.D., Ph.D., Manfred M. Mayer, Ph.D., and Georges Köhler, Ph.D.

The $2,000 award and appropriate scroll, will be presented at the CME Assembly of the Medical Society of the State of New York, June 25–27, 1982. The award was endowed by the late Morris J. Bernstein in memory of his son, a physician who died in an accident while answering a hospital call in November 1940.

Nominators must complete and submit an official nomination form with additional support information which must include the nominee's curriculum vitae, a brief synopsis of the significance of the achievement and a list of publications, if any. Please submit by March 1, 1982 to:

BERNSTEIN AWARDS COMMITTEE
MEDICAL SOCIETY OF THE STATE OF NEW YORK
420 Lakeville Road, P.O. Box 5404, Lake Success, N.Y. 11042

Albion O. Bernstein, M.D. Award

1981 Nomination Form

(*Please print/ type*)

Name(s) of Nominee____________________

Professional Address____________________

____

Telephone (   )____________________

Title of Achievement____________________

The above is nominated for the 1981 Albion O. Bernstein, M.D. Award for a recent widely beneficial scientific discovery in medicine, surgery or the prevention of disease.

Nominator____________________

Title____________________

Organization____________________

Address____________________

Telephone (   )____________________

Signed____________________Date__________

MEDICAL SOCIETY

of the

STATE OF NEW YORK

BYLAWS

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MEDICAL SOCIETY OF THE STATE OF NEW YORK
420 LAKEVILLE ROAD
LAKE SUCCESS, NEW YORK 11042

MEDICAL SOCIETY OF THE STATE OF NEW YORK

BYLAWS

Revised 1981

ARTICLE I. NAME AND PURPOSE

The name and title of the State Society shall be the Medical Society of the State of New York. The purposes of the State Society shall be: to federate into one organization the medical profession of the State of New York; to extend medical knowledge and advance the science and art of medicine; to establish the *Principles of Professional Conduct* which shall be binding on the members of the Medical Society of the State of New York, the members of the component county medical societies, and the members of the component district branches, in all matters in their relation to each other and to the public; to enhance the delivery of medical care of high quality to all people in the most economical manner; to promote the betterment of community health; and to enlighten and direct public opinion in regard to the problems of medicine and health for the best interests of the people of the State.

ARTICLE II. MEMBERSHIP

SECTION 1. CLASSES

The membership in the Medical Society of the State of New York shall be divided into five classes: (a) active, (b) life, (c) honorary, (d) resident, and (e) student.

Active membership shall be limited to graduates of recognized medical or osteopathic schools who have completed not less than four satisfactory years of at least eight months each, or the equivalent, in a medical or osteopathic school in the United States of America or Canada registered as maintaining at the time a standard satisfactory to the medical or osteopathic licensing authorities of the State of New York, or in a medical or osteopathic school in a foreign country maintaining a standard not lower than that prescribed for medical schools in this State.

The active members shall be all active members in good standing of the component county medical societies. A copy of the roster of such members, certified to be correct by the respective secretary of each component county medical society, shall be evidence of the right of the members whose names appear therein to membership in the Medical Society of the State of New York.

Student members shall be those members enrolled in recognized medical or osteopathic schools in the State of New York who are pursuing a course of study leading to the degree of Doctor of Medicine or Doctor of Osteopathy. Eligible students may become members of the Medical Society of the State of New York. Concurrent membership in a component county society and the American Medical Association is not a requirement for student membership. They shall apply for student membership on a form supplied by the secretary together with such dues as are fixed by the House of Delegates. When a student member ceases to be enrolled in a recognized school of medicine or school of osteopathy in the State of New York pursuing a course of study leading to a degree of Doctor of Medicine or Doctor of Osteopathy, other than by reason of graduation, he shall be considered to have resigned from membership in the Medical Society of the State of New York.

A student member who is suspended from the rights and privileges of his medical or osteopathic school shall likewise be suspended for the same period from the Medical Society of the State of New York.

An active member in good standing who has completely withdrawn from the active practice of medicine and who has been a member in good standing for ten consecutive years prior to the attainment of the age of seventy years or an active member in good standing who continues the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy-five years, or an active member in good standing for ten consecutive years or more who is permanently disabled, may apply for life membership. The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership.

His application shall be signed by the president and the secretary of the component county medical society of which he is a member and sent to the secretary of the State Society for presentation to the Council for approval.

The honorary members of the Medical Society of the State of New York shall be such distinguished physicians residing outside the State of New York as may be elected. Nominations for honorary membership shall be endorsed by three members of the State Society and forwarded to the secretary of the State Society for presentation to the House of Delegates. A two-thirds vote of the House of Delegates present and voting shall be necessary for election to honorary membership.

Resident membership shall be limited to graduates of recognized medical or osteopathic schools who are in continuous residency training and who are resident members of a component county medical society. Any resident who is unable to join the component county society (societies) notwithstanding the provisions of Article XVIII, Section 2, paragraphs 5 and 6 of these Bylaws shall be eligible to join the Medical Society of the State of New York directly as a resident member.

This provision shall not affect the status of any individual currently in continuous residency training who became a member of a component county medical society prior to October, 1981.

SECTION 2. PRIVILEGES

Active members vote and hold office in the Medical Society of the State of New York.

They shall be entitled to receive the *New York State Journal of Medicine*, the *News of New York*, and the *Medical Directory of New York State.*

Life members shall not be subject to Medical Society of the State of New York dues or assessments but shall be accorded all the rights and privileges of active membership. They shall be entitled to receive the *New York State Journal of Medicine* and the *News of New York*, but the *Medical Directory of New York State* only on request.

Student members shall be entitled to receive the *News of New York*. Each student member shall only be entitled to receive the *New York State Journal of Medicine* upon his individual written request, on an annual basis. Student members shall not be entitled to receive the *Medical Directory of New York State* free of charge.

The dues and assessments of resident members shall be no more than one tenth the amount levied on all other active members. The resident members shall be accorded all the rights and privileges of active membership. They shall be entitled to receive the *Medical Directory of New York State* only on request.

Honorary members shall be entitled to the privilege of attending the meetings of the Medical Society of the State of New York.

For a member elected after October 1, all rights and privileges of membership shall date from the time of election.

State Society dues and assessments of a member elected after October 1 shall be credited to the succeeding year.

A member of one component county medical society shall not be permitted to transfer to membership in another component county medical society until he has paid the current annual dues and assessments to the former component county medical society and has established a legal residence or practices in the county to which he desires transfer, except as provided in Article XVIII, "Component County Medical Societies," Section 2. The question of legal residence or locus of practice shall be verified by the component county medical society to which the member desires transfer.

Any member, except a member who is eligible and has applied for life membership, whose component county medical society and Medical Society of the State of New York dues are unpaid after April 1 of any current year or whose assessments are unpaid by the specified time is not in good standing and shall be deemed to be in arrears.

A member of the Medical Society of the State of New York who is in arrears for component county medical society dues and State Society dues or assessments shall not be eligible for any office or delegacy or be entitled to vote for any officer, councilor, trustee, or delegate.

A member whose dues are unpaid after May 1 or whose assessments are unpaid one month after the specified date shall be dropped from the rolls of membership of his component county medical society and the Medical Society of the State of New York upon reasonable notice to such member by his component county medical society, or the State Society, and without further action on the part of either the component county medical society or the State Society; and on such date he shall automatically cease to be a member of both the component county medical society and the State Society. In the case of nonpayment of dues, the reasonable notice to be provided shall commence on April 1, or as soon as possible thereafter, upon the determination that such member is in arrears.

A member who has been dropped from the roll of a component county medical society by reason of failure to pay dues shall not be accepted by another component county medical society except by regular transfer after reinstatement in the original component county medical society.

Medical Society of the State of New York dues of a member reinstated after October 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of reinstatement; but no member dropped for nonpayment of dues and assessments shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped.

A member convicted in a court of law of a crime evidencing moral turpitude shall thereupon cease to be a member of the Medical Society of the State of New York.

A member expelled from his component county medical society or suspended from its rights and privileges shall likewise be expelled or suspended for the same period from the Medical Society of the State of New York. The right of appeal to the State Society shall not be impaired. Members not in good standing or ceasing to be members of their component county medical society shall *ipso facto* have the same status in the State Society.

SECTION 3. CONTINUING MEDICAL EDUCATION

An active member who fails to fulfill the requirements for continuing medical education established by the Council of the Medical Society of the State of New York shall not be in good standing. This section shall become effective on March 1, 1981.

An active member as defined in Article II, Section 1, who is found not to be in good standing as of March 1, 1981, or March 1 of any subsequent year, for failing to comply with paragraph 1 of this Section shall receive reasonable notice that he must fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing. An active member who does not fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing shall automatically cease to be a member of the component county medical society and the State Society, unless, in the view of the Council, specific mitigating circumstances exist that the physician could not complete the CME requirements.

ARTICLE III. HOUSE OF DELEGATES

There shall be a House of Delegates which shall be the legislative body of the Medical Society of the State of New York and shall be charged with the general management, superintendence, and control of the State Society and its affairs, and shall have such general powers as may necessarily be incident thereto, except as otherwise specifically provided by the Bylaws.

SECTION 1. COMPOSITION

The House of Delegates shall be composed of: (a) duly designated delegates from the component county medical societies; (b) officers of the Medical Society of the State of New York, councilors, and trustees; (c) a duly designated delegate from each district branch; (d) a duly designated delegate from each scientific section; (e) duly designated delegates from the student membership; (f) the Commissioner of Health of the State of New York, or a deputy designated by him, provided that any representative shall be a member of the State Society; (g) past-presidents of the State Society and any past president of the American Medical Association, provided that individual is a member of the Medical Society of the State of New York who shall be members for life; and (h) a representative from each of the medical schools in New York State, provided said representative is a member of the Medical Society of the State of New York.

The number of delegates to which each component county medical society is entitled shall be determined by one of the two following optional methods:

(a) Each component county medical society shall be entitled to as many delegates as there shall be State assembly districts in such county at the time of election, but each county medical society shall be entitled to elect at least 1 delegate;

(b) Any component county medical society, which according to the rolls of the Medical Society of the State of New York two months prior to the annual meeting, shall have had up to 99 members, shall be entitled to 1 delegate. Any component county medical society having 100 to 199 members shall be entitled to 2 delegates. Any component county medical society having 200 to 349 members shall be entitled to 3 delegates. Any component county medical society having 350 to 499 members shall be entitled to 4 delegates. Any component county medical society having 500 to 749 members shall be entitled to 5 delegates. Any component county medical society having 750 to 999 members shall be entitled to 6 delegates. Any component county medical society having 1,000 or more members shall be entitled to at least 7 delegates and 1 additional delegate for each additional 300 members. Each component county medical society shall be entitled to designate at least 1 delegate, but no component county medical society shall be entitled to designate more than 30 delegates.

A delegate to the House of Delegates shall not be considered in good standing or entitled to vote in the House of Delegates if the component county medical society by which he was elected is in default of the payment of any dues or assessments imposed by the House of Delegates, and said component county medical society has been duly notified of such default, or if such component county medical society shall at the time be under sentence of suspension imposed by the House of Delegates, or if such delegate is not in good standing in the Medical Society of the State of New York, or in the component county medical society to which he belongs.

The term of a delegate duly designated by a component county medical society, district branch, scientific section, or medical school shall begin at the first annual meeting of the House of Delegates subsequent to his designation.

A delegate shall practice or maintain residence or an office in the State of New York. Otherwise his office as a delegate in the Medical Society of the State of New York shall be declared vacant by the Council.

The student members of each medical school in New York State shall, at least sixty days prior to the annual meeting of the House of Delegates of the Medical Society of the State of New York, elect two members from among their number to represent them at the business meeting of the student members which shall be held immediately prior to the convening of the House of Delegates. At such meeting the representatives shall elect a chairman, vice-chairman, secretary, delegates, and alternate delegates. The medical student membership shall be entitled to one delegate and one alternate delegate and, according to the rolls of the Medical Society of the State of New York, sixty days prior to the annual meeting, one additional delegate for each additional 400 student members, up to a maximum of 3 delegates. No member shall hold more than one such office. The chairman, vice-chairman, and secretary shall conduct the business meeting and the delegates and alternate delegates shall represent the student members at the first annual meeting of the House of Delegates subsequent to their designation.

SECTION 2. DUTIES

The House of Delegates formulates policy for the Medical Society of the State of New York. No officer, councilor, board, commission, committee, or employee shall initiate any policy or commit the State Society to any policy unless such policy has been expressly approved by the House of Delegates or by the Council.

It shall elect the officers, councilors, and trustees of the State Society and the delegates to the American Medical Association.

Credentials signed by the president and secretary shall be issued to delegates to the American Medical Association.

It shall pass on the credentials and qualifications of delegates and shall decide who are entitled to be members of the House of Delegates of the Medical Society of the State of New York.

It shall have authority and power to suspend or otherwise discipline its own members, district branches, component county medical societies, or any members of the Medical Society of the State of New York charged with special duties for and under authority of the State Society.

It shall provide for a division of the scientific work of the Medical Society of the State of New York into appropriate sections; for the organization of the district branches; for rules and regulations for its own government, and for the administration of the affairs of the State Society.

It shall provide for the issuance of charters to component county medical societies in affiliation with the Medical Society of the State of New York.

It shall have authority to appoint special committees from among members of the Medical Society of the State of New York.

SECTION 3. MEETINGS

The annual meeting of the Medical Society of the State of New York and the annual meeting of the House of Delegates shall be held at the call of the speaker.

Such annual meetings may be held during the annual convention of the Medical Society of the State of New York though this is not required.

The sessions of the House of Delegates may be adjourned from time to time as may be necessary. At least 30 days before the annual meeting of the House of Delegates, the speaker shall announce a schedule of the adjourned sessions of the House of Delegates. This schedule may be amended by the House of Delegates during its meeting.

Resolutions may be submitted to the House of Delegates only by members of the House of Delegates as individuals, or by component county medical societies, district branches, scientific section delegates, student membership delegates, and medical school delegates.

No new resolution shall be introduced at the last scheduled session except by a unanimous vote of the House of Delegates.

Special meetings of the House of Delegates shall be called by the speaker on the request in writing by 25 percent of the duly accredited delegates of the previous annual meeting of the House, or at the request of the Council; and in case of the failure, inability, or refusal of the speaker to act, such meetings may be called by a notice thereof subscribed by 25 percent of duly accredited delegates.

The notices of the annual and special meetings of the House of Delegates shall state the date, place, hour, and items of business that will be considered. These shall be mailed first class postpaid to each delegate not less than ten nor more than fifty days before such a meeting.

Publication of the notice of the annual meeting in the official publication of the Medical Society of the State of New York shall be considered as complying with this provision.

The affidavit of mailing by the secretary of the Medical Society of the State of New York to the last recorded address of the delegate shall be deemed sufficient proof of the service on each and every delegate for any and all purposes.

A quorum shall consist of 100 members of the House of Delegates.

The following shall be the order of business at the sessions of the House of Delegates:

1. Calling the meeting to order
2. Invocation
3. National Anthem
4. Report of Reference Committee on Credentials
5. Report by the secretary as to the presence or absence of a quorum
6. Remarks by the speaker
7. Reading of the minutes of the previous meeting by title
8. Address by the president
9. Report of House Committee on Bylaws
10. Report of the Judicial Council
11. Reports of Council commissions and committees
12. Report of the secretary
13. Report of the treasurer
14. Report of the Board of Trustees
15. Report of the executive vice-president
16. Reports of district branches
17. Reports of special committees
18. Reports of reference committees
19. Elections
20. Recess for annual meeting of the State Society
21. Unfinished business
22. New business
23. Adjournment

This order of business may be altered by the speaker with the approval of the House of Delegates and may be suspended by two-thirds vote of the House.

No delegate shall speak on any question before the House of Delegates for longer than five minutes nor more than once on any subject except by the consent of a majority vote of the House.

As the first business of the last scheduled session of the annual meeting of the House of Delegates, the officers, councilors, and the trustees of the Medical Society of the State of New York, and the delegates to the American Medical Association shall be nominated and elected.

The rules contained in *Sturgis Standard Code of Parliamentary Procedure* shall govern the House of Delegates in all cases in which they are not inconsistent or in conflict with the Bylaws of the Medical Society of the State of New York or the standing or special rules of the House of Delegates.

ARTICLE IV. COUNCIL

There shall be a Council which shall exercise all the rights and duties of the House of Delegates, consistent with the Bylaws of the State Society, when the House of Delegates is not in session. The Council, therefore, is in fact the executive committee of the House of Delegates.

SECTION 1. COMPOSITION

The Council shall be composed of the president, president-elect, vice-president, immediate past-president, secretary, assistant secretary, treasurer, assistant treasurer, speaker, vice-speaker, chairman of the Board of Trustees, and 12 councilors elected by the House of Delegates.

The trustees, the executive vice-president, the deputy executive vice-president, and the general counsel of the Medical Society of the State of New York shall attend all meetings of the Council with voice but without vote.

Four councilors shall be elected annually by the House of Delegates, each for a term of three years. In the event of a vacancy, a councilor shall be elected by the Council to serve until the next meeting of the House of Delegates, at which time the House of Delegates shall elect a councilor to fill the unexpired term.

No person shall serve, consecutively, more than two terms as councilor. An unexpired term shall not be construed as a term of office.

The councilors shall assume office on election and shall hold office until their successors are duly elected and qualified.

Councilors shall be assigned to specific county societies as liaison for the Council in accordance with the provisions of Article V, Section 2. Councilors shall be required to disseminate information of Council activity as well as returning information to the Council, and shall report regularly to the Council on their activity.

A councilor shall practice or maintain a residence or an office in the State of New York. Otherwise his position in the Medical Society of the State of New York shall be declared vacant by the Council.

If a councilor is absent from three consecutive regular meetings of the Council without proper excuse, the Council shall declare his position vacant and elect a successor for the unexpired term.

SECTION 2. DUTIES

The Council shall take such action as is necessary to carry out the Bylaws and to give full effect to any resolution or vote of the House of Delegates.

It shall also have power to legislate as a House of Delegates, when the latter is not in session, on all matters consistent with the Bylaws.

It shall have the authority to make policy for the Medical Society of the State of New York when the House of Delegates is not in session.

The Council's resolutions and actions shall be decisive and final except that all resolutions and actions of the Council are subject to review by the House of Delegates. Its actions shall be governed by the Bylaws of the Medical Society of the State of New York and the rules and regulations of the House of Delegates.

The Council shall have the authority to vote all funds of the Society subject to the approval of the Board of Trustees.

Should the Board of Trustees disapprove of the expenditure of any funds voted for by the House of Delegates or the Council, then and in that event, the Board of Trustees shall return the matter to either the House of Delegates or the Council, if the House of Delegates is not in session, which may override such disapproval by a three-quarter vote and direct the expenditure of such funds. The Board of Trustees shall not vote on this issue at a meeting of the House of Delegates and the chairman of the Board of Trustees shall not vote on this issue at the Council.

The Council shall have power to fill any vacancy which may occur in any elective office not otherwise provided for, until the next meeting of the House of Delegates.

The Council shall, by written notice, inform the component county medical societies of the specific Councilor assigned to it as liaison with the Council.

It shall prepare an annual budget for submission to the Board of Trustees.

The Council utilizing a search committee shall, with the approval of the Board of Trustees, appoint and reappoint an executive vice-president, who shall be the chief executive officer of the Medical Society of the State of New York, to manage and direct the activities of the State Society including disbursement of its funds when duly authorized. He shall be a member of all boards, commissions, and committees with voice but without vote. The executive vice-president shall appoint and reappoint a deputy executive vice-president subject to the approval of the Council.

The Council shall act on the applications for life membership which have been submitted by the component county medical societies. A majority vote of the Council present and voting shall be necessary for election to life membership.

The Council shall have responsibility for all publications of the Medical Society of the State of New York and their distribution. For the purpose of required announcements, the official publication of the State Society shall be the *New York State Journal of Medicine.*

Special committees shall report to the Council and shall be subject to the Council unless otherwise instructed by the House of Delegates.

The Council, with the aid of the general counsel of the Medical Society of the State of New York, shall examine the constitution and bylaws of component county medical societies and district branches and/or all amendments thereto which shall be submitted to the Council for approval and shall approve or disapprove of said amendments.

The duties of the Council shall include the supervision of all commissions, committees, and activities of the Medical Society of the State of New York.

The Council shall also keep constantly advised of the activities of and collaborate with the health and social service departments of the State and with hospitals, clinics, and social service agencies in furthering the health of the community.

Commissions and committees of the Council may include any member of the Medical Society of the State of New York who shall be appointed by the president subject to the approval of the Council.

The Council shall control all arrangements for the annual convention of the Medical Society of the State of New York.

SECTION 3. TRIALS FOR MALFEASANCE

The Council shall sit as a trial body for hearings on charges of malfeasance and/or nonfeasance.

Charges of malfeasance or nonfeasance preferred by a member against an officer, councilor, trustee, or member of a board, commission, or committee of the Medical Society of the State of New York shall be transmitted to the president in writing. The president shall order a trial on said charges by the Council, or a committee thereof.

Charges of malfeasance or nonfeasance preferred by a member against the president shall be transmitted in writing to the secretary of the Medical Society of the State of New York and shall be considered by the Council with the vice-president presiding.

The accused shall be given at least ten days' notice of such trial and of the charges against him and shall have full opportunity to defend himself, but no such officer, councilor, trustee, or member of a board, commission, or committee shall be removed or otherwise disciplined except by a three-fourths vote of the Council.

In case any such officer, councilor, trustee, or member of a board, commission, or committee shall be removed, he may appeal from the decision of the said Council to the House of Delegates; but, pending the determination of such appeal, he shall not exercise the functions of his office.

SECTION 4. EXECUTIVE COMMITTEE

The Council shall establish an executive committee to be composed of the president, the vice-president, the president-elect, the immediate past-president, the secretary, the treasurer, and two additional members of the Council appointed by the president with the approval of the Council.

This committee shall be appointed by the president and shall serve only during his tenure as president.

The executive committee shall have the authority to take action in case of emergency arising in the interim between the meetings of the Council to protect the interests and purposes of the Medical Society of the State of New York as set forth in these Bylaws. In times of such emergency, the executive committee shall have all the powers and duties which are conferred on the Council, and it shall at all times assist the Council. Any action taken by the executive committee shall be reported in full to the Council at its next meeting.

SECTION 5. MEETINGS

The newly elected Council shall meet at the close of the annual meeting of the House of Delegates. The Council and Executive Committee shall meet at regular intervals at times and places that shall be fixed by the president with the approval of the Council. Twenty-five percent of the members of the Council in writing may require the president to call a special meeting for such time and place as he shall designate, within ten days of his receipt of such notice.

The notices of the regular meetings of the Council shall state the date, place, hour, and shall be mailed postpaid to each member by first class mail not less than ten nor more than fifty days before a meeting.

The affidavit of mailing by the secretary of the Medical Society of the State of New York to the last recorded address of the Council member shall be deemed sufficient proof of the service on each and every Council member for any and all purposes.

Council members must receive at least three days' notice by letter or telegram from the State Society's office of a special meeting, which shall state the date, place, hour, and items of business that will be considered.

A quorum shall consist of 14 members of the Council.

The following shall be the order of business at meetings of the Council, which may be altered by the chairman with the consent of the Council:

1. Calling the meeting to order
2. Roll call
3. Reading of minutes
4. Communications
5. Report of the Executive Committee
6. Report of the president
7. Report of the secretary
8. Report of the treasurer
9. Report of the chairman of the Board of Trustees
10. Reports of councilors
11. Report of the executive vice-president
12. Reports of commissions and committees
13. Unfinished business
14. New business
15. Adjournment

ARTICLE V. OFFICERS

The officers of the Medical Society of the State of New York shall be a president, a president-elect, a vice-president, a secretary, an assistant secretary, a treasurer, an assistant treasurer, a speaker, and a vice-speaker of the House of Delegates. They shall take office at the termination of the annual meeting at which they are elected and shall serve for one year or until their successors have been duly chosen.

No person may serve, consecutively, more than five terms as secretary, treasurer, assistant secretary, assistant treasurer, speaker, or vice-speaker. An unexpired term shall not be construed as a term of office.

No salaried employee of the Medical Society of the State of New York shall be an elected officer of the Medical Society of the State of New York. For the purposes of this article an honorarium shall not be considered as a salary.

SECTION 1. VACANCIES AND SUCCESSION

An officer shall practice or maintain a residence or an office in the State of New York, otherwise his office in the Medical Society of the State of New York shall be declared vacant.

The president-elect shall succeed to the presidency at the end of his term as president-elect.

In the event of the president's death, resignation, removal, permanent incapacity, or refusal to act, the vice-president shall succeed him and shall serve for the remainder of the unexpired term.

If the president is temporarily incapacitated for service by injury, ill health of himself or his family, important professional duties, or any other mandatory absence, the vice-president shall become acting president for the duration of such incapacity of the president. The president shall promptly notify the vice-president of his incapacity and request his attention to the duties of the office and shall also promptly notify the vice-president of the end of the period of temporary incapacity before resuming the office of the presidency.

If the office of vice-president becomes vacant, for any reason whatsoever, the Council, when the House of Delegates is not in session, shall elect a successor for the unexpired term.

If the office of president-elect becomes vacant, it shall remain so until the next annual meeting of the House of Delegates, at which an eligible member shall be elected to become president. A president-elect to succeed him at the end of his term shall also be elected at the same meeting.

The assistant secretary, the assistant treasurer, and the vice-speaker shall serve as the secretary, the treasurer, and the speaker, respectively, whenever these senior officers are incapacitated for service by injury, ill health of themselves or families, important professional duties, or any other mandatory absences. This shall be construed so as to include duty at or during meetings of the Board of Trustees as well as the other official duties designated for the senior officer. The senior officer shall promptly notify the junior officer of his incapacity and request his attention to said duties. When the period of incapacity is ended, the senior officer shall promptly notify the junior officer of the end of the period of temporary incapacity before resuming office.

If the offices of secretary, treasurer, or speaker become vacant, for any reason whatsoever, these officers shall be succeeded by the assistant secretary, assistant treasurer, and vice-speaker, respectively, for the unexpired term.

If the office of assistant secretary, assistant treasurer, or vice-speaker becomes vacant, for any reason whatsoever, the Council, when the House of Delegates is not in session, shall elect a successor for the unexpired term.

If an elected officer is absent from three consecutive regular meetings of the Council, without proper excuse, the Council shall declare his office vacant. The vacancy shall be filled as provided in the Bylaws.

Any elected officer of the Medical Society of the State of New York who is called into active service in the armed forces of the United States or in the United States Public Health Service may, on application to the Council, be granted leave of absence for any portion of his term of office during which he is on active service. During such absence, his duties shall be delegated as the Council may direct except where such delegation is already provided for elsewhere in the Bylaws.

SECTION 2. DUTIES

President

The president shall set the dates and place of regular meetings of the Council and Executive Committee and shall preside at the meetings of the Medical Society of the State of New York, the Council, and the Executive Committee.

He shall name the appointive members of the Executive Committee and appoint the chairmen and members of all committees and the chairmen of all commissions of the Council with the approval of the Council. He shall appoint all other committees not otherwise provided for, with the approval of the Council.

Within three months after assuming the office of president, he shall appoint, as prescribed in Article XI, Section 2, a nominating committee, whose names he shall cause to be published in the official publication of Medical Society of the State of New York.

He shall be an *ex officio* member of all boards, commissions, and committees with voice and vote, with the exception of the Judicial Council, the Board of Trustees, and the Nominating Committee wherein he shall have voice but no vote.

With the approval of the Council, he shall apoint a member to the Judicial Council to succeed the member with an expiring term, and in the event of a vacancy occasioned otherwise, he shall appoint a member for the unexpired term.

He shall appoint, with the approval of the Council, representatives to other medical societies or similar bodies as the interests of the Medical Society of the State of New York may require.

He shall appoint a sufficient number of delegates or alternate delegates to the House of Delegates of the American Medical Association when the full quota of those elected is not available, as provided in the Bylaws, Article VIII, paragraphs 3 and 4.

He shall assign Councilors as liaison between the Council and specific county medical societies for the purpose of the dissemination of information to such societies.

He shall appoint, with the approval of the Council, a chairman and a secretary for each organized session of the Medical Society of the State of New York.

When charges by a member of malfeasance or nonfeasance are preferred against any other officer, councilor, trustee, or member of a board, commission, or committee of the Medical Society of the State of New York and are transmitted to the president in writing, he shall order a trial on said charges by the Council, or a committee thereof.

He shall assign the special branches of work for which the members of the Council shall be responsible, with the approval of the Council.

He shall make an annual report to the House of Delegates.

He shall deliver an address at the annual meeting of the House of Delegates. He shall perform such other duties as the House of Delegates or the Council shall require.

He shall attend all meetings of the House of Delegates of the American Medical Association.

President-Elect

The president-elect shall perform such duties as may be requested by the president.

The president-elect shall attend all meetings of the House of Delegates of the American Medical Association.

Vice-President

The vice-president shall perform the duties of the president in the latter's absence.

He shall preside over the Council when it is deliberating on charges of malfeasance or nonfeasance preferred against the president.

Secretary

The secretary shall attend all meetings of the Medical Society of the State of New York, the House of Delegates, the Council, the Board of Trustees, and the Judicial Council, and shall keep minutes of their respective proceedings. These minutes shall be copied from a stenographer's notes with such deletion only as will not modify, alter, or becloud the history of the actions of the said bodies. The stenographer's typewritten copy shall be preserved until ordered destroyed by the House of Delegates.

He shall perform such other duties as may be prescribed from time to time by the House of Delegates or the Council. He shall attend all meetings of the House of Delegates of the American Medical Association.

The secretary shall be the custodian of the seal of the Medical Society of the State of New York and of all books of records and papers belonging to the State Society, except such as properly belong to the treasurer, and shall keep an account of and promptly turn over to the treasurer all funds of the State Society which come into his hands.

He shall record the name and date of admission of each member of the Medical Society of the State of New York.

He shall provide for the registration of the members at all conventions of the Medical Society of the State of New York. With the aid and cooperation of the secretaries of the component county medical societies, he shall keep a proper register of all registered physicians of the State by counties.

He shall conduct the official correspondence, notifying members of meetings, officers, councilors, trustees, and board members of their election, and commissions and committees of their appointments and duties.

He shall affix the seal of the Medical Society of the State of New York to the credentials of delegates to the American Medical Association and to such other papers and documents as may require the same.

He shall make an annual report to the House of Delegates. Acting in cooperation with the Council, he shall prepare and issue all programs.

He shall be an *ex officio* member of all boards, commissions, and committees with voice and vote, with the exception of the Judicial Council, the Board of Trustees, and the Nominating Committee wherein he shall have voice but no vote.

Assistant Secretary

The assistant secretary shall aid the secretary in the work of his office.

Treasurer

The treasurer shall keep accurate books of accounts of all moneys of the Medical Society of the State of New York which he may receive and shall disburse or cause to be disbursed the same when duly authorized. He shall be the official custodian of all securities and the income thereof owned by the State Society, subject to the direction and disposition of the Board of Trustees. The Board of Trustees may select a bank or trust company to act as custodian in the place of the treasurer of all or any part of such securities and to act as agent of the State Society in collecting the income therefrom.

He shall collect, on or before the first day of April in each year, from the treasurer of each component county medical society, the Medical Society of the State of New York per capita annual dues. He shall collect any assessments voted by the House of Delegates or the Council. He shall, at the expense of the Medical Society of the State of New York, give a bond for the faithful performance of his duties, which shall be approved by the Board of Trustees as to amount, form, and surety. He shall make an annual report to the House of Delegates and report to the Council at each of its meetings. He shall be an *ex officio* member of the Professional Medical Liability Insurance and Defense Board, with voice but without vote.

Assistant Treasurer

The assistant treasurer shall aid the treasurer in the work of his office.

He shall, at the expense of the Medical Society of the State of New York, give a bond for the faithful performance of his duties, which shall be approved by the Board of Trustees as to the amount, form, and surety.

Speaker

The speaker shall preside at all meetings of the House of Delegates. He shall appoint all committees to serve during the meeting of the House of Delegates at least thirty days in advance of the meeting. All resolutions submitted by component county medical societies, district branches, scientific sections, and medical schools to be presented to the House of Delegates should be forwarded to the speaker at least forty-five days in advance of the annual meeting of the House and referred by him to the appropriate reference committees; and all resolutions sent in subsequent to forty-five days should be presented to the House and referred to the appropriate reference committees.

Vice-Speaker

The vice-speaker shall perform the duties of the speaker when so requested by the speaker.

ARTICLE VI. TRUSTEES

There shall be a Board of Trustees which shall have charge of all property including trust funds and shall supervise the financial affairs of the Medical Society of the State of New York.

SECTION 1. COMPOSITION

The Board of Trustees shall consist of seven members elected by the House of Delegates. The president, secretary, treasurer, executive vice-president, deputy executive vice-president, and general counsel shall sit with the Board of Trustees with voice but without vote.

One trustee shall be elected annually for a term of five years, but whenever the terms of two trustees expire in the same year, two trustees shall be elected each for five years.

To be eligible for election as trustee, a member shall have served at least two years as an officer or at least three years as a councilor, or at least five years as a member of the House of Delegates.

No person shall serve more than one term as a trustee. An unexpired term shall not be construed as a term of office.

A trustee shall practice or maintain a residence or an office in the State of New York, otherwise his position in the Medical Society of the State of New York shall be declared vacant.

If a trustee is absent from three consecutive regular meetings of the Board, without proper excuse, the Council shall declare his position vacant and elect a successor for the unexpired term.

In the event of a vacancy, a trustee shall be elected by the Council to serve until the next meeting of the House of Delegates at which time the House of Delegates shall elect a trustee to fill the unexpired term.

SECTION 2. DUTIES

The annual budget estimate, prepared by the Committee on Budget and Finance, after its approval by the Council, shall be submitted to the Board of Trustees for its approval.

All resolutions or recommendations of the House of Delegates or Council pertaining to expenditures of money must be approved by the Board of Trustees before the same shall become effective.

Should the Board of Trustees disapprove of the expenditure of any funds voted for by the House of Delegates or the Council, then and in that event, the Board of Trustees shall return the matter to either the House of Delegates or the Council, if the House of Delegates is not in session, which may override such disapproval by a three-quarter vote and direct the expenditure of such funds. The Board of Trustees shall not vote on this issue at a meeting of the House of Delegates and the chairman of the Board of Trustees shall not vote on this issue at the Council.

The Board of Trustees shall make and execute all contracts for the Medical Society of the State of New York. The fiscal year shall begin January 1 and end December 31 of each calendar year.

All moneys of the Medical Society of the State of New York received by the Board of Trustees, Council, or any member or agent thereof, shall be paid to the treasurer of the State Society. The Board of Trustees shall approve the bond of the treasurer and the assistant treasurer as to amount, form, and surety, and shall employ a certified public accountant licensed by the State of New York to audit the accounts of the treasurer and secretary and other agents of the State Society and present a statement of the same in its annual report to the House of Delegates.

The chairman of the Board of Trustees shall make a report to the House of Delegates of its transactions for the year and of the amount of money belonging to the Medical Society of the State of New York under its control.

SECTION 3. MEETINGS

The Board of Trustees shall meet immediately at the close of the annual meeting of the House of Delegates, and shall organize under the temporary chairmanship of the member senior in service on the Board, elect a permanent chairman, and fix the time and place of its regular meetings. Should two trustees have similar seniority, choice between them for temporary chairmanship shall be by lot.

The Board of Trustees shall meet at least bimonthly, except in July and August.

The notices of the regular and special meetings of the Board of Trustees shall state the date, place, and hour and shall be mailed first class postpaid to each member not less than ten nor more than fifty days before a regular meeting and at least five days before a special meeting.

The affidavit of mailing by the secretary of the Medical Society of the State of New York to the last recorded address of the trustee shall be deemed sufficient proof of the service on each and every trustee for any and all purposes.

Any three members of the Board of Trustees may require the chairman to call a special meeting at the office of the Medical Society of the State of New York for such time as shall be designated by them in writing.

A quorum shall consist of four members of the Board of Trustees.

The following shall be the order of business at the meetings of the Board of Trustees, which may be altered by the chairman with the approval of the Board:

1. Calling the meeting to order
2. Roll call by the secretary
3. Reading of minutes
4. Communications
5. Reports
6. Unfinished business
7. New business
8. Adjournment

ARTICLE VII. JUDICIAL COUNCIL

There shall be a Judicial Council which shall have jurisdiction to hear and determine all appeals from decisions on discipline of component county medical societies or decisions of such societies which may involve the privileges, rights, or standing of members, whether in relation to one another or to component county medical societies or to the Medical Society of the State of New York.

It shall hear also from applicants on appeals from the action of a component county medical society in excluding them from membership.

SECTION 1. COMPOSITION

The Judicial Council shall consist of five appointed members. One member shall be appointed by the president each year for a term of five years with the approval of the Council.

No member shall serve for more than two consecutive terms, but a member appointed to serve an unexpired term shall not be regarded as having served a term unless he has served three or more years.

A member of the Judicial Council shall practice or maintain a residence or an office in the State of New York, otherwise his position on the Judicial Council shall be declared vacant.

In the event of a vacancy, a member shall be appointed by the president for the unexpired term with the approval of the Council.

The president and secretary of the Medical Society of the State of New York shall be *ex officio* members of the Judicial Council with voice but no vote. The executive vice-president, the deputy executive vice-president, and the general counsel of the Medical Society of the State of New York shall sit with the Judicial Council with voice but without vote.

SECTION 2. DUTIES AND PROCEDURES

A member of a component county medical society who shall have been disciplined or directed to suffer discipline in any degree by any final decision of his component county medical society and who shall have exhausted his right of appeal, if any, with a component county medical society, feeling aggrieved by the decision of such society, may appeal to the Judicial Council of the Medical Society of the State of New York from the decision of such component county medical society by filing a notice of appeal with the secretary of the State Society and with the secretary of such component county medical society within three months after such final decision by such component county medical society.

An applicant for membership in a component county medical society who has been excluded from membership in such society may likewise appeal from the action of said society.

The Judicial Council shall investigate also all charges preferred (a) by a member of a component county medical society against a component county medical society of which he is not a member; and (b) by a component county medical society against another such component county medical society or a member thereof.

A notice of appeal shall set forth in writing the name of the appellant, the name of such component county medical society and the date and substance of the decision appealed from, and shall indicate the ground or grounds upon which such appeal is taken. If the appellant desires to be present, with or without counsel, at the hearing of said appeal, the notice of appeal must so state. In that event, the appellant must file with the notice of appeal a bond in the sum of $500 to cover the costs of said appeal. If the appellant fails to appear in person or be represented by counsel on hearing of said appeal, he shall forfeit to the Medical Society of the State of New York such shares of said bond as represents necessary expenditures incident to convening the Judicial Council for the hearing of said appeal.

On filing a notice of appeal, the appellant and the component county medical society shall submit to the secretary of the Judicial Council all records, minutes, letters, papers, and all written evidence, including a digest of all testimony not stenographically reported relating to the matter. All data so submitted shall be available only to the Judicial Council.

The Judicial Council shall consider the appeal on the data so submitted to it and may affirm, modify, or reverse the decisions so appealed from by a majority vote of the members present and voting. If, in its opinion, the taking of further evidence is advisable, the Judicial Council may summon witnesses and proceed to take such evidence in such manner as it may deem proper and render its decision by a majority vote of those present and voting, which decision shall be final and binding. A member shall have the right of appeal to the Judicial Council of the American Medical Association.

Whenever the Judicial Council has met, the secretary shall report the proceedings to the Council of the Medical Society of the State of New York at its next regular meeting.

The chairman shall submit an annual report of the Judicial Council to the House of Delegates.

SECTION 3. MEETINGS

Immediately at the close of the annual meeting of the House of Delegates the Judicial Council shall organize and elect its own chairman.

The secretary of the Medical Society of the State of New York shall be the secretary of the Judicial Council.

The Judicial Council shall meet on the call of the chairman. The notices of the meetings of the Judicial Council shall state the date, place, and hour and shall be mailed postpaid to each member not less than ten nor more than fifty days before a meeting.

The affidavit of mailing of the secretary of the Medical Society of the State of New York to the last recorded address of the member of the Judicial Council shall be deemed sufficient proof of the service on each and every member for any and all purposes.

A quorum shall consist of three members of the Judicial Council.

ARTICLE VIII. ELECTIONS

As the first business of the last scheduled session of the annual meeting of the House of Delegates, the officers, councilors, and trustees of the Medical Society of the State of New York, and the delegates to the American Medical Association shall be nominated and elected.

A member of the Medical Society of the State of New York who is in arrears for component county medical society dues or State Society dues or assessments shall not be eligible for nomination to any office, the Council, the Board of Trustees, or as a delegate to the American Medical Association, or entitled to vote for any officer, councilor, trustee, or delegate.

The delegates to the American Medical Association shall be elected in the calendar year preceding the meeting of the House of Delegates of the American Medical Association to which they are elected. One half of the allotted number of delegates and alternate delegates shall be elected each year.

Nominations for delegate to the American Medical Association shall be made for not less than double the full number of delegates to be elected.

SECTION 1. BALLOTING

After the appointment of a sufficient number of tellers by the speaker and after all nominations have been made, the secretary of the Medical Society of the State of New York shall cause to be displayed in full sight of the House of Delegates a list of nominees for each office of the Medical Society of the State of New York and for delegates to the American Medical Association, arranged in alphabetical order, and shall also cause to be distributed a sufficient number of blank ballots for the use of the House of Delegates. These ballots shall have printed or stamped thereon the appropriate headings for each office with spaces thereunder in which may be written the name of the candidate or candidates to be voted for.

All elections for offices of the State Society and delegates to the American Medical Association shall be by ballot, each member of the House of Delegates depositing his ballot on roll call individually. When after the call for nominations from the floor, there is only one candidate for an office, the speaker shall direct the secretary to cast one ballot on behalf of the delegates. If there are more than two nominees for an office, with the exception of that of delegate to the American Medical Association, and none receives a majority of votes on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken for that office. This procedure shall be continued until one of the nominees receives a majority of the votes cast when he shall be declared elected.

For the election of delegates to the American Medical Association, the delegates shall be declared elected in the order of the highest number of votes cast until the allotted number shall have been chosen; a corresponding number in the next highest order of votes cast shall be declared alternate delegates.

When the full quota of elected delegates or alternate delegates is not available for attendance at the meeting of the House of Delegates of the American Medical Association, the president of the Medical Society of the State of New York shall appoint and certify a sufficient number to complete the quota.

A duly elected delegate to the American Medical Association who does not serve as such because of reduction in number of delegates to which the Medical Society of the State of New York is entitled shall fill any vacancy which may occur in the delegation before alternate delegates are designated for that purpose.

The delegates and alternate delegates shall take office at the beginning of the calendar year following their election and shall serve for a term of two years.

ARTICLE IX. REFERENDUM

At any meeting of the House of Delegates two thirds of the members present and voting may order a referendum vote of the Medical Society of the State of New York on any question consistent with the Bylaws and in accordance with such regulations respecting the submission of the question as the House of Delegates may prescribe.

The members of the Medical Society of the State of New York shall vote thereon by mail. The polls shall be closed at the expiration of fifteen days after the mailing of the question; and if the members voting shall comprise a majority of all the active and life members of the Medical Society of the State of New York, a majority of such vote shall determine the question and be binding on the State Society and the House of Delegates.

When the House of Delegates is not in session the Council may in a similar manner order such a referendum by a two-thirds vote.

ARTICLE X. COMMITTEES OF THE HOUSE OF DELEGATES

SECTION 1. REFERENCE COMMITTEES

At least one month before the meeting of the House of Delegates the speaker shall appoint and publish in the official publication of the Medical Society of the State of New York such reference committees as he shall deem expedient for the purposes of the meeting. Immediately after the organization of the House of Delegates he shall formally announce the appointments of the committees. Only members of the House of Delegates shall be eligible for appointment to the reference committees. Such committees shall each consist of five members, three members constituting a quorum, and shall serve during the meeting of the House of Delegates for which they are appointed.

Annual reports of officers, Council commissions and committees, Board of Trustees, Judicial Council, district branches, and special committees shall be printed at least one month before the meeting of the House of Delegates and sent to the members of the reference committees appointed according to paragraph 1, for their preliminary consideration.

All recommendations, resolutions, measures, and propositions presented to the House of Delegates and which have been duly seconded shall be referred by the speaker to the appropriate reference committees, except that reports of committees of the House of Delegates may, at the discretion of the House, be presented directly to the House without referral to the reference committees.

Each reference committee shall consider such business as may have been referred to it and shall report promptly to the House.

Any member of the Medical Society of the State of New York in good standing shall have the right to appear before any reference committee and participate in its deliberations.

SECTION 2. COMMITTEE ON BYLAWS

The House Committee on Bylaws shall be appointed annually by the speaker. It shall consist of at least five members including a chairman, all of whom shall be members of the House. The president, secretary, and the speaker shall be *ex officio* members with voice and vote. The executive vice-president, deputy executive vice-president, and general counsel of the Medical Society of the State of New York shall be members of the committee with voice but without vote.

It shall be the duty of the committee to study all proposed amendments to the *Bylaws* and the *Principles of Professional Conduct* of the State Society and to report thereon at the annual meeting of the House of Delegates following the meeting at which such amendments are proposed. The committee shall include in its report recommendations for action on the proposed amendments with reasons for such recommendations.

It shall be the duty of the committee to suggest amendments to or revisions of the *Bylaws* and the *Principles of Professional Conduct* of the Medical Society of the State of New York.

The report of the House Committee on Bylaws shall be presented directly to the House, without referral to a reference committee.

SECTION 3. SPECIAL COMMITTEES

Special committees may be created by the House of Delegates to perform the special functions for which they are created. They shall be appointed by the speaker or other officer presiding pro tempore over the meeting at which the committee is authorized.

ARTICLE XI. COUNCIL COMMISSIONS AND COMMITTEES

SECTION 1. ORGANIZATION

Committees of the Council are grouped by the related nature of their purposes and functions. A commission is composed of the chairmen of all committees within such a group.

Subject to the approval of the Council, the president shall appoint the chairmen and members of all of its committees and the chairmen of the commissions.

Any member of the Medical Society of the State of New York is eligible for membership on committees and commissions of the Council.

All chairmen of such commissions and committees shall have the right to present their reports in person to the Council and to engage in the discussion of such reports. Members of such commissions and committees shall have the privilege of presenting minority reports, and both the majority and minority reports shall be published.

Any *ex officio* member of a committee who enjoys that status by being a duly elected officer of the Medical Society of the State of New York shall have all the rights, responsibilities, and duties of any other member of the committee.

SECTION 2. NOMINATING COMMITTEE

The Nominating Committee shall be appointed by the president from a list of not less than three or more than five names submitted by the respective district branches, in conformity with Article V, Section 2, paragraph 3. It shall consist of 11 members, 1 from each district branch and 2 members at large.

In the event that a member of the Nominating Committee who has been selected as the representative of a particular district branch (or his alternate) shall be unable to attend the meeting of this committee, the president shall appoint an at large member, from the district branch whose representative is absent, to represent the interests of that district on the Nominating Committee. It shall be the duty of this committee to propose and nominate members of the Medical Society of the State of New York for all vacancies to be filled at the ensuing annual meeting of the House of Delegates. These recommendations shall be made to the House of Delegates in the same manner as prescribed in Article X, Section 1, paragraph 2.

SECTION 3. PROFESSIONAL MEDICAL LIABILITY INSURANCE AND DEFENSE BOARD

A committee to be known as the Professional Medical Liability Insurance and Defense Board shall be appointed by the president with the approval of the Council. It shall consist of nine members including a chairman, each appointed for a three-year term. No member shall serve for more than two consecutive terms. A vacancy created by expiration of a term shall be filled by the president, with the approval of the Council, by appointment of a member for three years. Other vacancies shall be filled for the unexpired term in similar manner. The secretary shall be an *ex officio* member of the committee with voice and vote. The treasurer shall be an *ex officio* member of the committee with voice but without vote. The general counsel and indemnity representative shall attend all meetings with voice but without vote. It shall be the duty of the committee to study and supervise, on behalf of the Medical Society of the State of New York, all matters having to do with professional medical liability insurance and defense.

ARTICLE XII. SECTIONS AND SESSIONS

As designated by the House of Delegates, there shall be sections devoted to the scientific work of the Medical Society of the State of New York and sessions devoted to scientific, cultural, historical, or economic subjects. Both sections and sessions shall meet during the annual convention of the State Society, under the supervision of the Council.

SECTION 1. SECTIONS

The House of Delegates shall designate those scientific sections entitled to representation in the Medical Society of the State of New York. Such sections shall correspond to the Statewide specialty societies recognized by the Council of the Medical Society of the State of New York. These scientific sections designated by the House of Delegates shall organize at their annual meeting by the election of officers. Officers to be elected shall include a chairman, a vice-chairman, a secretary, and a delegate to the House of Delegates. The chairman, vice-chairman, secretary, and delegate must be members of both the Statewide specialty societies and the Medical Society of the State of New York and shall be elected for one year terms with the exception of the secretary who shall be elected for such term as the section may deem desirable.

Each of the Statewide specialty societies recognized by the Council of the Medical Society of the State of New York shall be requested to submit to the office of the Executive Vice-President the name of one nominee for each office of their corresponding sections not less than ninety days prior to the section's annual business meeting. Such nominees shall be voted on, together with all other nominees submitted, at the annual business meeting of the section. All such nominees must be members of the Medical Society of the State of New York.

To participate in the election of any section, a member of the Medical Society of the State of New York must be registered with such section.

Should the delegate of a scientific section be unable to serve in the House of Delegates, the chairman of the section shall designate a substitute delegate and shall so notify the secretary of the Medical Society of the State of New York in writing.

The officers of the various sections shall prepare programs for their section under the direction and subject to the approval of the Council.

No new section shall be created by the House of Delegates unless a session devoted to its subject matter or specialty shall have been held at at least two successive annual conventions.

SECTION 2. SESSIONS

A session shall be a single meeting of a group to discuss scientific, cultural, historical, or economic subjects, under the direction and subject to the approval of the Council.

Each session shall have a chairman and a secretary who shall be appointed by the president with the approval of the Council.

ARTICLE XIII. MEETINGS

SECTION 1. ANNUAL CONVENTION

There shall be an annual convention of the Medical Society of the State of New York to be held at a time and place designated by the House of Delegates or by the Council.

This convention shall include the annual scientific program which shall include the annual meetings of the sections and sessions, scientific motion pictures, and exhibits, and such other activities, and presentations as the House of Delegates or Council may direct.

The annual meetings of the Medical Society of the State of New York and the House of Delegates may or may not be held at such convention pursuant to the provisions of Article III, Section 3 of these Bylaws.

SECTION 2. ANNUAL MEETING OF MEDICAL SOCIETY OF THE STATE OF NEW YORK

The Medical Society of the State of New York shall hold its annual meeting at the last scheduled session of the House of Delegates, while the House is recessed following the annual elections. The president shall preside at this annual meeting of the State Society, which shall include the induction of the incoming president. The incoming president shall deliver his inaugural address at the annual meeting of the State Society.

Following the adjournment of the annual meeting, the House of Delegates shall reconvene to complete its agenda and receive the report of the tellers.

SECTION 3. SPECIAL MEETINGS

Special meetings of the Medical Society of the State of New York shall be called by the president on the request in writing of members entitled to cast ten percent of the total number of votes entitled to be cast at such meeting. Such request must specify the date and month of such meeting, which shall not be less than two nor more than three months from the date of such written demand. The president of the Society upon receiving the written request shall direct the secretary to promptly give notice of such meeting. If the secretary shall fail to give such notice within five business days of such request, any member signing such request may give the required notice.

SECTION 4. ORGANIZATION AND PROCEDURES

The notices of the annual convention and annual and special meetings of the Medical Society of the State of New York shall state the date, place, and hour and shall be mailed postpaid to each member by first class mail not less than ten nor more than fifty days before a meeting.

Publication of such notice in the official publication of the Medical Society of the State of New York shall be considered as complying with this provision.

The affidavit of mailing by the secretary of the Medical Society of the State of New York to the last recorded address of the member shall be deemed sufficient proof of the service upon each and every member for any and all purposes.

Each member in attendance at the annual convention of the Medical Society of the State of New York shall enter his name and the name of the component county medical society to which he belongs in a register to be kept by the secretary of the State Society for that purpose. No member shall take part in any of the proceedings of such convention until he shall have complied herewith.

All members in good standing so registered may attend and participate in the proceedings and discussions of the scientific meetings of the Medical Society of the State of New York and of the sections and sessions.

A distinguished physician of a foreign country or a physician not a resident of this State who is a member of his own state medical association may become a guest during any annual convention upon the invitation of the president or officers of the Medical Society of the State of New York, and may be accorded the privilege of participating in all the scientific programs of the convention.

No address or paper before the Medical Society of the State of New York, except those of the president and president-elect, shall occupy more than twenty minutes in its delivery.

All papers read before the Medical Society of the State of New York at its annual convention by its members shall become the property of the State Society. Whenever such paper shall be deemed not acceptable for publication in the *New York State Journal of Medicine* it shall be returned to the author as promptly as possible after its receipt in the publication office of the State Society.

The following shall be the order of business at the annual meeting of the Medical Society of the State of New York:

1. Calling the State Society to order
2. Reading of minutes of the last meeting by title
3. Induction of incoming president
4. Inaugural address by incoming president
5. Adjournment

The rules contained in *Sturgis Standard Code of Parliamentary Procedure* shall govern the Medical Society of the State of New York in all cases in which they are not inconsistent or in conflict with the Bylaws of the State Society.

ARTICLE XIV. FUNDS

Funds shall be raised by annual dues levied on each active member at a uniform per capita rate throughout the State. Funds may also be raised in any other manner approved by the House of Delegates or by the Council when the said House of Delegates shall not be in session.

The approval of the Council and of the Board of Trustees shall be necessary for the expenditure of any funds of the Medical Society of the State of New York, except that the said Board may delegate, to such person or persons as it sees fit, the authority to expend funds of the State Society in amounts and under conditions to be determined by said Board, on recommendation of the Council.

ARTICLE XV. DUES

The annual dues shall be determined by the House of Delegates.

Assessments can be levied by the House of Delegates or the Council and shall be payable within a period of time specified by them.

The dues and assessments of those active members who have been graduated from medical or osteopathic college not more than five calendar years, not counting active service in the armed forces of the United States or in the United States Public Health Service, shall be one third the amount levied on all other active members. The dues and assessments of those active members who have not completed their continuous residency training shall be one tenth the amount levied on all other active members. In no case may an active physician continue to pay such reduced dues more than seven years after the date of graduation from medical or osteopathic school. The dues and assessments of those active members entering solo practice for the first time, who are not otherwise eligible for reduced dues as set forth in prior provisions in this paragraph, shall be one half the amount levied on all other active members, for the first two years of solo practice; full dues shall be paid after the first two years of solo practice. Once an active member pays full dues, he shall no longer qualify for half-dues status.

Life and honorary members shall not be required to pay dues or assessments to the Medical Society of the State of New York.

Annual dues are due and payable on the first day of January each year. The dues year shall coincide with the calendar year, January 1 to December 31.

Any member, except a member who is eligible for and has applied for life membership, whose component county medical society and State Society dues are unpaid after April 1 of any current year or whose assessments are unpaid by the specified time is not in good standing and shall be deemed to be in arrears.

A member whose dues are unpaid after May 1 of any current year or whose assessments are unpaid one month after the specified date shall be dropped from the roles of membership of his component county medical society and the Medical Society of the State of New York upon reasonable notice to such member by his component county medical society or the State Society, and without further action on the part of either the component county medical society or the State Society, and on such date he shall automatically cease to be a member of the component county medical society and State Society. In the case of nonpayment of dues, the reasonable notice to be provided shall commence on April 1, or as soon as possible thereafter, upon the determination that such member is in arrears.

Dues and State Society assessments of a member elected or reinstated after October 1 shall be credited to the succeeding year, but no member dropped for nonpayment of dues and assessments shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped.

The dues of an active or student member of the State Society may be remitted for the current year by action by the Council on account of illness, financial hardship, or temporary active service in the armed forces of the United States or in the United States Public Health Service, when the request for such remission is made by the member's component county medical society, except in the case of student members who shall make application for remission directly to the secretary. Such a request shall be accompanied by a brief summary of the reasons therefor. Remission of dues due to illness or financial hardship shall be reviewed annually.

ARTICLE XVI. EXPENSES

Allowances for expenses incurred in the actual performance of official duties by officers, councilors, trustees, members of the Judicial Council and of commissions and committees, delegates to the American Medical Association, and employees of the Medical Society of the State of New York shall be made in conformity with the following conditions.

The president and the president-elect shall be allowed a per diem and expenses when engaged on official business. The amount of the per diem shall be set by the House of Delegates.

All other officers, councilors, trustees, members of the Judicial Council, delegates to the House of Delegates of the American Medical Association or an alternate delegate who, at the direction of the Council, attends a meeting of the House of Delegates of the American Medical Association, members of commissions and committees of the Council, and of all special committees, members of the Medical Society of the State of New York appointed by the president or the Council to carry out special assignments for the State Society, and employees of the State Society shall be allowed traveling expenses when engaged on official business.

Members for life of the House of Delegates, delegates of the district branches, scientific sections, and student members, sitting in the House of Delegates, shall be allowed necessary expenses by the Medical Society of the State of New York.

Proper vouchers must be filed with the secretary of the Medical Society of the State of New York before any of the above allowances shall be made.

There shall be no allowances for the expenses, traveling or otherwise, for members of any reference committee.

Each district branch shall be entitled to receive a sum in accordance with the number of members in the district branch. The maximum allowable amount shall be $1,000 to district branches of less than 1,000 members; $2,000 to district branches of more than 999 but less than 2,000 members; $3,000 to district branches of more than 1999 but less than 4,000 members; $5,000 to district branches of more than 3999 members, exclusive of the work done by the Medical Society of the State of New York regarding notices, programs, and so on, to defray the expenses of such district branch, provided a proper statement of such expenses shall have been presented to the secretary.

All bills, claims, or vouchers herein provided for shall be filed within thirty days after the date of the incurring of such expense. This time may be extended for any cause by the Board of Trustees.

ARTICLE XVII. DISTRICT BRANCHES

SECTION 1. DIVISION

The membership of the Medical Society of the State of New York shall be divided into nine district branches, as follows:

The First District Branch shall comprise the members of the Medical Societies of the Counties of Bronx, Kings, New York, Queens, and Richmond.

The Second District Branch shall comprise the members of the Medical Societies of the Counties of Nassau and Suffolk.

The Third District Branch shall comprise the members of the Medical Societies of the Counties of Albany, Columbia, Greene, Rensselaer, Schoharie, Sullivan, and Ulster.

The Fourth District Branch shall comprise the members of the Medical Societies of the Counties of Clinton, Essex, Franklin, Fulton, Hamilton, Montgomery, Saratoga, Schenectady, Warren, and Washington.

The Fifth District Branch shall comprise the members of the Medical Societies of the Counties of Cayuga, Chenango, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, and St. Lawrence.

The Sixth District Branch shall comprise the members of the Medical Societies of the Counties of Broome, Chemung, Cortland, Delaware, Otsego, Schuyler, Tioga, and Tompkins.

The Seventh District Branch shall comprise the members of the Medical Societies of the Counties of Livingston, Monroe, Ontario, Seneca, Steuben, Wayne, and Yates.

The Eighth District Branch shall comprise the members of the Medical Societies of the Counties of Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, and Wyoming.

The Ninth District Branch shall comprise the members of the Medical Societies of the Counties of Dutchess, Orange, Putnam, Rockland, and Westchester.

Changes in the number or membership of these district branches may be made by a two-third vote of the House of Delegates at any annual meeting thereof.

SECTION 2. AIMS AND ORGANIZATION

The objectives of the district branches shall be to promote the scientific, social, cultural, and other interests of the medical profession within the district and to cooperate with the Council of the Medical Society of the State of New York in any way which that body may advise.

Each district branch may adopt a constitution and bylaws for its government and may amend them. The constitution, bylaws, and amendments shall not be in conflict with the Bylaws of the State Society and before becoming effective they shall be approved by the Council.

SECTION 3. OFFICERS AND ELECTIONS

Each district branch shall elect a president for two years and a delegate to the House of Delegates for two years, but with the approval of the Council a district branch may elect a president for one year.

Each district branch shall elect such other officers as are provided for in its bylaws. They shall attend the business meetings of the branch.

In the case of the inability of the delegate of a district to serve, the vice-president shall serve as delegate, and if the vice-president is unable so to function, the president shall designate a substitute delegate to serve and shall so notify in writing the secretary of the Medical Society of the State of New York.

Any elected officer of a district branch who is called into active service in the armed forces of the United States or the United States Public Health Service may, on application to the Council, be granted leave of absence for any portion of his term of office during which he is on active service. During such absence his duties shall be designated as the Council may direct, except where such delegation is already provided for elsewhere in the Bylaws.

The president of each district branch shall visit the component county medical societies of the district at least once during his tenure of office and make a careful inquiry of the condition of the profession in each county in his district and shall report thereon to the House of Delegates.

ARTICLE XVIII. COMPONENT COUNTY MEDICAL SOCIETIES

SECTION 1. DEFINITION

The term "component county medical society" shall include all county medical societies now in affiliation with the Medical Society of the State of New York or which may hereafter be organized and chartered by the House of Delegates. There shall be but one component county medical society in each county affiliated with the State Society. If there should be an insufficient number of physicians in any of the counties of this State to form themselves into a component county medical society, such physicians may become members of the component county medical society of an adjoining county when eligible by the constitution and bylaws of such component county medical society.

SECTION 2. MEMBERSHIP

Eligibility for membership in a component county medical society shall be determined by that society. Except by the approval of the Council no physician shall be an active member in a component county medical society other than that of the county in which he practices or maintains legal residence.

Whenever an active member in good standing or a life member in any component county medical society removes to another county in this State, his name on his request shall be transferred to the roster of the component county medical society of the county to which he removes, without cost to him, provided that he files a certificate with the secretary of the Medical Society of the State of New York, signed by the president and secretary of the component county medical society from which he removes as to his good standing in such society, and provided his application for membership has been acted on favorably by the members of the component county medical society of the county to which he has removed.

No physician shall be granted membership by any county medical society in any category of membership which has been created for the benefit of physicians who neither reside nor practice in such county, unless and until such county medical society verifies, with the Medical Society of the State of New York, the fact that the applicant currently holds either active, junior, or life membership in another county of this State. This requirement applies with equal force whether the category of membership on the local county medical society level be designated "associate membership," "affiliate membership," "corresponding membership," "nonresident membership," or by any similar designation.

No member shall be an active member of more than one component county medical society, nor shall any component county medical society accept as a member a physician who does not practice or have a residence in that county in any other way than in accordance with the law governing transfers.

Every component county medical society shall provide for membership for graduates of recognized medical or osteopathic schools who are in continuous residency training. The constitution and/or bylaws of the component county medical society shall provide that residents shall be eligible for membership whether or not they are duly licensed and registered to practice in the State of New York. The resident members will have all the rights and privileges of active membership. Dues and assessments for the members in continuous residency training shall be no more than one tenth the amount levied on all other active members.

Except by the approval of the Council, no resident may be a member in a component county medical society other than that of the county where he is in residency training or where he maintains his legal residence.

SECTION 3. DUTIES OF OFFICERS

The secretary of each component county medical society shall keep a roster of its members in which shall appear the full name of each of said physicians, the date of his admission to such society, his residence, and the date when his license to practice medicine in this State was granted. He shall note any changes in said roster by reason of removal, death, or change of name, revocation of license, or other disqualification.

He shall forward said roster and information together with the names and places of residence of each of the officers of said society and the names and residences of each delegate to the House of Delegates from said society to the secretary of the Medical Society of the State of New York at least ninety days before the date of the annual meeting of said House of Delegates.

The treasurer of each component county medical society shall forward to the treasurer of the Medical Society of the State of New York the amount of the State Society per capita dues and/or assessments and the amount of all American Medical Association dues collected from members of his component county medical society as promptly as possible, but in any event before the first day of April of each year.

SECTION 4. MEETINGS

Each component county medical society shall hold an annual meeting for the purpose of electing officers and a delegate or delegates to represent it in the House of Delegates of the Medical Society of the State of New York in accordance with the Bylaws.

The annual meeting of each component county medical society shall be held between January 1 and July 1 of each year at a time which it shall determine.

All officers of the component county medical society shall enter on their official duties between May 1 and July 1 at a date determined by the component county medical society and shall serve for a term of one year or until their successors shall have been duly elected and qualified.

SECTION 5. RESIGNATIONS

An active or life member in good standing whose resignation from membership in his component county medical society shall have been duly accepted, shall be considered to have resigned from the Medical Society of the State of New York.

When a member in good standing, other than a life or honorary member, ceases, between May 1 and December 31 of any year, to reside and practice in the State of New York, he shall be considered to have resigned from membership effective as of that December 31. If such cessation to reside and practice occurs between January 1 and May 1 of any year, he shall, provided he has been in good standing for the prior calendar year, be considered to have resigned from membership effective as of the previous December 31.

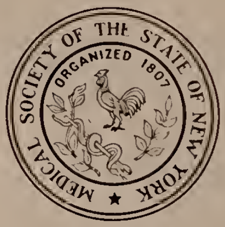
On resignation, a member shall forfeit all rights and title to any share in the privileges and property of the Medical Society of the State of New York, the district branch, and his component county medical society.

SECTION 6. CONSTITUTION AND BYLAWS

Each component county medical society shall adopt a constitution and/or bylaws for regulation of its affairs and may amend them. The constitution, bylaws, and amendments shall not be in conflict with the Bylaws of the Medical Society of the State of New York, and before becoming effective, they shall be approved by the Council.

ARTICLE XIX. SEAL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

The seal of the Medical Society of the State of New York shall be as follows:


MEDICAL SOCIETY OF THE STATE OF NEW YORK
ORGANIZED 1807

ARTICLE XX. AMENDMENTS

Amendments to the *Bylaws* or to the *Principles of Professional Conduct*, except such as are obligatory by law, shall be made only at an annual meeting of the House of Delegates after having been submitted in writing at a previous annual meeting and having been published in the official publication of the Medical Society of the State of New York at least once and at least one month before the annual meeting at which action shall be taken.

The affirmative vote of two thirds of the House of Delegates present and voting shall be necessary for adoption of any amendment.

Amendments made necessary by law shall be made either by the Council or House of Delegates whenever such necessity exists.

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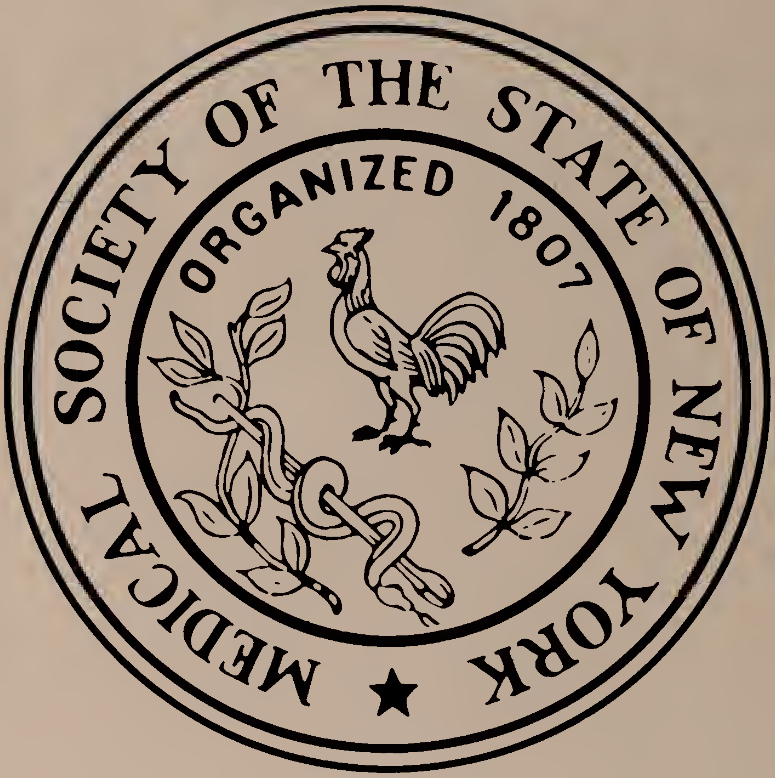
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Our opportunities are great. But EMPAC (Empire Medical Political Action Committee) and NYMPAC (New York Medical Political Action Committee) cannot support this larger agenda with the dedicated minority of support we now have in the New York State Medical Community. Only 1 out of 10 MSSNY members belong to EMPAC and NYMPAC.

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Modern Views of Vitamin D

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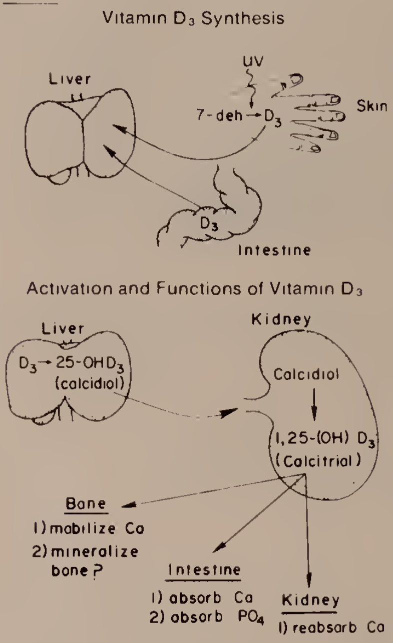
Introduction

Vitamin D is unique among the vitamins in several respects. First, it is a steroid and its main active form acts in a manner quite similar to that of other steroid hormones. Second, it is not a dietary requirement when the organisms are subjected to sufficient amounts of ultraviolet light originating from the sun. Third, it is the only vitamin known to be converted to a hormonal form. The full realization of these unique features of vitamin D has led to an explosion of investigation resulting in rapid advances in our understanding of its metabolism and mechanism of action. In addition, these investigations have led to the rapid application of the active forms of vitamin D and our knowledge of the vitamin D endocrine system to the understanding and treatment of metabolic bone disease. This brief review will provide the basic information on the vitamin D endocrine system as it is visualized at the present time and the disturbances in that system in some disease states.

Metabolism of Vitamin D$_3$

Vitamin D$_3$ originates from two sources (see Figure 1). It is synthesized in skin under normal conditions. When an organism is subjected to ultraviolet light, an intermediate in the biogenesis of cholesterol, 7-dehydrocholesterol, is converted to previtamin D$_3$ which then equilibrates slowly to vitamin D$_3$. The vitamin is then bound to the plasma transport protein and transferred to the liver where it enters the metabolic sequence. Alternatively, vitamin D$_3$ is absorbed from the small intestine, from the diet or food supplements. Vitamin D is not abundant in the natural food supply, being found only in such sources as liver or fortified foods such as milk. Unfortified milk has about 40 I.U./liter of vitamin D activity despite claims of super active forms of vitamin D in milk. Vitamin D, being lipid soluble, is absorbed primarily with lipids through the lacteal system. Vitamin D$_3$ from either source is rapidly cleared by the liver.

Fig 1



Vitamin D$_3$ must be metabolically activated before function (Figure 1). The first activation step occurs primarily, but not exclusively, in the liver where it is converted to 25-hydroxyvitamin D$_3$ (calcidiol) which is the major circulating form of vitamin D$_3$. Calcidiol also is not active at physiologic concentrations but must be further activated before function. This activation in nonpregnant animals takes place exclusively in the proximal tubule of the kidney where a 1α-hydroxyl group is installed on the molecule giving rise to the final active form of the vitamin D hormone, 1α, 25-dihydroxyvitamin D$_3$ or calcitriol (see Figure 1). This hormonal form of vitamin D (calcitriol) is then transported to the intestine, bone, kidney, and perhaps other sites, where it initiates the actions of vitamin D. These are a) intestinal absorption of calcium and phosphorus, b) the mobilization of calcium from the bone fluid compartment, and c) renal reabsorption of calcium. This results in an elevation of plasma calcium and phosphorus to levels that will support normal mineralization of bone and neuromuscular activity.

There may be an additional action of one of the vitamin D compounds directly on the mineralization process in the bone. This, however, has not yet been firmly established though clinical evidence is suggestive.

In addition to the metabolic activation of vitamin D to calcitriol, other pathways of vitamin D metabolism are known, but their function remains unknown or controversial. Vitamin D and its metabolites, including calcitriol, are excreted into the feces via the bile with as much as 60-80% of an injected dose appearing in this excretory route. The exact chemical nature of the excretory forms is not known.

In keeping with its hormonal nature, the production of calcitriol is strongly feedback regulated. Perhaps the most important regulating factor is the blood calcium level. Low blood calcium stimulates the parathyroid glands to secrete the peptide hormone, parathyroid hormone. Parathyroid hormone is transported to the kidney where, along with its other functions, it stimulates the 25-hydroxyvitamin D$_3$-1α-hydroxylase that converts calcidiol to calcitriol. Together with the parathyroid hormone, calcitriol stimulates the mobilization of calcium from bone and the renal reabsorption of calcium in the distal tubule. Calcitriol by itself stimulates the intestine to absorb calcium. Calcium from these three sources is then transported into the plasma where the blood calcium level rises to the normal range, thus suppressing the parathyroid glands and thereby shutting down production of calcitriol. It is evident that the vitamin D-based hormonal system is extremely important in the regulation of the blood calcium levels.

It might be expected that under conditions where there are great demands for calcium there is a marked stimulation of calcitriol production. This is clearly the case under conditions of pregnancy and lactation when great demands for calcium are made. In man and animals, calcitriol levels in the blood rise sharply during the terminal stages of pregnancy and rises even more sharply during the periods of lactation. This correlates with both the mobilization of calcium from bone and increased intestinal absorption of calcium. The vitamin D endocrine system therefore reacts in a positive manner to provide calcium under conditions where it is drastically needed. The exact signal involved in stimulating the calcitriol production during pregnancy and lactation is not known although it has been suggested that prolactin may be involved.

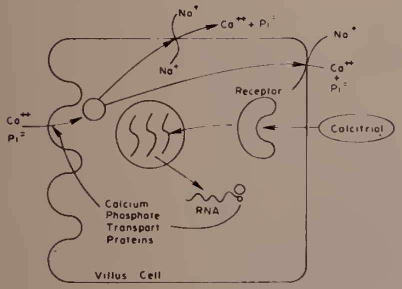
A major stimulus of the calcitriol levels in blood is the inorganic phosphorus level. Low blood phosphorus brings about marked elevations of plasma calcitriol levels in both animals and man which markedly stimulates intestinal absorption of phosphorus as well as calcium and also markedly stimulates the mobilization of phosphorus from bone. Thus calcitriol can be regarded as a phosphate-mobilizing hormone as well as a calcium-mobilizing hormone. It is unknown how low blood phosphorus causes the marked elevations in plasma calcitriol levels, although there is no doubt that some of this is the result of a stimulation of the 25-hydroxyvitamin D-1α-hydroxylase system.

Cellular and Molecular Mechanism of Action of Calcitriol

Concentrating on the well-recognized role of calcitriol in stimulating the transfer of calcium and phosphorus across the intestinal mucosa, some idea of how calcitriol functions at the cellular and molecular level can be realized. Calcitriol is transported to the target cells. In the case of the intestine, this is the mucosal villus cell. Here it binds with a specific cytosolic receptor (Figure 2). This receptor-bound calcitriol is transferred into the nucleus where it initiates a series of events that cause the transcription of specific genetic information. This information, in the form of messenger RNA, makes its appearance in the cytosol and codes for specific calcium and phosphorus transport proteins. The transport proteins are then transferred to the brush border membrane surface where calcium and phosphorus entry into the cell is facilitated. The calcium and phosphorus is transferred to the basal lateral membrane where it is expelled into the extracellular fluid compartment. Much remains to be learned concerning the molecular mechanism of calcitriol and a great deal of new information can be expected in the next decade.

Fig. 2

Mechanism of Calcitriol in Intestine



Vitamin D-Related Diseases

Several disease states are now known where there is a disturbance in the vitamin D system. Space permits only cursory mention of some of the more obvious ones.

Renal Osteodystrophy

Patients who have lost renal function and who have glomerular filtration rates below 20 ml/min have virtually unmeasurable levels of calcitriol in their blood because the organ responsible for biogenesis of the vitamin D hormone is inoperable. This condition is largely responsible for bone degeneration in patients with kidney failure. This disorder is treated successfully in 90% of the cases with calcitriol or an analog thereof.

Hypoparathyroidism

Patients without functional parathyroid glands cannot "sense" hypocalcemia and do not secrete parathyroid hormone when required. Thus, calcitriol is not synthesized when needed. Calcium is not mobilized and the sensitive neuromuscular junction reacts in a convulsive or tetanic state. Administration of calcitriol and oral calcium is successfully used to correct this disorder.

Vitamin D-Resistant Rickets

A genetic defect known as vitamin D-dependency rickets type I (autosomal recessive) is in fact a defect in the renal conversion of calcidiol to calcitriol. This disorder is treated with physiologic amounts of calcitriol or pharmacological amounts of other vitamin D analogs. Still other genetically related bone diseases are known to include either primary or secondary disturbances in the vitamin D system.

Osteoporosis

An inability to increase intestinal absorption of calcium when required to meet organismal needs will result in calcium mobilization from bone to maintain blood calcium levels. This results in a chronic loss of bone. There is an age-dependent loss of calcium absorption and of bone mass which correlates with low blood levels of calcitriol. Post-menopausal osteoporotic women have blood calcitriol levels that also correlate with diminished calcium absorption. Administration of calcitriol to osteoporotic post-menopausal women not only increases calcium absorption but also improves calcium balance, an effect that persists for up to two years. Thus, calcitriol appears promising as a therapeutic aid in preventing bone loss of old age and menopause. Definitive studies are now in progress.

Summary

The relatively recent discovery of the vitamin D endocrine system has provided a new dimension in our understanding of metabolic bone diseases. In addition, these investigations have provided new therapeutic tools for management of disorders of calcium and phosphorus metabolism. This area should continue to provide new approaches to the management of bone disorders.

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continued from page 9

the ocean bed, and in rock strata like granite, basalt, and shale.

- Local and state laws should be modified to create new disposal sites for low-level radioactive wastes that are generated within each state.
- The present standards for occupational exposure to ionizing radiation are adequate, and workers' exposures should continue to be kept as low as reasonably possible.
- Each physician should attempt to minimize exposures of patients with ionizing radiation in accordance with good medical practice. The physician should avoid unnecessary duplication of x-ray examinations, use proper techniques with minimum exposures, and use x-ray equipment that meets federal and state technical standards.
- The present standards for exposure of populations to ionizing radiation are adequate for the protection of the public.
- There is need for improved public planning by federal, state, and local agencies involved in responding to nuclear energy-related emergencies. Physicians and others in the health sciences should participate in the planning process.
- There is need for better training of operating personnel with regard to prevention and management of untoward reactor operating conditions.
- All nuclear reactors built in the future should be placed in areas of low population density. Present reactors located in low density areas should be managed so that the populations surrounding them remain small.

Risks of Nuclear Energy & Low-Level Ionizing Radiation may be purchased for $5.00 (including handling charge) by writing to Order Department OP-125, American Medical Association, P.O. Box 821, Monroe, WI 53566.

Organizational staff changes announced by AMA

The American Medical Association announced in November organizational and staff changes responsive to a redirection of effort and budget that the organization first announced at its annual meeting in June, 1981.

In announcing the changes, James H. Sammons, M.D., Executive Vice President of the AMA said, "This restructuring is another step in strengthening our organizational capabilities for the work and challenges that lie before us for the long term."

The AMA has consolidated its programs into two major areas: public, scientific and health service policy activities; and business, publishing, and management services. Whalen M. Strobhar was named Deputy Executive Vice President for Public, Scientific and Health Service Policy, and Thomas F. Hannon was named Deputy Executive Vice President for Corporate, Publishing and Management Services. Joe D. Miller with the new title of Senior Deputy Executive Vice President will continue as the principal deputy to Dr. Sammons and will assist him in the general management of the Association. Theodore R. Chilcoat, Jr., becomes Assistant Executive Vice President and will supervise and coordinate the activities of the Executive Vice President's Office.

C. H. William Ruhe, M.D., will retire from the position

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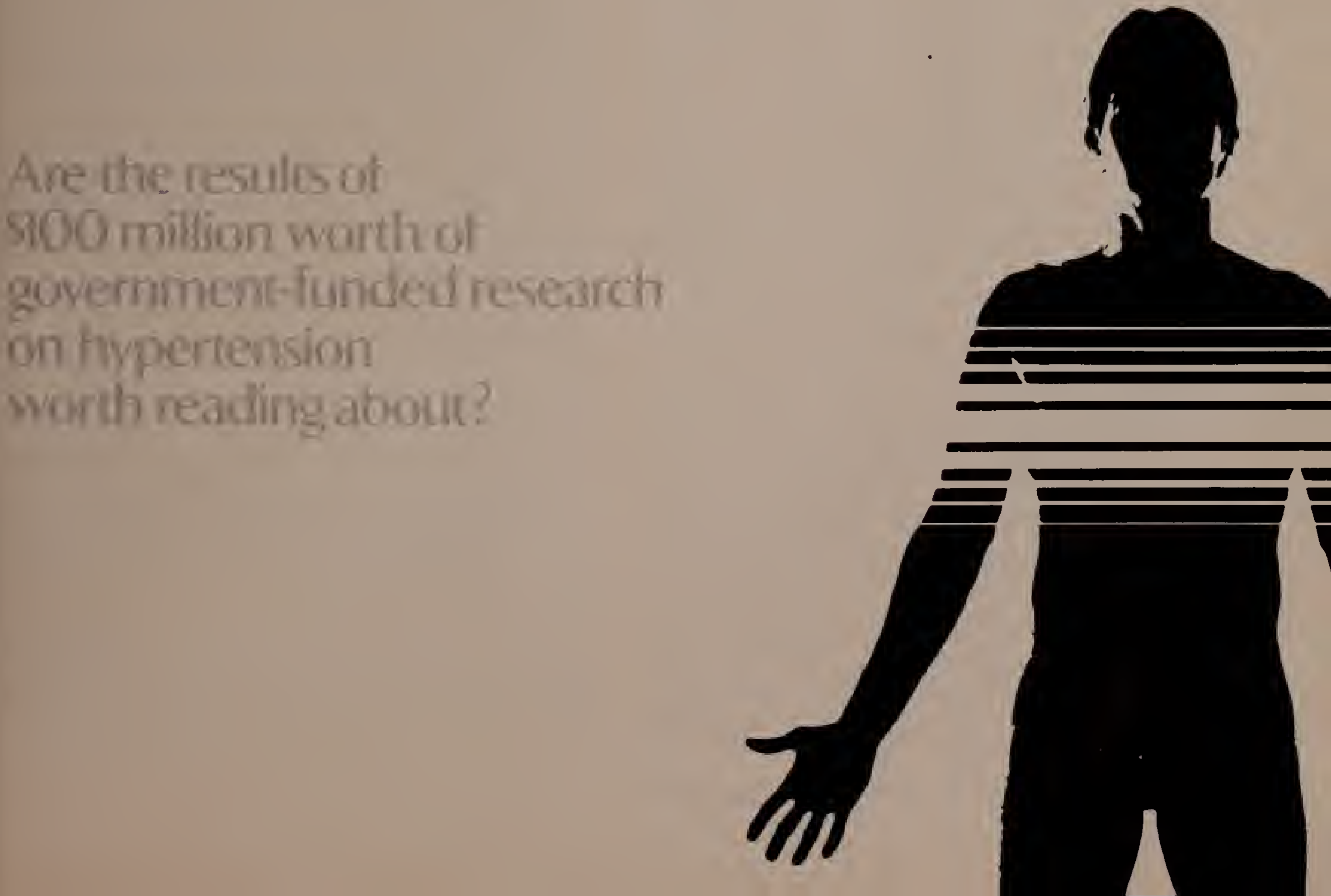

Books Reviewed

The Rights of Doctors, Nurses and Allied Health Professions; with a sample copy and discussion of the Living Will. By George J. Annas, Leonard H. Glants, and Barbara F. Katz. A Discus book published by Avon Books (An American Civil Liberties Union Handbook). 1981. Paperback, 382 pages. Price, $3.95.

The authors, legal authorities on medico-legal subjects, all seem competent writers of such a text, judging by their affiliations. Obviously, the respective rights of the medical professionals, paramedicals, and patients should be clearly understood by them.

In the preliminary perusal of the book, several thoughts pervaded the mind. First, the puzzling reason for, and affiliation with the book, of the ACLU, (American Civil Liberties Union) an organization usually associated with "causes," and second, as a book reputedly dealing with "*Rights*" of doctors, nurses and allied health professionals, the tone of the book seemed to portray the "*Rights*" only in a negative way—how one could get into trouble—giving the impression that the book might better serve as a primer or reference book on "how and when to sue doctors." There seemed to be an exhaustive exposition of legal technicalities which could act to entangle physicians (and the other professionals).

Then there was some confusion in grammar of the writing. As an example, there was an interchange, without qualification, in the use of pronouns denoting the sex of the individuals under discussion. While speaking of nurses, using the pronouns "she" and "her," the pronoun "he" was injected, out of context, forcing a rereading to determine if something had been missed. The same was true in discussing physicians, where in the midst of "hes," "she" suddenly appeared, though unaccountable.

The writers glibly presented the vulnerable areas where a physician could be sued, but conversely, they appeared to discount countersuits against lawyers who pursued meritless cases, regardless of the harm done to a physician. The pretext presented was that to permit countersuits might discourage "poor" people from suing, and they made light of the harm done to the physicians by stating that, anyway, some physicians never get sued, or at least, only once. (They carefully avoided recognition that the "only once" might be enough to ruin a physician, his home, family, savings, and future income!) It was interesting to note, too, that the decision of definitive *medical* judgment rested *not* with physicians or medical experts but with lawyers, the judiciary or lay juries supported by the court. Examples might be the overruling of hospital or physician's efforts to keep a husband out of the delivery room because of the potential danger at a critical moment for the mother or child. Similarly, these medical "authorities" defended the insistence to permit minors to make independent decisions for treatment of certain types, without parents' or guardians' knowledge.

There are contradictions, too. For instance: When, after saying that the physician-patient relationship is *consensual*, requiring that the patient and physician knowingly accept each other (that is, the patient being treated by the physician of *his* choice) there are expressions that physicians' assistants and nurses have an "obligation" to the patient beyond the obligation to, or even the orders of, the physician. Peculiarly, the physician nevertheless is suable for *their* action! In short, the legal technicality works detrimentally both ways against the physician who loses either way! A nurse who was disciplined for giving a patient information against explicit orders, was cleared by the court which decided that, ostensibly, she had really been disciplined just *because* she "talked" to the patient. There was no cognizance of the harm she may have done in apprising the patient of the interdicted information.

Another malaprop in the book is the statement that *the Constitution* says the foetus is not a person ... but the Constitution says *no* such thing!

There are other confusing implications: it is stated that the standard of care of physician's assistant must be the same as that of the physician but, if so, why should the physician have to study so much longer and be subjected to more rigid requirements? Also, the book says that the physicians' assistants may see the patient *first*, and then decide *when* to refer him to a physician, but this is diagnosis and is *the* most important decision! This technicality creates poor medicine, but it's legal, as decided by *nonmedical* persons, the jurists!

There are other irrationalities in the nursing requirements ... "a Nurse with a degree may be held to a higher standard" ... then a nondegree hospital school graduate who actually may be better prepared or experienced clinically, but the degree nurse may be more easily held for malpractice.

Despite all the foregoing and other exceptions and contradictions, the book *does* contain a number of useful points on which many physicians are not well informed; their *good samaritan* rights; the extent of the *informed consent* required before treating a patient; *detoxification* of a drug addict prohibited without special certification; *health department* requirements for reporting certain conditions; *genetic* counseling; method of *signing off* an undesired case; *advertising* as different from soliciting, which is prescribed; and other items with legal slants.

This book would have been more useful if it's presentation had spot-lighted the *rights* in a positive manner, without giving the probably unintentional impression of advising when to sue physicians. Moreover, instead of the long diatribe on legal interpretations in many other states, if it had confined itself to the regulations binding in New York, it would have produced a smaller, more readable, concise, and more useful compendium of the problems. The alleged purpose of the book was good, but the execution left much to be desired! **Lester J. Cadela, M.D.**

Don Carlos & Other Stories. By James A. FitzGerald, M.D. Washington, D.C., Bond Publishing Co., 1981. Cloth, 161 pages. Price, $9.95.

There have been and still are physicians who combine their medical skills and efforts with an excellent literary talent. William Carlos Williams, John Stone, Anton Chekhov, Robert Selzer, and many others wrote excep-

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of Senior Vice President for Scientific Activities effective February 1, 1982, and William R. Barclay, M.D., will retire as editor of the JAMA (*Journal of the American Medical Association*) effective December, 1981. Replacing Dr. Barclay as editor of JAMA will be George D. Lundberg, M.D., chairman of the Department of Pathology, University of California, Davis, since 1977. Dr. Lundberg has served as a member of JAMA's editorial board since 1973. Dr. Lundberg previously was director of the School of Medical Technology for Los Angeles County and the University of Southern California Medical Center.

Funding approved for AMA jail health program

The American Medical Association's Program to Improve Medical Care and Health Services in Correctional Institutions will receive funding from the Robert Wood Johnson Foundation to continue its work in jail health accreditation, said AMA trustee Alan R. Nelson, M.D., during a speech at the program's fifth annual conference October 31, 1981.

He added that further accreditation activities will be performed by an outside organization under contract with the AMA's Education and Research Foundation.

The funding for the program, encompassing a two-year period from November 1, 1981, to October 31, 1983, will total $398,258.

This amount is less than previous funding but is sufficient to maintain a central office operation to work with state medical societies involved in the program.

The Association sees the biggest effect of the reduced funding on the availability of technical assistance as it will no longer be possible to send experts on-site to the jails. However, telephone assistance will be available.

Previously developed AMA materials are also available as an aid to help jails implement their own successful programs.

The AMA reports that seven state medical associations have secured funding to continue their projects on a full-time basis and 10 more plan to continue part-time, making on-site assistance available in some areas.

The program, operating since July 1, 1975, was formerly funded primarily by the LEAA (Law Enforcement Assistance Administration) with additional monies from the AMA and participating state societies.

The Robert Wood Johnson Foundation, established in 1936 as the Johnson New Brunswick Foundation by the late General Robert Wood Johnson, is a private philanthropy interested in improving health in the United States. One of its main goals is to help improve health care delivery to underserved populations.

Beth Israel Medical Center opens psychiatric day treatment program

BIMC (Beth Israel Medical Center) opened the David B. Kriser Psychiatric Day Treatment Program on November 9, 1981. Designed as an alternative to inpatient care, the Day Treatment Program provides comprehensive psychiatric outpatient services to patients without sufficient daily structure to sustain social functioning. It often serves as a traditional program between hospitalization and independent living or long-term, community-based social rehabilitation programs.

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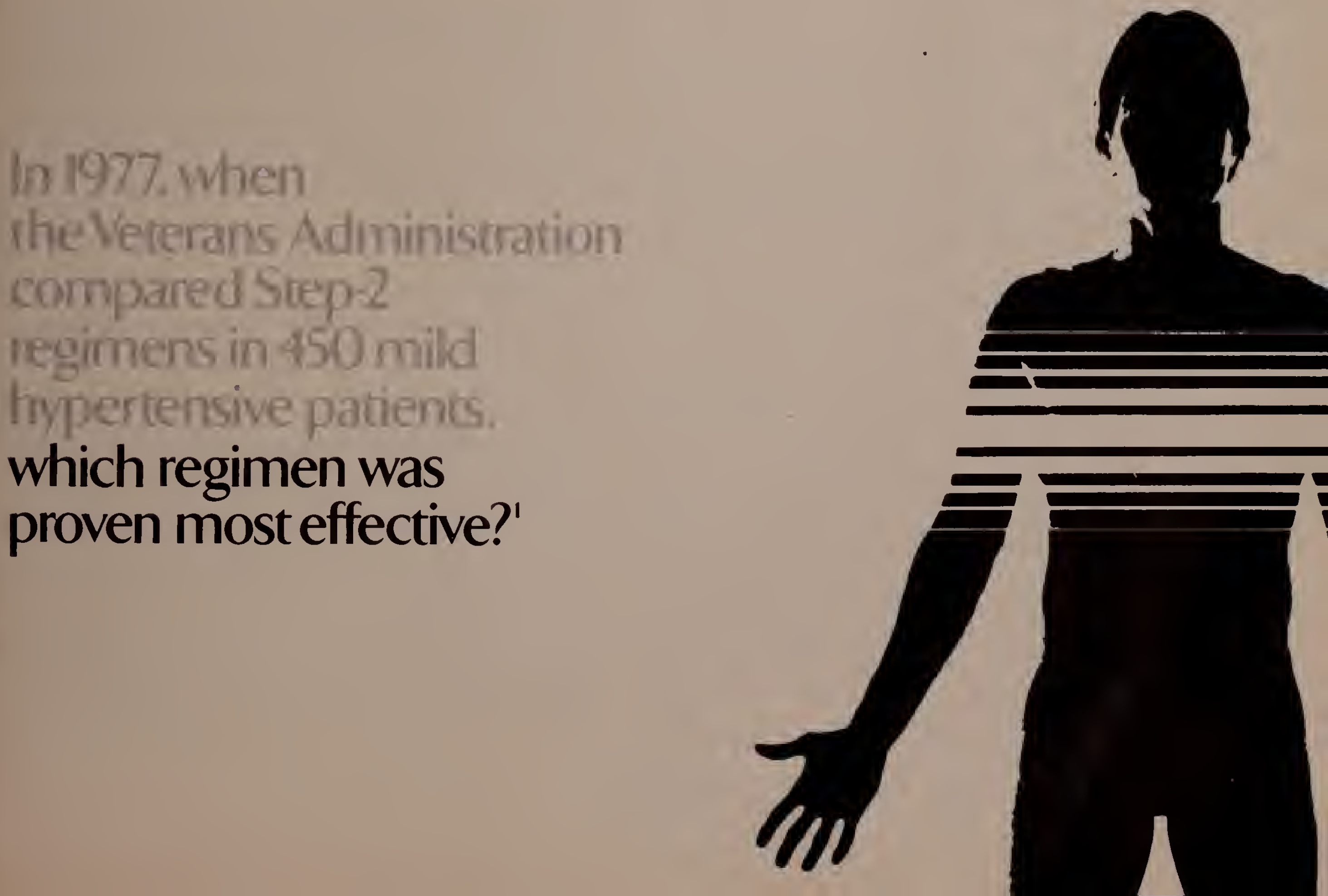

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients,
which regimen was proven most effective?[1]

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David B. Kriser, a Vice President and Trustee of Beth Israel Medical Center, is well-known for his philanthropy to Beth Israel and other health-care and health-related institutions.

The Day Treatment Program offers a structured daily treatment program, including prevocational and social rehabilitation services for adult patients, 17 and over, who meet the criteria for admission. Located at 245 East 17th Street, the Program hours are 9 a.m. to 4 p.m., Monday through Friday.

Individual treatment for each patient is planned and implemented by a professional treatment team consisting of a psychiatrist, psychologist, nurse, social worker, and occupational and recreational therapists. Treatment includes individual and group psychotherapy, family therapy, counseling, and pharmacotherapy. A full range of occupational and recreational therapies is offered. In addition to therapy, independent living is developed through workshops, counseling, work skills training, and educational trips to community agencies and resources.

Two meals are served daily, and carfare can be provided for patients.

The Department of Psychiatry of BIMC offers a full complement of inpatient and outpatient services. Of special note are the Center for Treaching and Research in Short-Term Dynamic Psychotherapy; the child and adolescent services; liaison services; and an Alcoholism Treatment Program.

Beth Israel Medical Center, a 966-bed voluntary teaching hospital whose origins as a health care institution serving the Lower East Side date back more than 90 years, is a member agency of Federation of Jewish Philanthropies.

Patients can be self-referred or referred by their personal physician or community agency representative by calling (212) 420-4411. Day treatment is covered by Medicaid and by some third-party, health-care insurance carriers.

Hepatitis B Vaccine likely by 1982

The recently developed vaccine against hepatitis B virus is both extremely safe and highly effective, according to results presented at the recent meeting the Advisory Committee on Immunization Practices of the CDC (Centers for Disease Control).

According to a report in the Medical News section of the Journal of the American Medical Association (November 13), this favorable outcome should spur approval of the vaccine, which is expected to become available in the spring or early summer of 1982.

Hepatitis B is an acute viral illness which can be transmitted by contaminated needles, administration of contaminated blood or blood products, or by oral ingestion of contaminated materials. For these reasons, groups at high risk for hepatitis B include homosexual men, prostitutes, drug users, dialysis center personnel, transfusion recipients, and hospital personnel (especially surgeons, those who work with blood products, and laundry workers who

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come in contact with contaminated needles in the sheets and scrub suits they handle).

The vaccine was tested on more than 500 homosexual men with the cooperation of five clinics in St. Louis, San Francisco, Los Angeles, Chicago, and Denver. Homosexual men were selected because they have approximately a 25 percent incidence of hepatitis B infection 20 to 30 times higher than in the general population.

Results of the clinical trial showed that 85 percent of the men vaccinated developed antibodies to the hepatitis B virus after receiving two injections one month apart and a booster injection five months later. Researchers at the CDC speculate that insufficiently potent vaccine may account for the 15 percent of vaccinated men who did not develop antibodies, citing other studies which showed that the vaccine produced immune responses in up to 99 percent of recipients.

In the months prior to expected approval of the vaccine, the CDC advisory committee will be working out questions concerning administration of the vaccine, including identifying high-risk groups and determining how best to screen persons already immune to hepatitis B viral infection.

Here and there

Awarded. Eugene Moskowitz, M.D., director of the Department of Physical Medicine and Rehabilitation, Westchester County Medical Center and Joseph B. Rogoff, M.D., professor of rehabilitation medicine, New York Medical College, are two of the three physicians selected to receive the 1981 Distinguished Clinician Award of the American Academy of Physical Medicine and Rehabilitation.

Installed. Victor Cummings, M.D., chief of the Amputee Clinic and director of Ambulatory Care in Rehabilitation Medicine, The Bronx Municipal Hospital Center, was installed as president of the American Congress of Rehabilitation Medicine at the organization's 58th annual session in November.

Promoted. Recent promotions at Downstate Medical Center at Brooklyn were Jeffrey Freedman, M.B., B.Ch., promoted to professor of clinical ophthalmology; George A. Vas, M.D., promoted to associate professor of clinical neurology; Sreedhar P. Rao, M.B.B.S., promoted to associate professor of clinical pediatrics; and Ingram Cohen, M.D., promoted to clinical associate professor of psychiatry.

In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study),

which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]

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tional poetry, short stories, novels, and essays. Dr. FitzGerald is not yet one of them.

One may admire the strong need of an educated man who believes he has something to say, to compose, rewrite, and publish. Dr. FitzGerald maintains a busy academic and clinical practice of obstetrics and gynecology while writing these stories. One can even be mildly jealous of him. Unfortunately his present literary ability is not equal to his perseverance. We can commend him for trying. He does get an "A" for effort.

His style is that of a mixture of a pulp detective novel, obtuse profundity, and an oblique attempt to introduce sexual motivations that remain largely statements rather than insights. This consists of a sequence of short stories, some rather long and all dealing with matters of sex. One story is that of an island native with a large penis, showing the ulcers of syphilis. Another story is that of a physician's extramarital adventure on a tropical island that proves sterile because his partner is suspect for gonococcus. He finds himself involved in a public health search as a contact. Another story tells of a young lady, with a seizure disorder, finds that only a sexual performance during the prodroma will abort the attack. She utilizes this rather haphazard device licentiously and relentlessly until an Italian in the country of Michaelangelo produces a man robot for her available at all times. The high point of the story is that a child of a future marriage resembles the Italian robot rather than her Nordic husband.

One would not wish to discourage this humanities-oriented physician/author for there are perhaps too few within our profession. It could be that with formal training, much criticism, and continued application good literature may be forthcoming. **Julius Pomeranze, M.D.**

Gynecology and Obstetrics: The Health Care of Women. Second edition. Edited by Seymour L. Romney, M.D., Mary Jane Gray, M.D., A. Brian Little, M.D., and others. New York, McGraw-Hill Book Company, 1981. Illustrated, 1,310 pages. Hardcover, $48.50.

A veritable encyclopedia of today's advances and currently available practices in providing health care for women is contained in this text. Sixty-three contributors from the fields of obstetrics, gynecology, pediatrics, pathology, surgery, psychiatry, genetics, medicine, sociology, and law present thorough coverage of hundreds of subjects pertaining to their areas of expertise. Many provocative chapters point to the changes that are going on now and predictive alterations in both management and definitive treatment of disease and societal-environmental conditions involving the female in today's society.

Organized in a most interesting arrangement of five separate but interrelated parts; that is, Care of Women, Mechanisms, Approach to the Patient, Manifestation of Disease, and Specific Problems, the text has very much to offer and is presented with multiple styles of writing and content arrangement. The tables, charts, and diagrams together with black-and-white photographs are readily identified and topic-oriented. Completing the formal arrangement of the text is an index of 39 pages, and with each chapter, a clear preliminary subject and title outline with a list of current references concluding every one of the chapters presented.

The cross references within each topic are of value because they present an indepth picture of many conditions—giving some alternative modes of diagnosis and/or treatment by recognized authorities. The contributions coming from 29 medical centers in 20 of our states and the District of Columbia also enhances the scope and breadth of patterns of care provided women in this country. The distinguished contributors to the book include 13 professors and chairmen of departments of obstetrics and gynecology, one in therapeutic radiology, and one in general surgery.

The subject matter is too voluminous to analyze in detail, but let it be said that current topics of genetics, bio-ethics, cancer, reproductive physiology, endocrinology, approach to the patient, psychiatric problems, as well as legal considerations, are competently covered.

Because of the nontraditional format, this volume will not only be of great value to the practitioner in obstetrics and gynecology, the medical student and residents in training in the discipline, but will be of great aid to physicians who are involved in rendering primary care to their patients. The editor and authors are to be commended for their astuteness in organizing topics "*A*bdomen, examination of," to "*Z*ona pellucida" (*see* index) between the covers of this valuable textbook for the 1980s. **Bernard J. Pisani, M.D.**

Food, Ecology and Culture: Readings in the Anthropology of Dietary Practices. Edited by J. R. K. Robson. New York, Gordon & Breach Science Publishers, Inc., 1980. Illustrated, 143 pages. Hardcover.

Food, Ecology and Culture, Readings in the Anthropology of Dietary Practices is, as the subtitle of the book implies, a collection of scientific essays on the sociocultural determinants of eating behavior. The editor is a well-known nutritionist, who spent 15 years of his professional life in developing countries. This experience led him into a quest to find out the factors which determine human food behavior. He is particularly interested in the risks and detrimental health effects of changing the traditional diet of people in Third World countries. His research at the University of Michigan and, more recently at the Medical University of South Carolina, has focused on the multifactorial causes of dietary deficiency. He is the editor of *Ecology of Food and Nutrition*, which has become the accepted journal for publications of papers on nutritional anthropology.

The small book under review represents a selection of studies which provide insight into human food behavior during man's development. Contributing authors acquaint their readers with the food practices of different societies. Strong emphasis is placed on the role of traditional diets in promoting health.

Origins of food taboos are discussed with particular reference to the risk of malnutrition.

The authors of the separate essays are physicians, anthropologists, and nutritionists from many countries.

The book is highly recommended as bedside reading for physicians as well as medical students who impose therapeutic diets without adequate knowledge of people's food beliefs and who promote health practices which may be contrary to tradition in a particular society or groups of patients.

This book is not intended as a textbook. The expressed goal of the editor is to make us more aware of the ancient beliefs which shape eating behaviors so that we may learn to reflect on the implications of change imposed by Western countries. For physicians who will be working in Third World countries, the book is a must. As for the rest of us who work with sick people of different cultural back-

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VD victim stereotype changing, hotline figures show

The stereotype of venereal disease victims as young, nonwhite, and inner-city poor may be a thing of the past, according to a report from the VD (Venereal Disease) National Hotline.

Statistics published in the Journal of the American Medical Association (October 9), reveal that only 18 percent of callers to the VD information and referral service are under 20 years old. More than half earn over $15,000 a year, and 83 percent are white.

The VD Hotline's toll-free telephone number is 800-227-8922; in California, it is 800-982-5883. Operated by the American Social Health Association, the service is funded primarily by the Centers for Disease Control.

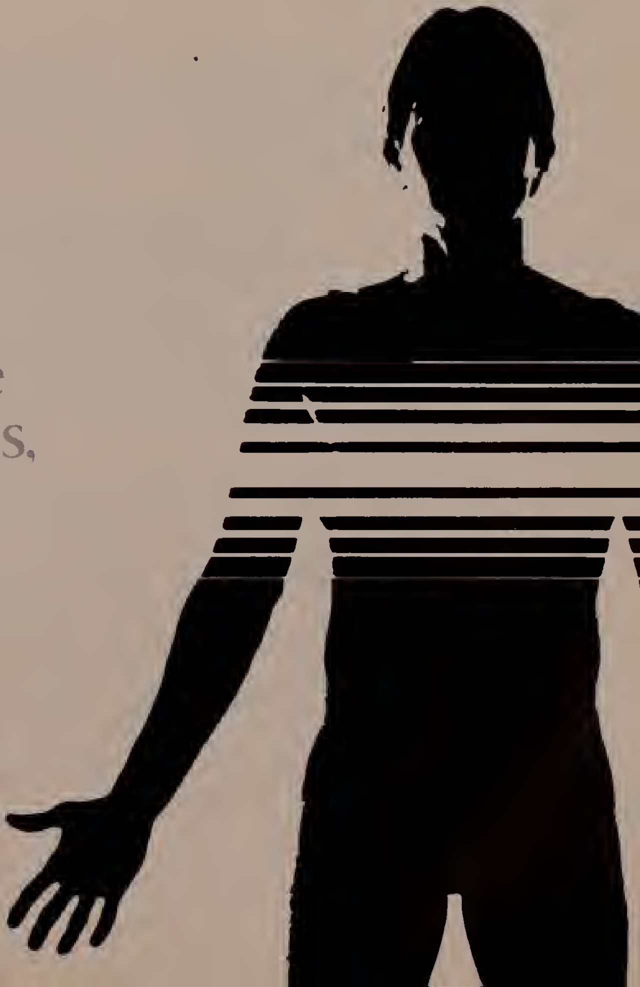
Trained volunteer operators screen calls from individuals who think they have contracted a venereal disease and who do not know where to go for medical help. The VD Hotline receives more than 100,000 calls a year.

Additional figures show that 60 percent of the callers are men. The mean age is 26.5 years, with nearly 30 percent being older than 30 years. Almost 90 percent are heterosexual, and 26 percent are married. The mean level of education is two years of college, with 35 percent holding a bachelor's degree. A quarter of the callers earn at least $25,000 a year.

VD Hotline officials speculate that the younger, poor, and nonwhite VD victims who no longer seem represented by the telephone data may not be calling the service because they don't know about it.

Currently, VD Hotline operators refer callers only to public VD clinics in their localities, but the telephone data indicate that many of the callers could afford and might prefer private care. Hotline officials want to asemble a nationwide corps of private physicians who could treat these middle and upper-middle class clients on a fee-for-service basis.

Physicians interested in joining this private physician referral network can contact Bea Mandel, Director, VD National Hotline, 260 Sheridan Avenue, Suite 307, Palo Alto, California. 94306.



In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

Month in Washington

The Reagan Administration and Congress have plunged into a bitter battle over the government budget that could affect all federal programs, including health.

The President has stressed his determination to reduce government spending and his irritation at Congress for not cutting deeply enough by vetoing a continuing resolution to keep the government operating.

The dramatic veto technically brought the government to a halt for a while, since the deadline for the previous resolution had passed. Such resolutions are needed to keep the federal establishment running in the absence of action on the regular appropriations bills, most of which are still before Congress two months into the current fiscal year.

The $428 billion stopgap appropriations resolution called for spending at a level at least $2 billion higher than President Reagan had requested.

Referring to his September request for Congress to decrease appropriations by an additional $13 billion, President Reagan said he had agreed to meet Congress halfway, but that the final resolution was not a fair compromise or sound budget policy.

Such "budget-busting" bills cause "sustained hardship" to taxpayers, the President charged. He criticized the lawmakers for the practice in the last two years of funding federal agencies through continuing resolutions rather than timely action on regular appropriations bills.

Over a frantic weekend, the House, 205 to 194, and the Senate, 46 to 39, approved the massive continuing spending bill despite warnings from the White House that it faced a veto. The margins of support made clear there were not enough votes in either chamber to override the veto, an action requiring a two-thirds vote.

Jolted by the President's veto, the Congress then quickly adopted a "mini" continuing resolution to keep the government running until mid-December, putting off until after the Thanksgiving recess the problem of wrestling with a longer resolution or perhaps attempting to speed action on the regular appropriations bills.

Many of the appropriations measures, which include

continued on page 125

Prepared by the Washington, D.C., office of the American Medical Association.

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funds for the HHS (Health and Human Services) Department, are still before Congress. And many of these carry more money than the Administration wants.

The battle between the Administration and Congress on appropriations promises to continue to dominate the scene on Capitol Hill until year's end.

* * *

The Supreme Court this term is slated to fix important boundaries on the application of the federal antitrust laws to medicine.

Four cases have been accepted for review so far. The latest involve a Blue Shield plan's exclusion of payments for psychologists and the practice of peer review by physicians committees of insurance reimbursement claims.

Previously, the Supreme Court had agreed to rule on the American Medical Association's challenge to the Federal Trade Commission's action against ethical advertising codes and the question of maximum fee schedules for medical foundations.

The decisions on these cases are not expected until this Spring.

The Blue Shield case involved two Virginia plans that excluded payment for clinical psychologists. The Fourth U.S. Circuit Court of Appeals upheld the suit against the plans charging a violation of antitrust laws.

If the high court's ruling is broad enough, it could have an impact on the question of whether health insurance can limit mental health benefits to treatment by psychiatrists or those acting under psychiatrists' directions.

The high court will also consider a case by a New York chiropractor who argued that the peer review process by insurance companies operated to set an upper limit on fees, a practice he charged is price-fixing and thus a restraint of trade.

* * *

The government is appealing a court order for an open season for the private health insurance plans for U.S. workers, claiming an open season could jeopardize the Blue Cross-Blue Shield plan that covers about half the federal work force.

U.S. District Court Judge Aubrey Robinson, acting on appeals from employe unions, ordered a two-week open season to allow the 9.2 million people covered under the Federal Employe Health Benefit program (FEBH) to choose other plans. The OPM (Office of Personnel Management) opposed the open season, apparently fearing adverse selection could work against the Blues.

OPM Director Donald Devine said an open season "threatens the integrity and perhaps even the survival" of the government's program.

He said the Blues might have to pull out of the program. Earlier, Blues' officials contended their plans might dip into the red unless they are allowed to trim mental health benefits, presently among the most liberal in the nation.

Psychiatric groups led by the American Psychiatric Association asked the District Court to prohibit the pro-

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And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

Please see references and brief summary of prescribing information on last pages of this advertisement.

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posed cutbacks in benefits, labelling the move "second-rate public policy which if allowed would make second-class citizens out of thousands of seriously mentally ill persons."

The reduction in benefits for the Blues would involve limiting inpatient hospital stays to 60 days and outpatient psychiatric visits to 50 a year. The patients would be asked to pay half the outpatient costs insteads of the present 30 percent.

Devine had ordered the 126 health plans that participate in the federal employee program to reduce benefits by 12.5 percent while the premium costs would rise nine percent in order to keep the plans on a sound financial footing. The government pays 60 percent of the premium.

There have been resolutions introduced in Congress to continue the present benefit structure until Congress has a chance to study the situation, but there has been no final action so far.

* * *

Support is picking up in Congress for legislation to expand Medicaid and Medicare coverage for home health services.

The measure's sponsor, Senator Oren Hatch (R., Ut.), Chairman of the Senate Labor and Human Resources Committee, is driving for Congressional passage by year's end.

The legislation (S.234) encourages establishment of home health programs and provides tax breaks for families who care for their elderly at home.

At the Committee's final hearing on the bill before marking it up for Committee action, Hatch won support from Chairman Claude Pepper (D., Fl.) of the House Aging Committee who said he would introduce a companion measure in the House. A number of Senators are cosponsors of Hatch's bill.

The Senator said more than 25 million Americans are over 65 and that three fourths of them may be forced to enter nursing homes instead of staying with their families. The Congressional Budget Office said some 1.7 million to 2.7 million people could be in need of expanded service, but that less than 500,000 people would receive it. Less than two percent of Medicare outlays—$750 million—go for home health care.

Actress Helen Hayes told the Committee that "it's such a pity when something as simple as not being able to get out of bed in the morning can cause you to go to a nursing home."

* * *

The long ordeal of C. Everett Koop, M.D., is over. The Senate has confirmed his nomination to be Surgeon General by a vote of 68–24, ending a seven-month controversy centering around Dr. Koop's outspoken views against abortion.

The nomination was stalled because it was necessary to grant a congressional waiver to allow Dr. Koop to take the post because of age and Public Health Service experience requirements in law. This allowed opponents, led by Chairman Henry Waxman (D., Ca.) of the House Commerce Subcommittee on Health, to block Senate waivers.

The issue was always abortion, however. Senator Orin Hatch (R., Ut.), Chairman of the Senate Labor and Human Resources Committee, told the Senate that abortion is a matter of great public debate "and I can conceive of no reason why advocacy . . . should affect Dr. Koop's fitness

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(Hydroflumethiazide, Reserpine Antihypertensive Formulation)

Brief Summary of Prescribing Information (12) 10/27/78

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

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to be surgeon general."

Said Hatch:

"Dr. Koop is a distinguished physician who is eminently qualified to hold this position. Not only is he a renowned surgeon and administrator but throughout his career has engaged in an incredibly numerous and varied set of public health activities."

Dr. Koop, 65, was surgeon in chief at Children's Hospital in Philadelphia when he was nominated.

During the congressional debate over the nomination, he had been serving in his twin capacity as Deputy Assistant Secretary for Health at the HHS (Health and Human Services) Department.

Hatch said that one objection to Dr. Koop had been that he should not be permitted to oversee or control certain PHS programs. Actually, Dr. Koop must report directly to Edwardt Brandt, M.D., Assistant Secretary for Health, Hatch noted.

The Senate fight against the nomination was led by Senator Edward Kennedy (D., Ma.), who criticized what he called "the essentially total absence of training or experience in public health." The Senator also accused Dr. Koop of being "out of touch with the role of women in our society."

Senator John Heinz (R., Pa.) said Dr. Koop's "personal views on these matters will in no way interfere with the manner in which he carries out the duties of the office of Surgeon General."

A Workshop on Thyroid Cancer

The Brooklyn Endocrine Club is presenting a workshop on cancer on Wednesday, January 27 from 1:00 p.m. to 4:30 p.m., at the Veterans Administration Medical Center, 800 Poly Place, in the second floor assembly room.

Topics to be presented are: Management of the Solitary Nodule; the Thyroid Biopsy; Surgery of Thyroid Cancer; and Postsurgical Management of the Patient with Thyroid Cancer.

This is designed as a working session for endocrinologists, surgeons, and nuclear medicine physicians.

For further information: telephone (212)-836-6600, extension 100 or 110, Paul M. Rosman, M.D.

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Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

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References:

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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Training program in group psychotherapy

NYU Medical Center and the Department of Psychiatry is offering a training program in group psychotherapy February 12 through June 25 on Fridays, 9 a.m. to NOON. Credit hours to be awarded will be 54 AMA Category I.

For information, write or call: NYU Post-Graduate Medical School, 550 First Avenue, New York, New York 10016; telephone: 212-340-5295 (24-hour telephone service).

Anesthesiology Comprehensive Board Review

"A Unique Approach to Preparation for the Oral Examination" will be presented by the Department of Medicine and NYU Medical Center, March 22 to 26. This is an anesthesiology comprehensive Board Review and 45 AMA Category I credit hours will be awarded.

For information, call or write: NYU Post-Graduated Medical School, 550 First Avenue, New York, New York 10016; telephone: 212-340-5295 (24-hour telephone service).

Seminar in Advanced Rheumatology with multiple basic science and clinical sessions

A "seminar in "Advanced Rheumatology" with multiple basic science and clinical sessions will be held March 8 to 12 by NYU Medical Center and the Department of Medicine. Thirty-two (32) credit hours, Category I AMA, will be offered.

For information, call or write: NYU Post-Graduate Medical School, 550 First Avenue, New York, New York 10016; telephone: 212-340-5295 (24-hour telephone service).

Axel Munthe Award in the field of reproduction

The Axel Munthe Award in the Field of Reproduction, of $25,000, will be presented by an international scientific committee on June 27, at the Axel Munthe Foundation, Capri, Italy.

Symposium

NYU Medical Center Post-Graduate Medical School announces a "Forensic Sciences Symposium—1982" for medical examiners, coroners, law enforcement personnel, and attorneys, June 28 to July 2, at New York City.

Directors of the course are Michael M. Baden, M.D., and Werner Spitz, M.D.

Category I 32 credit hours, Physicians Recognition Award, American Medical Association, will be awarded.

For registration and information: NYU Post-Graduate Medical School, 550 First Avenue, New York, New York 10016; telephone (212) 340-5294 (24-hour telephone).

Formaldehyde seen as possible cause of cancer in man

Formaldehyde, a chemical widely used in medical laboratories, home insulation, and various manufacturing processes, may eventually be named a cause of cancer in humans.

Rats and mice exposed to formaldehyde fumes have developed increased numbers of nasal carcinomas, according to a report in the Journal of the American Medical Association (October 9) from the NIOSH (National Institute for Occupational Safety and Health). Although studies to determine the effects of formaldehyde exposure in humans have not yet produced statistically significant results, findings from the animal experiments have some cancer-conscious physicians worried.

According to NIOSH, about 1.6 million people, one third of whom are engaged in medical and other health services, may be exposed to formaldehyde. Pathology laboratory workers, for instance, have long been resigned to the itchy eyes, running nose, skin irritations, and respiratory distress caused by exposure to the formaldehyde used in preserving tissue specimens.

NIOSH has listed 29 industrial uses for formaldehyde, including urea-foam formaldehyde home insulation, printing, brake linings, lubricants, paint pigments, plastic moldings, and crease-proof textiles. In 1978, 28 percent of the formaldehyde consumed in the United States was used to make urea formaldehyde resins used as adhesives in wood products such as particle board, fiber board, and hardwood plywood.

In addition, formaldehyde is used in the preparation of some cosmetics and vaccines and is commonly used as a fumigant and a disinfectant.

People living in homes insulated with urea-foam formaldehyde have reported sensitivity. Young children, the elderly, housebound invalids, and expectant mothers may be particularly at risk for toxic reactions to formaldehyde. These groups tend to remain indoors and thus may be exposed for longer periods.

The NIOSH report urges physicians to routinely include a patient's occupation in the medical history. Exposure to formaldehyde, it warns, may be more of a factor than currently realized in commmon respiratory diseases, such as asthma, and in other conditions, such as allergic dermatitis.

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grounds than our own, this book may encourage the need for enquiry into the implications of our health related and dietary advice. **Daphne A. Roe, M.D.**

Caution—Kindness Can Be Dangerous to the Alcoholic. By Abraham J. Twerski, M.D. Englewood Cliffs, N.J., Prentice-Hall, 1981. Hardcover, 174 pages.

The title is the message in Dr. Twerski's new book aimed at giving information and support to those individuals—spouses, children, parents, employers, friends—who are intimately involved with an alcoholic. These are the people who by their supposed "kindness" to the alcoholic become "enablers." His message clearly is that the alcoholic is the only one responsible for his drinking, but that the actions of those around him can help make the environment favorable or unfavorable for continuation of drinking. Spouses or others can also make the environment favorable or unfavorable for their own happiness or even survival.

Dr. Twerski, eminently qualified for this task by his years of helping alcoholics and families in his position as Medical Director of Gateway Rehabilitation Center, draws on numerous clinical case examples to help educate and offer support to those who so desperately need it that "there is an important distinction between punitive action against the alcoholic, which is worthless, and allowing him to face the natural consequences of his drinking, which can be most helpful."

This book can be recommended with confidence for anyone with a drinking problem or anyone who must live or work with someone with a drinking problem. Because of his rich and empathic presentation of clinical material I am also recommending this to all my alcoholism counselors. **Brian R. Nagy, M.D.**

The Doctor: Father Figure or Plumber. By James McCormick. London, England, Croom Helm, Ltd., 1979. Cloth, 171 pages. Price, $20. (Distributed in the U.S. By Biblio, 81 Adams St., Totowa, N.J. 07512)

If nothing else, the author of this rather small book gives a succinct description of the practice of medicine in England. I have no idea why the thread of comparison exists between the practice of medicine in the United States and England unless the author wishes to make the point that the problems are similar regardless of where medicine is practiced and which social philosophy prevails.

In the foreward, the author states: "It is written for all those who are concerned with health. It is not a textbook for professionals although I hope that they will read it." However, to emphasize the essential message of the book, it should be directed to the physician because the author does indeed find the physician at fault and calls on the profession to "demand concern and awareness of people as individuals, unique human beings."

I know what the author is saying and I know what message he is sending to the physician but I must cry out in defense of the bulk of my colleagues (both here and abroad) who do indeed see their patients as individuals, unique human beings.

I think this book would have been more complete if some attention had been drawn to the people by informing them that they are living longer; the infant mortality is decreasing; the technology spectacular; and that, by and large, we are enjoying better health than ever before. The outside wrapping of medical care may not be as some of us would like it but the product, at least in England and America, is basically sound. **E.S.**

Understanding the Family. Edited by Cathleen Getty, R.N., and Winnifred Humphreys, M.S.W. New York, Appleton-Century-Crofts, 1981. Softcover, 547 pages. Price, $16.95.

The topic is urgent, and there is a need for such a book. With 27 different author-contributors, the editors had an unenviable job. One of the questions that arose in the reading of the book—chiefly because of it's encyclopedic nature—was whether it was meant as a text for undergraduate students or a reference for practitioner-therapists. Portions would be good for either category but for nontechnical readers, it would miss the mark.

The listed curriculum vitae of the contributors would appear to justify their participation as professionals, but as writers conveying knowledge and concepts to beginners, there might be some question in the presentation of some contributors. There is a tendency for little-used words, with special applications, such as "microsocial" for family, and "macrosocial" for society: why not say "family" and "society?" A glossary would be useful. Also, some of the contributors appear to be too meticulously "tight" in their presentation, and a little too verbose and redundant. The language, sometimes, is too stilted in construction, almost like legalistic rhetoric, creating some confusion in understanding. Some contributors almost seem to be trying too hard to be scientifically technical, however, there were a number, like Humphreys, Barbee, Duggan, Mahar, Getty, Daughtry, and a few others, especially the writers on some ethnic groups, who were painstakingly clear, and they expounded on pertinent, practical topics.

One contribution, aside from it's almost anachronistic character which had to be "stretched" to conform to the "family stress" thrust of the book, was a paper of psychic healing, listing workers such as the Reverend Harold Plume (now dead)—ordained by the Ancient Catholic Church of England—who believed he was a channel for physician guides from the Spiritual Realms (Hoo Fang, a Chinese doctor who died 2,500 years ago). The Reverend Plume is said to allege that he could see through the body, and that he could dematerialize his hands to enter the body to treat the internal diseased tissue, without causing pain, bleeding, or leaving a scar. Another psychic healer mentioned was "Rolling Thunder," an Indian medicine man, who felt that physical disease was a reflection of spiritual malaise. The contributor to this section, Joan E. Rawson, R.N., M.S., of the V.A. Medical Center, Palo Alto, California, listed the names of Max H. Parrot, M.D., past president of the AMA; Johns Hopkins University, and Malcom Todd, M.D., president of the International College of Surgeons, and others who allegedly advocate a need for becoming involved in this "alternative" program of health care, inferring the psychic healing of the Reverend Plume rationale. The section closes with a statement relating these phenomena to their potential effect to transform the individual and family life.

Psychic healing was related to "invisible energies" (the Egyptian "ka"; the Yoga's "prana"; the Hawaiians "mana"; and so forth) which could be channeled through the healer. Reference is made to Franz Mesmer's allegations (now related to hypnotism) that there was a "magnetic fluid" which he could activate by passing his hands over the body.

There was mention of other psychic healing such as the

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laying on of the hands and the therapeutic touch, probably effective in psychosomatic disease.

This book has much to say, particularly in the more practical spheres, and especially by some of those writers mentioned above, but it might be enhanced by boiling down, with more classical tabulations, a glossary, and a more direct simplistic language. **Lester J. Candela, M.D.**

Renal Pathophysiology. Second edition. By Alexander Leaf, M.D., and Ramzi S. Cotran, M.D. New York, Oxford University Press, 1980. Illustrated, 410 pages. Paperback, $11.95.

One of the major recent developments in the curriculum of many medical schools has been the addition of courses in the pathophysiology of disease. Among the best of the texts written to accompany these courses is Leaf and Cotran's "Renal Physiology." This is a very "personal" book, which draws heavily on the authors' own experiences in dealing with patients with renal diseases and disorders of fluid and electrolyte balance.

The text admirably assists the medical student in obtaining a perspective which relates the principles of physiology and pathophysiology, the data which support these principles, and their implications to clinical medicine. It is not a book full of lists, but rather one which emphasizes explanations and understanding. The sections on glomerulonephritis and on volume and concentration of body fluids deserve particular note as models of clarity and organization.

The text is of appropriate size and depth for a three- to four-week student course in renal pathophysiology. House officers will also find it a useful guide. I believe that specific text references would have been a useful convenience for the student who desires to pursue the background of a particular topic, however there should be relatively little difficulty in selecting the appropriate references from among those listed at the end of each chapter. **Sherman D. Levine, M.D.**

Manual of Cancer Chemotherapy. Third edition. Edited by S. Monfardini, K. Brunner, D. D. Crowther, D. Olive, J. MacDonald, S. Eckhardt, and J. Whitehouse. Geneva,, Switzerland, International Union Against Cancer, 1981. UICC Technical Report Series, Volume 56. Paperback, 230 pages. $18, plus postage and packaging. (Available from above organization at 3 Rue du Conseil

This UICC Manual presents a well organized overall approach to the chemotherapy of the cancer patient. The basic essentials of histologic diagnosis, adequate staging of the extent of the disease before beginning treatment, s well as explicit criteria for measuring the response to treatment are clearly and concisely laid down.

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Constant up-dating by each practitioner of this specialty is needed to remain abreast in this rapidly changing field to supplement the excellent basic treatment manual.

The editors have quoted appropriate expert sources in all specialities and have in addition provided complete references for indepth coverage of each aspect of cancer chemotherapy. **Patricia McCormack, M.D.**

Thomas Willis's Oxford Lectures. Edited by Kenneth Dewhurst. Limited edition. Oxford, Great Britain, Sanford Publications, 1980. Illustrated, 182 pages. Hardcover, 9 English pounds.

Thomas Willis stands as one of the great medical scientists. He also had close associations with many of the "Oxford club," notably Hooke, Boyle, Lower, Petty, and Wren, whose contributions to science, medicine, and other disciplines are among the most long lasting and significant in history.

Yet, although Willis was one of these great minds of the seventeenth century, he was outshined in reputation during his lifetime and well afterward by others. For instance, Thomas Sydenham, his contemporary, was considered by most to be the outstanding clinician of the period, exerting widespread influence through his teachings and writings. But whereas Syndenham had little interest in chemistry, or physiology, none in microscopic studies, and an aversion to hypotheses, Willis, himself a clinician too, engaged in all of these endeavors, establishing a body of work that became a foundation on which others could build.

A pioneer in the description and treatment of nervous diseases and in the anatomy and physiology of the nervous system (we are all aware of the "Circle of Willis"), his interests also took him to other medical subjects, as for example diabetes—he brought attention again to the long forgotten sweet tasting characteristic of the urine of people with diabetes mellitus. Although he was ahead of his time in the use of experiment and controlled observation, he was also a man of his century, relying immoderately on drugs and bloodletting and believing that the mentally ill could be "possessed" by demons which could be exorcised; subscribing to the therapy of force to curb unruly "animal spirits" of the deranged.

Kenneth Dewhurst has put together in a slim, handsome volume a collection of notes taken down by John Locke and Richard Lower during attendance at 34 of the Oxford lectures delivered by Willis in 1661 and 1667. The reasons for the popularity at the time of these oral presentations are easy to understand, for they contain virtually no digressions or repetitions of classical texts but instead are eloquent recitals of observations and ideas which spring from the experiments of an enthusiastic investigator. The findings are reported honestly, without embellishment, and fresh insights are offered in order to test accepted opinion.

The integration of the notes into a spritely text is by itself a service to scholars and practitioners but Dewhurst has additionally written absorbing chapters, some of which contain entirely new material, on the life and works of Willis and on the history of his professorship (endowed by Sir William Sedley with approximately 2,000 pounds). We get to know Willis as a man as well as a great name: his origins, education, religion, beliefs, politics, achievements, and disappointments. Strengths and frailties are plainly on view. One also sees a picture of education in the universities, including the public and hidden influences on personal advancement.

Both as intellectual entertainment and a useful source of information on Willis and his period., this book with its organized, easily readable text, and extensive notes is well worth possession by clinicians and historians. **Albert S. Lyons, M.D.**

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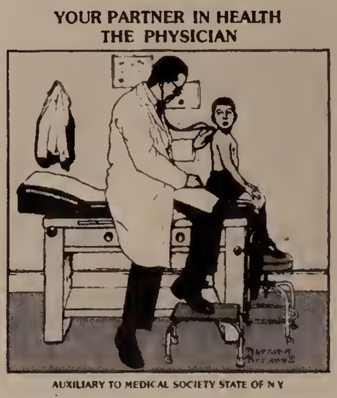

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Emergency Medicine Positions—available with emergency physician group in PA, NY, NJ, VA, WVA, MD, KY and throughout New England, the Southeast, the Midwest, including all suburban, rural and metropolitan areas. Fee-for-service with minimum guarantee provided. Malpractice paid. Practice credits toward board certification. Physician department directors also desired. Please send resume to: NEEMA Emergency Medical, Suite 400, 399 Market Street, Phila., PA 19106 or phone 215-925-3511 in PA, or 800-523-0776 outside PA.

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(212) 730-0069

PHYSICIANS WANTED—CONT'D

GROW WITH US IN THE SUNBELT—The INA Healthplan needs physicians in family practice and most specialties in Miami, Tampa, Dallas, Phoenix, Tucson, and Los Angeles. Attractive salaries and comprehensive benefits including professional development, retirement, and profit sharing programs are provided. If team interaction and casual living interest you, send a brief CV to Medical Administration, INA Healthplan, Inc., 7616 LBJ Freeway, Suite 303, Dallas, Texas 75251.

PSYCHIATRIST NEEDED for mental health and alcoholism unit, in New York State Community with drawing area of 80K. Team approach with excellent opportunity for advancement. Salaried position plus full benefit package. Four season recreational and cultural advantages; within driving distance of major medical center. Call Durham Medical Search, Suite 600-NYS, 268 Main Street, Buffalo, N.Y.—Collect (716) 852-5911.

FAMILY PHYSICIAN NEEDED: 50 miles north of New York City. Modern professional building-space was occupied by an M.D. It will be ready for occupancy by late spring. Contact: Dr. B. M. Poritzky, 22 Putnam Professional Park, Mahopac, N.Y. 10541. Telephone: (914) 628-3473 or (914) 628-8454.

WANTED YOUNG ORTHOPEDIST to share established orthopedic practice uptown Manhattan. Send particulars to Dept. 224, c/o NYSJM.

ORTHOPEDIC SPECIALIST NEEDED. An Upstate New York college community is in urgent need of a physician specializing in orthopedics for two modern hospitals servicing an area of 100,000 people. University medical center located in Syracuse, nearby. For further information write J. Sherwood Dunham, Oswego Hospital, Oswego, New York 13126, or call collect (315) 349-5526.

REAL ESTATE FOR SALE OR RENT

MANHATTAN'S EAST SIDE, 133 EAST 73RD ST., N.Y.C. LEXINGTON Professional Center, Inc. Part time & full time medical, dental, psychiatric office suites. Furnished & equipped. 24 hour answering service; receptionist. Mail service; cleaning. X-ray & clinical laboratory on premises. No leases necessary. Rent by the hour or full-time. (212) 861-9000.

THE PROFESSIONAL'S PROFESSIONAL—We offer expert consultation on the rental, sublet, or purchase of Manhattan professional offices and Co-ops. For personal attention in all matters including appraisal, please contact: Nathan H. Friedman, V.P.-Douglas Elliman-Gibbons & Ives, Inc., 575 Madison Ave., N.Y., N.Y. 10022. (212) 832-5571.

FLUSHING, NEAR BOOTH MEMORIAL AND FLUSHING hospitals. Office space available in a luxurious medical building on Main Street. Rents by the hour or month. Equipped for out-patient diagnostic work-up and ambulatory surgery. Emergency room to open soon. For information call (212) 539-8800.

HOUSE FOR SALE—TARRYTOWN, N.Y. Desirable Irvington School District. Prestigious, executive area. Attractive, modern split level home. Four bedrooms, large living room and dining room, 2½ baths, modern eat-in-kitchen, family room with fireplace, den/maids room, large finished basement, flagstone patio. Central air, 3 zone heat, 2 car garage. Clubhouse, tennis and pool. Assumable 7½% mortgage. $198,000. (914) 591-7471, (212) 288-1735.

REAL ESTATE FOR SALE OR RENT—CONT'D

MEDICAL/PROFESSIONAL BUILDING WANTED suitable for condominium conversion. Right building enables us to give you the highest price with capital gains advantage. Minimum 10,000 square feet. Contact: Paul Gellert, Gelco Associates, 155 West 68th Street, New York, N.Y. 10023. Phone: (212) 223-1130.

MANHATTAN—WEST GREENWICH VILLAGE—for sale—cooperative professional apt.—ground floor lobby. Approx. 700 sq. ft.—ceiling height 12′—in building with 77 apts.—area booming. Great opportunity—contact: Wilkinson Associates (212) 597-0431.

SAG HARBOR—LONG ISLAND New waterfront professional building opening soon in centrally located hub of the Hamptons—several miles from Southampton Hospital. Unprecedented current land sales should triple population within near future. Physician most needed. Excellent opportunity for individual practitioner or group seeking lucrative future with a superb life style. (516) 725-1240.

PRESTIGIOUS OLD FIELD: (Setauket, Long Island, Suffolk) 2 secluded acres of woodland and laurel, spacious custom Colonial. All pine-panelled including kitchen and large family room with huge Fireplace open to large covered patio. 2 bedrooms, 2½ baths plus library/office. Unusually large 2 car garage. Possible 2nd floor expansion. Full Basement. By appointment only. $155,000. 2–4 p.m. (516) 737-3546.

INTERNIST, VASCULAR SURGEON OR Orthopedist to share new, fully furnished office opposite the Bay Terrace Shopping Center in lovely Bayside, N.Y. (near Great Neck, Little Neck). Please call Dr. Harry Baldinger for information or an appointment. (212) 224-2424.

SHARE FULLY EQUIPPED MEDICAL OFFICE—ground floor—New Milford, N.J. Dr. Rhine (201) 836-7722.

FOREST HILLS, LONG ISLAND—Beautiful doctor's home-office. 6 bedrooms, 5 baths, brick, 2 car garage, convenient to hospitals, 20 minutes Manhattan. $375,000. Phone (after Jan. 12, 1982) (212) 268-6768.

YONKERS, NEW YORK: Office lease available, 1552 square feet. Fully equipped and furnished. Suitable medical, surgical, specialty practice, includes X-ray. Professional office building. Good transportation and parking facilities. Medical secretary and office assistant available. Reply Dept. 221, c/o NYSJM.

SHARE AN OFFICE, ALBANY, New York. Professional office space available for rent by the hour or full time. Excellent location. Week days call (518) 465-6068.

RIVERDALE: LEASE 600, 800 or 1400 sq. ft. of professional office space in a new medical building on Henry Hudson Parkway. Also available: office time to share in a newly furnished office with 4 examining rooms. On site parking. Call evenings (212) 549-4777.

MANHASSET HILLS—Excellent Herricks School District. Split level, 4 bedrooms, 3 full baths, den/family room, partial finished large basement, central air, ¼ acre, minutes to Long Island Jewish and North Shore Hospitals, fire alarm system, move-in condition. Principals only. $195,000. Call evenings (516) 746-6479.

THREE BEDROOM COLONIAL HOUSE for rent by owner. Very large sunny rooms include galley kitchen, lovely dining room, living room with air tight wood burning stove, large center hall entrance, two complete bathrooms and washer and dryer. Ideally suited for professional on corner of busy main street. $1,200. month. (516) 796-4310.

INVESTOR WISHES TO PURCHASE PHYSICIANS' Medical Center, Eastern Queens line or Nassau County. 10% rate of return on cash payment after debt service required. All information will be kept confidential! Contact Broker—A. Schoen/Cambridge Realty, Inc. after 5 pm (516) 265-8901.

MERRICK, L.I., N.Y., FOR SALE Contemporary sprawling ranch on ⅓+ acre. Includes 3 bedrooms and maid's room, 3 full baths, eat-in kitchen, separate laundry room, living room with fireplace, den with skylights, ceramic floors, cedar exterior, professionally landscaped and decorated, circular driveway, burglar and fire alarms. Principals only. Financing available. $200,000. (516) 223-8704.

what goes on IN CONTINUING MEDICAL EDUCATION

NEW YORK STATE **FEBRUARY 1982**

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420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK CITY

Doctors Hospital

170 East End Ave
February 4
URINARY TRACT INFECTIONS
Donald C. Kaye, M.D.
NO FEE CREDIT: AMA Cat. 1
For further information contact Doctors Hospital, 170 East End Avenue, New York 10028. Tel. #212-870-9118

The Jewish Hospital and Medical Center of Brooklyn in Assocation with the American Cancer Society, New York Division, Brooklyn Unit, SUNY Downstate Medical Center

555 Prospect Place
Brooklyn
*B-51 Conference Room
Basement, Leviton Bldg.
February 3
ABNORMALITIES OF PLATELET FUNCTION
Harvey J. Weis, M.D.
February 10
PROSTAGLANDINS AND CANCER
Bernard Jaffe, M.D.
February 17
TREATMENT OF BONE AND SOFT TISSUE SARCOMAS IN ADOLESCENTS AND ADULTS
Gerald Rosen, M.D.
February 24
EMDOMETRIAL CANCER
John Lewis, M.D.
NO FEE CREDIT: AMA Cat. 1
For further information contact the Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn, New York 11238. Tel. #212-240-1211

Saint Mary's Hospital of Brooklyn

170 Buffalo Avenue
Brooklyn
*3rd Floor Board Room
8:00 a.m.–9:00 a.m.
Wednesday, February 3, 1982
TOTAL PARENTERAL NUTRITION
Shelly L. Ludwig, M.D.
8:00 a.m.–9:00 a.m.
Wednesday, February 10, 1982
PORTAL SYSTEM ENCEPHALOPATHY
Robert Lowy, M.D.
8:00 a.m.–9:00 a.m.
Wednesday, February 17, 1982
NEW ADVANCES IN ALCOHOLIC LIVER DISEASE
Prem Misra, M.D.
8:00 a.m.–9:00 a.m.
Wednesday, February 24, 1982
UPDATE, DIAGNOSIS AND THERAPY OF PANCREATITIS
Simy Banks, M.D.
For further information contact the Department of Medicine at St. Mary's Hospital, 170 Buffalo Avenue, Brooklyn, New York. Tel. #212-774-3600 Ext. 2044.

Metropolitan Hospital Center— New York Medical College Department of Pathology

1901 First Avenue, New York 10029
Wednesday, February 17th at 3:30 p.m.
RENAL PATHOLOGY
Jacob Churg, M.D.
CREDIT: AMA Cat. 1
For further information contact Victor Tchertkoff, M.D., Coordinator, Metropolitan Hospital Center, 1901 First Avenue, New York 10029. Tel. #212-360-6253

State University of New York Downstate Medical Center Kings County Hospital Center in Cooperation with District I, NYSSA, Department of Anesthesiology

450 Clarkson Avenue, Brooklyn, N.Y. 11203
February 3, 1982—4 p.m.—5 p.m.
CLINICAL IMPLICATION OF HYPOXIA
Bryan E. Marshall, M.D.
February 2, 1982—8:00 p.m.—9:00 p.m.
ANESTHESIA AND THE PULMONARY CIRCULATION
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D. Program Coordinator at 212-735-2133.

New York Society for Clinical Ophthalmology

146 East 71st Street, New York 10021
*The New York Academy of Medicine
2 East 103rd Street, New York
February 8, 1982–8:00 p.m.–10:00 p.m.
REFRACTIVE SURGERY
Herbert E. Kaufman, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Norman B. Medow, M.D., Secretary, New York Society for Clinical Ophthalmology 146 E. 71st Street, New York.

New York University Post Graduate Medical School

550 First Avenue, New York 10016
*Alumni Hall
SPRING SESSION—Feb. 12, 1982 through June 25, 1982
Fridays, 9:00 a.m.–12:00 noon
TRAINING PROGRAM IN GROUP PSYCHOTHERAPY
Samuel Slipp, M.D. and Edward Pinney, M.D.
FEE: $650. CREDIT: AMA Cat. 1
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York. Tel. #212-340-5295.

American Group Psychotherapy Association, Inc.

1995 Broadway, 14th Floor, New York 10023
*The Waldorf Astoria Hotel
February 11–15, 1982
ANNUAL MEETING—39th Conference
CREDIT: AMA Cat. 1
For further information contact American Group Psychotherapy Association, Inc. 1995 Broadway, New York.

Kingsbrook Jewish Medical Center, The Speech, Hearing & Language Center of the Department of Rehabilitation Medicine of Kingsbrook Jewish Medical Center

Rutland Road & East 49th Street, Brooklyn
Monday, February 1st, 1982
A COURSE IN THE APPLICATION OF AUGMENTATIVE COMMUNICATION SYSTEMS
FEE: $50. CREDIT: ASHA Continuing Education Credits.
For further information contact J. Kavarsky, M.D. at 212-756-9700 Ext. 2943.

Long Island Jewish-Hillside Medical Center,

sponsored by The Department of Psychiatry, Long Island Jewish-Hillside Medical Center, The Postgraduate Institute for Medical and Dental Education and the Health Sciences Center, SUNY at Stony Brook

*Warkwick Hotel
54th Street & 6th Avenue, New York City
8:15 a.m.–5:00 p.m.
Friday, February 5, 1982
RECENT DEVELOPMENTS IN THE STUDY OF CHILDHOOD & ADOLESCENT DEPRESSION
Stuart L. Kaplan, M.D.
FEE: $90. (includes luncheon and coffee breaks)
CREDIT: AMA Cat. 1 (7 hrs.)
For further information contact Ann J. Boehme, CME Coordinator, Long Island Jewish-Hillside Medical Center New Hyde Park, New York 11042.

Peninsula Hospital Center Under the Auspices of Downstate Medical Center Co-Sponsored by the Academy of Medicine County of Queens

51-15 Beach Channel Drive, Far Rockaway, New York
*Perlberg Auditorium
9:00 a.m.–12:00 noon
October 18, 1981–March 28, 1982—Sunday Mornings
INTENSIVE REVIEW FOR FAMILY PHYSICIANS
FEE: $200. CREDIT: AMA Cat. 1
For further information contact Edward H. Davis, M.D., Peninsula Hospital Center, 51-15 Beach Channel Drive, Far Rockaway, New York. Tel. #212-945-7100 Ext. 377

The Jamaica Hospital Medical Center—Department of Medicine

89th Avenue & Van Wyck Expressway
Jamaica, New York 11418
REVIEW OF INTERNAL MEDICINE 1981–1982
ORTHOPEDICS
February 1, 1982
CRITERIA FOR JOINT REPLACEMENT
Felix Rosenhain, M.D.
February 8, 1982
MUSCULOSKELETAL STRESS SYNDROMES
Elie J. Sarkis, M.D.
February 22, 1982
MANAGEMENT OF SKELETAL PROBLEMS IN THE ADOLESCENT
Leon Bernstein, M.D.
ENDOCRINOLOGY & METABOLISM
Tuesdays, 10:45–11:45 a.m.
*Community Room
February 9, 1982
DIABETES MELLITUS—DIABETIC COMAS
Selim Baruh, M.D.
ENDOCRINOLOGY CASE REPRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room, on Tuesdays—Amar Jit Singh, M.D.
HEMATOLOGY
*Community Room
Tuesdays, 10:45–11:45
February 16, 1982
MULTIPLE MYELOMA
Mary T. Ti, M.D.
HEMATOLOGY CASE PRESENTATIONS are conducted monthly, from Noon–1:00, in the Community Room, on Tuesdays—Malcolm E. Levine, M.D.
NEPHROLOGY
Tuesdays, 10:45–11:45
*Community Room
February 2, 1982
ACUTE RENAL FAILURE—DIFFERENTIAL DIAGNOSIS & TREATMENT
Ronald Golden, M.D.
Wednesdays, 9:00 a.m.–10:30 a.m.
*Trump Pavilion
February 10, 1982
HYPONATREMIA
Richard M. Stein, M.D.
February 24, 1982
ACUTE RENAL FAILURE
Godfrey C. Burns, M.D.
NEPHROLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room on Tuesday—Amarjit Singh, M.D.
NEUROLOGY
*Community Room
Tuesday, February 23, 1982—10:45–11:45
CEREBRAL HEMORRHAGE
Alfred C. Bannerman, M.D.
NEUROLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room on Tuesdays.
MEDICAL GRAND ROUNDS
*Trump Pavilion
February 3, 1982—Wednesdays, 9:00–10:30
CALCIUM ANTAGONIST
February 10, 1982
HYPONATREMIA
Richard M. Stein, M.D.
February 17, 1982
ANTIBIOTIC ASSOCIATED COLITIS
Sheldon H. Landesman, M.D.
February, 24, 1982
ACUTE RENAL FAILURE
Godfrey C. Burns, M.D.
WEDNESDAYS, 1:00–2:00, TUMOR BOARD—Fourth Wednesday—CLINICAL PATHOLOGY CONFERENCE
Assembly Room
CARDIOLOGY
*Community Room
February 4, 1982, Thursday, 8:30–9:30
CARDIOGENIC SHOCK—ASSESSMENT OF THERAPY
Leslie Kuhn, M.D.
February 18, 1982
HYPERTROPHIC CARDIOMYOPATHY
Paul Kligfield, M.D.
Trump Pavilion
Wednesday, February 3, 1982—9:00–10:30
CALCIUM ANTAGONIST
ECG & ARRHYTHMIAS CONFERENCES are held monthly, on Thursdays, from 9:30–10:30—Thomas A. Bizzaro, MD.
INFECTIOUS DISEASES
*Community Room
February 11, 1982, Thursdays, 9:30–10:30
ENDOCARDITIS & BACTEREMIA
Robert H. Lapin, M.D.
INFECTIOUS DISEASES CASE PRESENTATIONS are conducted monthly, from 3:30–4:30 in the Community Room, on Tuesdays—Robert H. Lapin, M.D.
ONCOLOGY
*Community Room
February 18, 1982—Thursdays, 9:30–10:30
ROLE OF RADIATION AS INDEPENDENT & ADJUVANT TREATMENT OF COLORECTAL CANCER
Bernard Roswit, M.D.
TUMOR BOARD, 1:00–2:00, Wednesdays, Fourth Wednesday—CLINICAL PATHOLOGY CONFERENCE, Assembly Room
RHEUMATOLOGY
*Community Room
February 25, 1982—Thursday, 9:30–10:30
ROLE OF SURGICAL MANAGEMENT OF RHEUMATOID ARTHRITIS
Stephen Paget, M.D.
RHEUMATOLOGY CASE PRESENTATIONS are conducted monthly, from 8:00–9:00 in the Community Room, on Tuesdays—William A. O'Connell, M.D.
MEDICAL GASTROENTEROLOGY

*Community Room
February 5, 1982—Fridays, 10:45–11:45
SELECTED DISORDERS OF SMALL BOWEL-PATHOGENESIS & TREATMENT
Sagar V. Vallabh, M.D.
February 19, 1982
CHOLECYSTITIS-ACUTE & CHRONIC: GALLSTONE DISSOLUTION
Sushil K. Sharma, M.D.
MEDICAL GASTROENTEROLOGY CASE PRESENTATIONS are conducted on alternate Fridays, in the Community Room, 10:45–11:45—Robert T. Todaro, M.D.
PATHOLOGY GRAND ROUNDS
*Assembly Room
February 26, 1982—Friday, Noon–1:00
DIAGNOSTICS CYTOGENETICS-AN OVERVIEW
M. Lita Alonso, M.D.
FRIDAYS, bimonthly, 1:00–2:30, Community Room—HEMATOLOGY GRAND ROUNDS
For further information contact The Jamaica Hospital at 212-657-1800

NASSAU COUNTY

Nassau County Medical Center Sponsored by Department of Medicine Co-sponsored by The Office of Continuing Medical Education

2201 Hempstead Turnpike
East Meadow, New York 11554
*Amphitheater Dynamic Care Building
February 4, 1982—Thursday–10:00 a.m.
PROSTAGLANDINS, INFLAMMATION AND INFLAMMATORY DRUGS
Werner Barth, M.D.
February 11
MENINGITIS
Mark Kaplan, M.D.
February 18
HYPOKALEMIA
Stanley Goldfarb, M.D.
February 25
MEDICAL TREATMENT OF GALLSTONES
Gerald Salen, M.D.
CREDIT: AMA Cat. 1

Long Island Jewish-Hillside Medical Center—Sponsored by Department of Surgery, LIJ Medical Center, The Post-Graduate Institute for Medical and Dental Education, New Hyde Park, New York and the Health Sciences Center State University of New York at Stony Brook

February 4, 1982
SURGICAL PATHOLOGY III
Leonard Kahn, M.D.
February 11, 1982
PRESENT STATUS OF LUNG TRANSPLANTATION AND PRESERVATION TECHNIQUES
Julius Garvey, M.D.
February 18, 1982
VISITING PROFESSOR
CHRONIC PANCREATITIS
Jeremiah G. Turcotte, M.D.
February 25, 1982
GUEST LECTURER
SURGICAL NUTRITION
Harry Soroff, M.D.
CREDIT: AMA Cat. 1

SUFFOLK COUNTY

SUNY at Stony Brook

Health Sciences Center
February 3, Wednesday
TOPIC IN EMERGENCY MEDICINE (II)
FEE: $60. CREDIT: AMA Cat. 1(6 1/2 hrs.)
For further information contact Tamarath K. Yolles, M.D., Associate Dean for Continuing Medical Education, SUNY at Stony Brook, Stony Brook 11794. Tel: 516/246-2094/2135.

Brookhaven Memorial Hospital Medical Center

101 Hospital Road
Patchogue
*1st Floor Conference Room
February 6, 8:30 a.m.
MEDICAL GRAND ROUNDS
Douglas Brand, M.D.
CREDIT: AMA & AAFP
*2nd Floor Conference Room
February 16, 8:00–9:00 a.m.
PEDIATRIC GRAND ROUNDS
ACUTE GASTROENTERITIS
Grace Rabadam, M.D.
CREDIT: AMA & AAFP
*1st Floor Conference Room
February 2, 8:00—9:00 a.m.
DIAGNOSIS & TREATMENT OF CYANOTIC NEWBORN
Milton Reitman, M.D.
CREDIT: AMA & AAFP
*1st Floor Conference Room
8:00–9:00 a.m.
PROBLEMS IN FAMILY MEDICINE
February 5
SELECTION OF PATIENTS FOR EXERCISE STRESS TESTING
Michael Zema, M.D.
February 12
NEW DRUGS IN CARDIAC THERAPY
Stephen Scheidt, M.D.
February 19
VALVULAR HEART DISEASE
Soma Pulipati, M.D.
February 26
RHEUMATOLOGY
ENTEROPATHIC ARTHRITIS
Kenneth Solinsky, M.D.
CREDIT: AMA & AAFP
For further information contact Brookhaven Memorial Hospital Medical Center, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.

St. Charles Hospital cosponsored by St. Francis Hospital

200 Belle Terre Road
Port Jefferson
*St. Charles Lecture Room
February 1, 11:45 a.m.–1:15 p.m., Monday
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
February 2, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES—Cosponsored by Dept. of CME, SUNY, Stony Brook
OVERVIEW OF BEHAVIORAL MEDICINE
Richard Friedman, Ph.D.
*St. Charles Classroom A
February 5, 8:00 a.m., Friday
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LIJ-HILLSIDE

MEDICAL CENTER
*St. Charles Lecture Room
February 8, 11:45 a.m.–1:15 p.m., Monday
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
February 9, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES—Cosponsored by Dept. of CME, SUNY, Stony Brook
BIOFEEDBACK: CONCEPTS AND METHODOLOGY
Bernard Tursky, Professor of Psychiatry and Professor and Chairman, Dept. of Political Science, SUNY, Stony Brook
*St. Charles, SUNY, Stony Brook
*St. Charles Classroom "A"
February 12, 8:00 a.m.
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LIJ–Hillside Medical Center
February 15, 7:30 a.m., Monday
OPHTHALMOLOGY CONFERENCE
ONE-EYED VISION
Norbert Fethke, M.D.
*St. Charles Lecture Room
February 15, 11:45 a.m.–1:15 p.m., Monday
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
February 16, 11:30 a.m.–11:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES—Cosponsored by Dept. of CME, SUNY, Stony Brook
STRESS AND COPING
Arthur Stone, Ph.D.
*St. Charles Classroom "A"
February 19, 8:00 a.m., Friday
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LIJ–Hillside Medical Center
*St. Charles Lecture Room
February 22, 11:45 a.m.–1:15 p.m.
TUMOR CONFERENCE—Cosponsored by Dept. of CME, SUNY, Stony Brook
BIOFEEDBACK IN THE TREATMENT OF PAIN IN THE CANCER PATIENT
Bernard Tursky, Professor of Psychiatry and Professor and Chairman, Dept. of Political Sciences, SUNY, Stony Brook
February 23, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES—Cosponsored by Dept. of CME, SUNY, Stony Brook
BIOFEEDBACK IN THE TREATMENT OF ANXIETY
Leonard White, P.D.
*St. Charles Classroom "A"
February 26, 8:00 a.m., Friday
PEDIATRIC ELECTRONIC BLACKBOARD
*St. Charles Lecture Room
February 26, 8:00 a.m., Friday
FAMILY PRACTICE PROGRAM
OFFICE RHEUMATOLOGY
Ronald S. Bennett, M.D.
CREDIT: AMA Cat. 1
For further information contact Jesse W. Mahoney, M.D., Director, St. Charles Hospital, 200 Belle Terre Road, Port Jefferson 11777. Tel: 516/473-2800.

Mather Memorial Hospital

North Country Road
Port Jefferson
*Mather Conference Room
February 15, 7:00 a.m., Monday
ANESTHESIOLOGY CONFERENCE
REGIONAL ANESTHESIA FOR VAGINAL DELIVERY
Edward A. Norris, M.D.
CREDIT: AMA Cat. 1
For further information contact Jesse W. Mahoney, M.D., Director, Mather Memorial Hospital, North Country Road, Port Jefferson 11777. Tel: 516/473-1320.

BUFFALO

Roswell Park Memorial Institute and the American Cancer Society, New York State Divison and Erie County Unit

666 Elm Street
Buffalo
February 11
SOFT TISSUE TUMORS
E. Douglas Holyoke, M.D.
FEE: $25. CREDIT: AMA Cat. 1 & AAFP & AOA Cat. 2
For further information contact Gayle Bersani, Coordinator, Cancer Control Office, Roswell Park Memorial Institute, 666 Elm Street, Buffalo 14263. Tel: 716/845-4406.

SYRACUSE

SUNY Upstate Medical Center

Office of Graduate and Continuing Education
750 East Adams Street
Syracuse
*Acapulco Princess
Acapulco, Mexico
February 25–March 2
UPDATE ON COMPUTED TOMOGRAPHY OF THE CENTRAL NERVOUS SYSTEM
FEE: $385. CREDIT: AMA Cat. 1 (22 hrs.)
For further information contact Program Coordinator, Office of Continuing Education, Upstate Medical Center, State University of New York, 750 East Adams Street, Syracuse 13210.

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Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100

ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello NY 12701. Tel: 914/794-4900.

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INFORMATION REGARDING OPENING FOR A PHYSICIAN
(General Practice or Specialist Associate)

Date__________________

Name of Town________________________County__________________________State__________

Population________Population of area served by physician______________________________

What type of specialty?________________________________New opening?__________________
If this is a replacement, why did former physician leave?_____________________________

When will position be available?____

Please list special requirements: a) Residency training?_____________________________
b) Board eligible?________________Board certified?______________________Age?__________

Please describe type of practice: a) Solo?____b) Association?________Please describe the reason for associateship____
c) Group practice? Please give details, i.e., number in group, number in this specialty, when group was commenced____
____

Please show what type of financial agreement is acceptable: a) Straight salary?__________
b) Percentage basis?_________c) Will investment be necessary?_____________________________
d) If partnership basis is acceptable, how soon would it be available?___________________
______________________e) Would written agreement be used?___________________________________

Office space available? Yes_____No______ If yes, describe briefly_________________________
____

Living quarters available? Yes______NO______ If yes, describe briefly_____________________
____
____

Is there a hospital in the town? Yes______No______ If yes, please describe, i.e., number of beds, type of ownership, how soon can physician obtain hospital privileges_______________
____
____
____

If no, please describe hospitals in nearby areas____
____
____
____

List any other features which you consider would make the position attractive to a prospective physician____
____
____

List person to be contacted by interested physician giving name, address and telephone number
____
____
____

When completed, kindly return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100.

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(Please print in black)

Name____________________________Date__________

Address____________________________________

____

(Zip code number) (Telephone Number)

Date of Birth__________Place of Birth__________________

Citizenship Status____________________Marital Status__________

Medical School______________________Year Graduated__________

Internship____________________________________

Hospitals__________________________Dates__________

Residency____________________________________

Hospitals__________________________Dates__________

Specialty____________________________________

Licensed in what States?__________________________

Applied for__________________________________

American Board Certificates held?______________________

Eligible________________Certified________________

Do you have a New York State License?________Date of Certificate__________

Military Status________________________________

Professional Organization Memberships____________________

Are you in practice at present?________What type of practice are you interested in?

Solo______Associate______Industrial______Group______Institutional______

Other______________________________________

Date you will be available for practice________Former locations in which you have practiced______________________________

(Give dates)

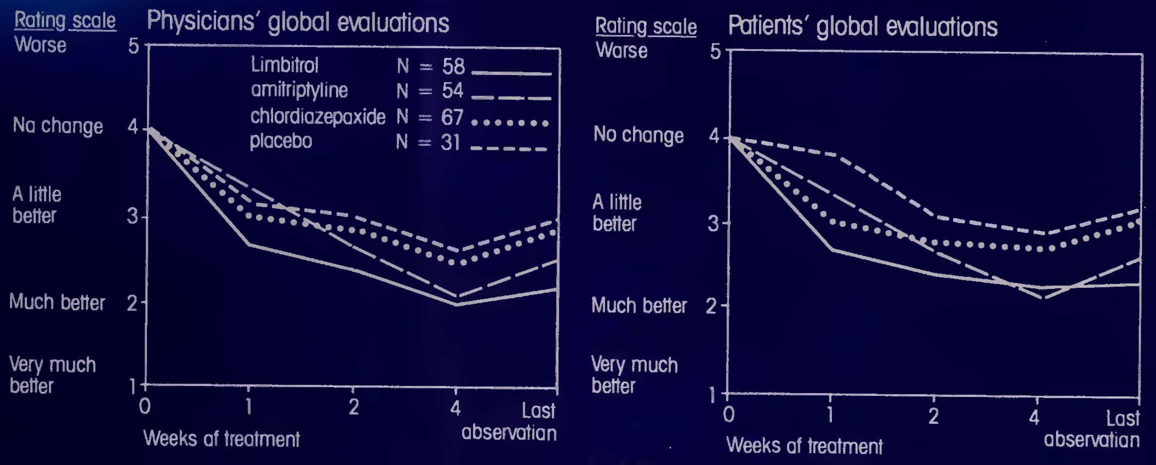
____

When completed, please return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Tel. 516/ 488-6100.

In anxious depression

A special quality of relief

Improvement with Limbitrol compared to other regimens in a study of 210 patients[2]



References:

1. Feighner JP, *et al*: *Psychopharmacology 61*:217-225, Mar 22, 1979.
2. Data on file, Medical Department, Hoffmann-La Roche Inc.

LIMBITROL® TABLETS Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated: sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50.

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James McNaughton, M.D., Albany County. President, Medical Society of the State of New York, 1836–37. See page 242.

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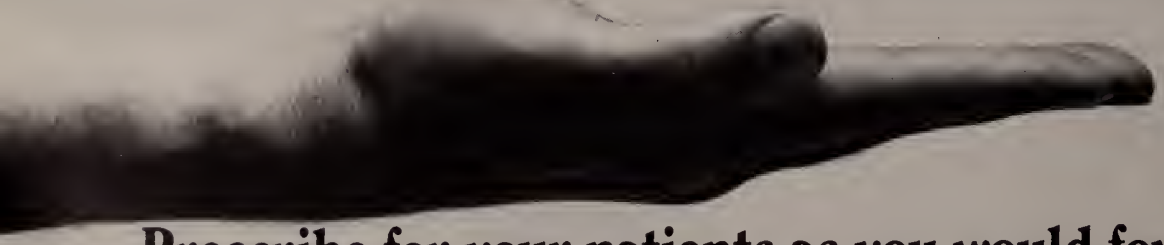

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Medical Society of the State of New York
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*As with all fixed combinations, INDERIDE is not indicated for initial therapy of hypertension and should not be used in dosage which would provide more than 100 mg hydrochlorothiazide per day.

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(FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR)

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DESCRIPTION: INDERIDE combines two antihypertensive agents. INDERAL (propranolol hydrochloride). a beta-adrenergic blocking agent, and hydrochlorothiazide, a thiazide diuretic-antihypertensive

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE. Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e* , that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e g* , isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g* , CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma

Thiazides may add to or potentiate the action of other antihypertensive drugs Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult

Nursing Mothers Thiazides appear in breast milk If the use of the drug is deemed essential the patient should stop nursing

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH

Interference with adequate oral electrolyte intake will also contribute to hypokalemia Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (e.g., increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease) Dilutional hyponatremia may occur in edematous patients in hot weather, appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient Thiazides may decrease arterial responsiveness to norepinephrine This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular* bradycardia; congestive heart failure; intensification of AV block, hypotension; paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura.

Central Nervous System. lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia, visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

Hydrochlorothiazide: *Gastrointestinal.* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System. dizziness, vertigo, paresthesias, headache, xanthopsia

Hematologic leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia

Cardiovascular orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics)

Hypersensitivity purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions

Other hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION: The dosage must be determined by individual titration (see boxed warning).

Hydrochlorothiazide is usually given at a dose of 50 to 100 mg per day The initial dose of propranolol is 40 mg twice daily and it may be increased gradually until optimum blood pressure control is achieved. The usual effective dose is 160 to 480 mg per day

One to two INDERIDE tablets twice daily can be used to administer up to 320 mg of propranolol and 100 mg of hydrochlorothiazide. For doses of propranolol greater than 320 mg, the combination products are not appropriate because their use would lead to an excessive dose of the thiazide component

When necessary, another antihypertensive agent may be added gradually beginning with 50 percent of the usual recommended starting dose to avoid an excessive fall in blood pressure

OVERDOSAGE OR EXAGGERATED RESPONSE: The propranolol hydrochloride (INDERAL) component may cause bradycardia, cardiac failure, hypotension, or bronchospasm

The hydrochlorothiazide component can be expected to cause diuresis Lethargy of varying degree may appear and may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function, and in the absence of significant serum electrolyte changes or dehydration The mechanism of central nervous system depression with thiazide overdosage is unknown Gastrointestinal irritation and hypermotility can occur, temporary elevation of BUN has been reported, and serum electrolyte changes could occur, especially in patients with impairment of renal function

TREATMENT: The following measures should be employed GENERAL—If ingestion is, or may have been, recent, evacuate gastric contents taking care to prevent pulmonary aspiration. BRADYCARDIA—Administer atropine (0 25 to 1 0 mg) If there is no response to vagal blockade, administer isoproterenol cautiously CARDIAC FAILURE—Digitalization and diuretics HYPOTENSION—Vasopressors, e.g., levarterenol or epinephrine BRONCHOSPASM—Administer isoproterenol and aminophylline STUPOR OR COMA—Administer supportive therapy as clinically warranted GASTROINTESTINAL EFFECTS—Though usually of short duration, these may require symptomatic treatment ABNORMALITIES IN BUN AND/OR SERUM ELECTROLYTES—Monitor serum electrolyte levels and renal function, institute supportive measures as required individually to maintain hydration, electrolyte balance, respiration, and cardiovascular-renal function

HOW SUPPLIED: *No 474*—Each INDERIDE®-40/25 tablet contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000. Also in unit dose package of 100.

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References: 1. Kaplan, N M Beta-blockade in the treatment of mild to moderate hypertension, in Braunwald, E. (ed.): Beta-Adrenergic Blockade, A New Era in Cardiovascular Medicine. Amsterdam, Excerpta Medica, 1978, pp. 253-263 2 Veterans Administration Cooperative Study Group on Antihypertensive Agents. J A M A 237 2303 (May 23) 1977

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Professor of Dermatology & Pathology, & Director, Department of Dermatopathology, New York University School of Medicine, New York City. *Diseases in Dermatology That Don't Exist.*

Thomas Bigger, M.D.

Professor of Medicine & Pharmacology, Columbia University College of Physicians & Surgeons, New York City. *Prophylaxis & Medical Management of Life-Threatening Ventricular Arrhythmias.*

Robert E. Carroll, M.D.

Professor of Orthopedic Surgery, Columbia University College of Physicians & Surgeons; Director, Hand Surgery, Columbia-Presbyterian Medical Center, New York City. *Primary or Secondary Repair of Flexor Tendon Injuries in the Hand.*

Harold Carron, M.D.

Professor of Anesthesiology; Organizer, Director & Consultant of Pain Clinic, University of Virginia Medical Center, Charlottesville. President, American Society of Regional Anesthesia. *Outpatient Management of Pain: The Anesthesiologist's Holistic Viewpoint.*

Robert S. Litwak, M.D.

Governor, American College of Chest Physicians; Professor of Surgery & Chief, Division of Cardiothoracic Surgery, Mount Sinai Medical Center, New York City. *Howard M. Lilienthal, M.D.: A Vignette.*

Joseph Ransohoff, M.D.

Professor & Chairman, Department of Neurosurgery, New York University-Bellevue Medical Center, New York City. *Neurosurgical Indications for Surgery in Acute Lumbo-Spine Injuries.*

Guy F. Robbins, M.D.

Consultant to Breast Service, Department of Surgery, & Former Director of Cancer Control, Memorial Sloan-Kettering Cancer Center, New York City. *Rehabilitation in Breast Surgery.*

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Abstracts

Shoenfeld, Y., Hager, S., Berliner, S., Gallant, L. A., and Pinkhas, J.: Hypophosphatemia as diagnostic aid in sepsis; study of 141 patients, **New York State J. Med.** 82: 163 (Feb.) 1982.

The serum phosphorus levels of 141 patients with bacterial sepsis were found to be significantly lower than those of a control group of 75 patients without sepsis or any other disturbances which might possibly affect the serum phosphorus concentration. Hypophosphatemia of less than 3 mg. phosphorus per deciliter (0.96 mmol per liter, mean − 2 S.D.) was observed in 42.6 percent of our patients with gram-negative sepsis and in only 31.6 percent of the gram-positive group, a statistically significant difference ($p < 0.05$). Hypophosphatemia of less than 2 mg. per deciliter (0.64 mmol per liter) was detected only in patients with gram-negative sepsis (13 percent; $p < 0.001$). The serum phosphorus concentration was of no aid as a prognostic factor. The mean white blood cell and platelet counts were similar in gram-positive and gram-negative sepsis, and like the phosphorus levels, served no prognostic value. From the present study it can be concluded that among the three preliminary indirect laboratory tests supporting a diagnosis of sepsis, that is, leukocytosis, thrombocytopenia, and hypophosphatemia, only the latter may be suggestive of the type of infection, gram-positive or gram-negative. Without positive blood cultures, in the presence of a characteristic clinical picture and a high index of suspicion, the existence of hypophosphatemia, especially in values under 2 mg. per deciliter (0.64 mmol per liter) lends support to the diagnosis of sepsis.

Ferstenberg, H., Fried, G., Virshup, M., and McSherry, C. K.: Intraabdominal abscesses; clinical observations and new diagnostic techniques, **New York State J. Med.** 82: 166 (Feb.) 1982.

In the past three years, 103 patients were operated on for intraabdominal abscesses at Beth Israel and LaGuardia hospitals. In 38 patients, the abscesses were in the lower quadrant, 37 subphrenic, 15 pelvic, 13 intrahepatic, 12 retroperitoneal, and 1 splenic. In 57 patients, the abscesses were diagnosed and localized by clinical methods plus standard radiographic studies. Ultrasonography was performed in 39 patients and the abscesses correctly identified in 77 percent. Computed tomography scans were performed in 28 patients with a diagnostic accuracy of 96 percent. Gallium-67 scans were performed in 20 patients and were positive in 70 percent. All patients were operated on and 116 abscesses drained. The mortality rate was 3.9 percent. This study emphasizes the importance of clinical acumen in the successful management of intraabdominal abscesses. Of the newer diagnostic studies, computed tomography appears to be the most accurate and reliable.

Beaton, H. L.: Small intestinal bleeding; method for intraoperative localization, **New York State J. Med.** 82: 171 (Feb.) 1982.

It is estimated that lesions of the small intestine other than those of the duodenum cause bleeding in only 1.4 percent of all patients with gastrointestinal hemorrhage. The recognition of vascular abnormalities, in particular, has been greatly facilitated in recent years by arteriography. However, the intraoperative localization of these lesions can still be a frustrating experience for the surgeon. From The New York Hospital-Cornell Medical Center, three such patients are reported. One was bleeding from an arteriovenous malformation, one from a leiomyoma, and one from an area of ulceration of Meckel's diverticulum. A method of supraselective catheterization of the feeding vessel and intraoperative injection with methylene blue to guide the small bowel resection was successfully employed.

Poliak, J., and Morgenthau, J. E.: Adolescent aborters; factors associated with gestational age, **New York State J. Med.** 82: 176 (Feb.) 1982.

Abortions obtained late in pregnancy are accompanied by greater morbidity and mortality rates and are psychologically more trying for both patients and staff than "early" abortions. Of the one million abortions obtained each year in the United States, one third are to teenagers with one fifth of these occurring in the second trimester ("late"). To examine possible correlates of late abortions, as well as the relationship between enrollment in the FLEP (Family Life Education Program) of the Mount Sinai Adolescent Health Center with the stage of gestation at the time of abortion, the differential characteristics of 113 pregnant teenagers who sought abortion were studied. The following variables were found to be statistically significantly related to the gestational stage of pregnancy at the time an adolescent seeks an abortion: enrollment in FLEP, contraceptive use, age, and school performance. Conversely, ethnicity, nulliparity, menstrual irregularity, method of payment, previous abortion, and age at menarche were not found to be relevant. These variables suggest that the problem of late abortions among adolescents is one that may be greatly influenced by intensive health education and counseling.

Fleck, H., and Feldman, M. E.: Compression syndrome at wrist; precise diagnostic procedure, **New York State J. Med.** 81: 180 (Feb.) 1982.

A method of detecting damage to digital nerves has been presented; it correlates well with clinical sensory loss and is more reliable than the heretofore customary use of the TSL (terminal sensory latency) of index fingers and fifth finger alone. This method permits a precise diagnosis of nerve compression in both median and/or ulnar nerves at the wrist.

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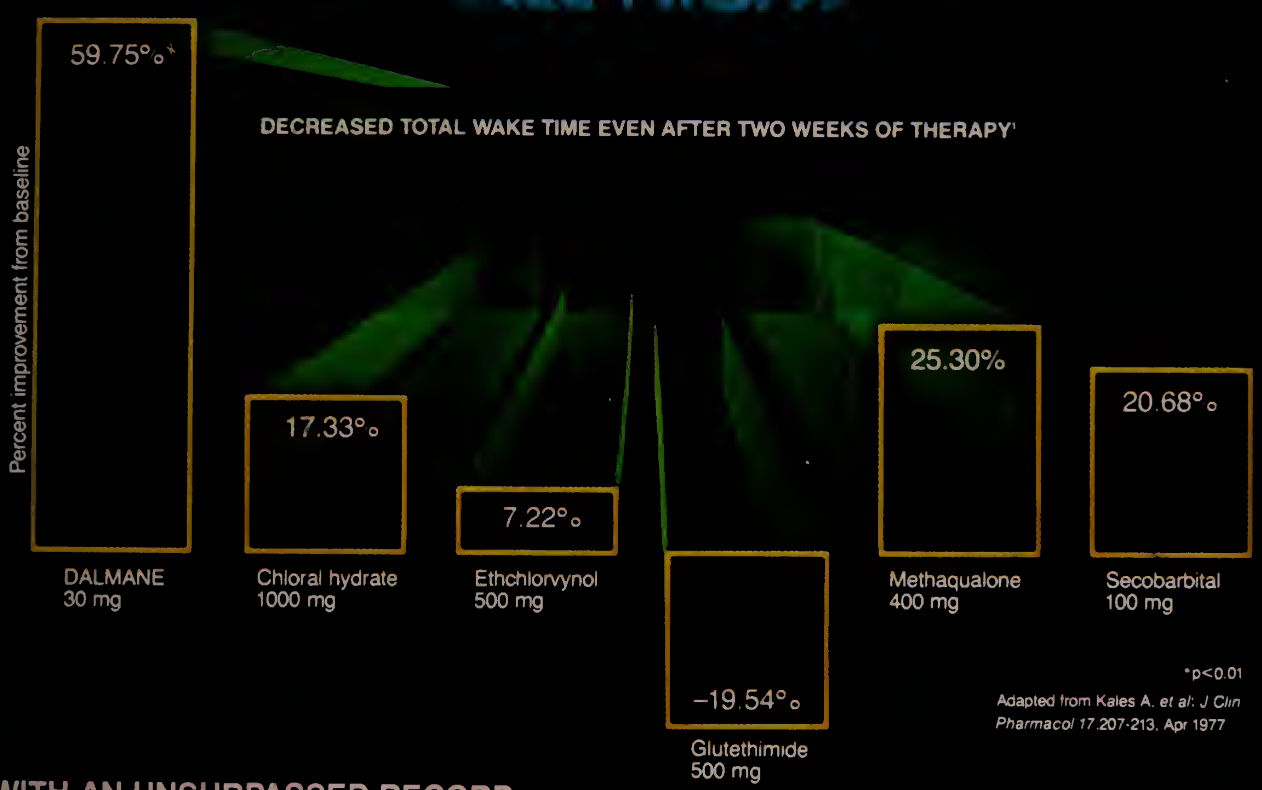

DECREASED TOTAL WAKE TIME EVEN AFTER TWO WEEKS OF THERAPY[1]

*$p<0.01$

Adapted from Kales A. *et al*: *J Clin Pharmacol* 17:207-213, Apr 1977

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Consider other medications the patient may be taking (including alcoholic beverages) and be aware of possible drug interactions. Please note that patients should be treated for underlying physical or psychological factors before therapy with a sleep medication is undertaken.

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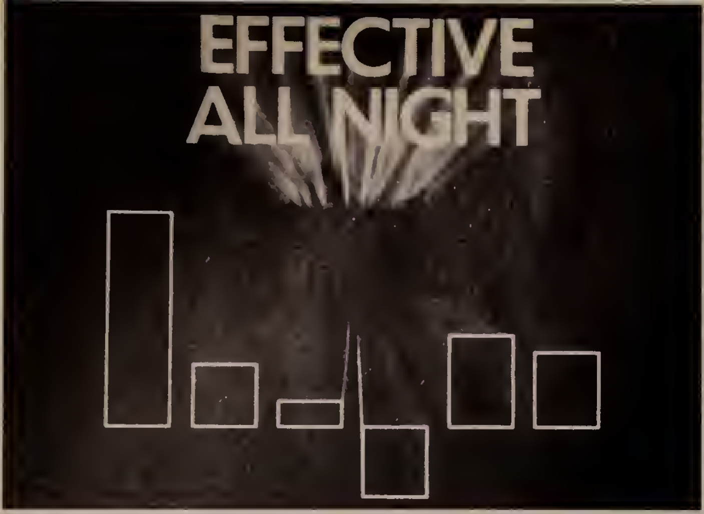

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–which can require careful monitoring in cardiovascular patients[10]

–which have strong anticholinergic effects[10]

Antihistamines

–which are *not* reliable sleep-inducing agents[11]

–which may produce stimulation instead[11]

–which have anticholinergic effects[11]

Major tranquilizers

–whose side effects may be troublesome for nonpsychotic patients[12]

–where tolerance for sedation appears rapidly[12]

Dalmane does not cause significant worsening of sleep beyond baseline levels upon discontinuation.[4]

References: 1. Kales A. *et al J Clin Pharmacol 17* 207-213. Apr 1977 **2.** Data on file. Medical Department. Hoffmann-La Roche Inc . Nutley NJ 3. Greenblatt DJ. Allen MD. Shader RI *Clin Pharmacol Ther 21*:355-361. Mar 1977 **4.** Kales A. *et al Clin Pharmacol Ther 18*.356-363. Sep 1975 **5.** Moore JD. Weissman L *J Clin Pharmacol 16* 241-244. May-Jun 1976 6. Spiegel HE Data on file Medical Department. Hoffmann-La Roche Inc . Nutley NJ **7.** Robinson DS. Amidon EL Interaction of benzodiazepines with warfarin in man. in *The Benzodiazepines*. edited by Garattini S. Mussini E. Randall LO New York. Raven Press. 1973. pp 641-646 **8.** Warfarin Study Data on file. Medical Department. Hoffmann-La Roche Inc.. Nutley NJ 9. Baldessarini RJ Drugs and the treatment of psychiatric disorders. chap 19. in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*. ed 6 New York. Macmillan Publishing Co Inc 1980. pp 391-447 **10.** Cole JO. Davis JM Antidepressant drugs. chap. 31 2. in *Comprehensive Textbook of Psychiatry II*. edited by Freedman AM. Kaplan HI. Sadock BJ. ed 2 Baltimore The Williams & Wilkins Company. vol 2. 1976. pp. 1941-1956 **11.** Douglas WW Histamine and 5-hydroxytryptamine (serotonin) and their antagonists. chap. 26. in Goodman and Gilman's *The Pharmacological Basis of Therapeutics*, ed 6. New York, Macmillan Publishing Co Inc . 1980. pp 609-646 **12.** Davis JM. Cole JO Antipsychotic drugs. chap 31 1 in *Comprehensive Textbook of Psychiatry/II*. edited by Freedman AM. Kaplan HI. Sadock BJ. ed 2 Baltimore. The Williams & Wilkins Company. vol 2 1976. pp 1921-1940

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect.
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Abstracts in Interlingua

Schoenfeld, Y., Hager, S., Berliner, S., Gallant, L. A., e Pinkhas, J.: Hypophosphatemia como adjuta diagnostic in sepsis; studio in 141 patientes, **New York State J. Med. 82:** 163 (Februario) 1982.

Le nivellos del phosphorus seric de 141 patientes con sepsis bacterial esseva significativemente plus basse que illos del gruppo de control formate per 75 patientes sin sepsis o altere morbos que possibilimente poteva affectar le concentration seric del phosphorus. Le hypophosphatemia inferior a 3 mg/dl (0.96 mmol/litro; promedie >2) esseva observate in 42.6 pro cento de nostre patientes con sepsis bacterial Gramnegative, e solmente in 31.6 pro cento del patientes del gruppo con sepsis bacterial Grampositive: un differentia significative ($p < 0.05$). Hypophosphatemia inferior a 2 mg/dl (0.64 mmol/litro) esseva trovate solmente in le patientes con sepsis bacterial Gramnegative (13 pro cento; $p < 0.001$). Le concentration seric del phosphorus non esseva de valor prognostic. Le contos promedie del leukocytos e del thrombocytos esseva similari tanto in le patientes con sepsis Grampositive como in illos con sepsis Gramnegative, e al equal que le nivellos seric del phosphorus, non esseva de adjuta como factor prognostic. Basate in le presente studio pote considerar se que del 3 tests preliminari e indirecte usate pro le diagnose de sepsis: leukocytosis, thrombopenia e hypophosphatemia, solmente iste ultime (le hypophosphatemia) pote esser suggestive in quanto al typo de infection Grampositive o Gramnegative. Sin culturas sanguine positive, in presentia de un quadro clinic characteristic juncto con un elevate indice de suspectation, le presentia de hypophosphatemia, especialmente con valores inferior a 2 mg/dl (0.64 mmol/litro) pote conducer al diagnose de sepsis.

Poliak, J., e Morgenthau, J. E.: Aborto in adolescentes; factores associate con le etate gestational, **New York State J. Med.** 82: 176 (Februario) 1982.

Le abortio facite in pregnantias avanciate es associate con un major morbiditate e mortalitate, e etiam con un pression psychologic major tanto per le patientes como le medicos que le aborto "temprane." Del million (1.000.000) de abortos facite annualmente in le Statos Unite, un tertio correspondeva a adolescentes de 13 a 19 annos de etate ("teenagers"), e un 20 pro cento de iste ciphra esseva facite in le trimestre seconde ("tardive"). Pro cognoscer le possibile relation inter le aborto tardive e le etate del gestation al tempore del aborto, le "Family Life Education Program -FLEP-" del "Mount Sinai Adolescent Health Center" studiate le characteristicas differentes de 113 adolescentes pregnante quando illes demandava le aborto. Le sequente variabilitates esseva trovate de signification statistic con relation al etate del pregnantia e le tempore in que le adolescentes demandava le aborto: registration in le FLEP; uso de contraceptivos; etate, e le performantia in le scola. Esseva trovate irrelevante le ethnicitate, multiparitate, menstruationes irregular, forma de pagamento, abortos anteriori e le etate del menarchia. Iste variabilitates suggere que le problema del aborto tardive in le adolescentes es un situation que pote esser influenciate grandemente mediante le education sanitari intensive e le consiliamento appropriate.

Ferstenberg, H., Fried, G., Virshup, M., e McSherry, C. K.: Abscessos intraabdominal; observationes clinic e techcnicas diagnostic nove, **New York State J. Med. 82:** 166 (Februario) 1982.

Durante le 3 ultime annos, 103 patientes esseva operate per abscessos intraabdominal in le Hospitales Beth Israel e LaGuardia. In 38 patientes, le abscessos esseva trovate in le abdomen basse; in 37, in le area subphrenic; in 15, in le pelvis; in 13, le abscessos esseva intrahepatic; in 12, retroperitoneal, e in un caso, le abscesso esseva splenic. In 57 patientes, le abscessos esseva diagnosticate e localisate mediante methodos clinic plus studios radiographic standard. Le ultrasonographia esseva facite in 39 patientes e le abscessos esseva identificate correctemente in 77 pro cento del casos. Le tomographic computarisate ("CAT scan") esseva facite in 28 patientes; le precission diagnostic esseva 96 pro cento. Le scans con Gallium^{67} esseva facite in 20 patientes e esseva positive in 70 pro cento del casos. Omne patientes esseva operate e 116 abscessos esseva drenate. Le mortalitate esseva 3.9 pro cento. In iste studio es emphatisate le importantia del acumen clinic pro le tractamento successosse del abscessos intraabdominal. De omne studios diagnostic nove, le tomographia computarisate pare esser le plus precise e confiabile.

Beaton, H. L.: Hemorrhagia del intestino parve; methodo de localisation intraoperatori, **New York State J. Med. 82:** 171 (Februario) 1982.

Es estimate que le lesiones del intestino parve, excepte illes del duodenum, causa hemorrhagia in solmente 1.4 pro cento de omne patientes con hemorrhagia gastrointestinal. In iste ultime annos, particularmente, le diagnose de abnormalities vasculari ha essite grandemente facilitate con le arteriographia. Nonobstante, le localisation intraoperatori de iste lesiones es, totavia, un experientia frustrante per le chirurgo. Tres (3) de iste patientes es reportate per le New York Hospital-Cornell Medical Center. Un patiente habeva hemorrhagia procedente de un malformation arteriovenose; altere de un leiomyoma, e le altere de un diverticlum de Meckel ulcerate. Le methodo de catheterisation supraselective del vaso conducente del sanguine e le injection intraoperatori de azuro de methyleno pro guidar le resection del intestino parve esseva usate successossamente.

Fleck, H., e Feldman, M. E.: Syndrome de compression del carpo; procedimento diagnostic precise, **New York State J. Med.** 82: 180 (Februario) 1982.

Un methodo pro detectar le injurias del nervos digital es presentate. Iste methodo correlationa se ben con le perdita sensorial clinic, e esseva plus confiabile que le uso currente del "TSL" ("terminal sensory latency"-latentia sensorial terminal) del digitos indice e quinte. Iste methodo permite le diagnose exacte del compression nervose, median o ulnari, del carpo.

Translated by Eduardo I. Juliet, M.D.

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Letters to the Editor

Juries and medical malpractice

To the Editor: In these United States the vast majority of citizens have the opportunity and privilege of serving as jurists. A significant number of trials revolve around personal injury whether from automobile and airplane accidents, mishaps on the ski slopes, and, with increasing frequency, injuries from alleged medical malpractice. In each case the jury, after hearing evidence and arguments of the plaintiff and defendants, must decide whether the defendant is innocent or guilty, and, if the latter, the size of the monetary award. In past decades the defendant was likely to be found innocent, recently the trend is toward a guilty verdict. Whether this change suggests a deterioration in the medical profession's competence or the demand by the public for a more perfect performance is a debatable point. What is not debatable is the fact that awards have increased outrageously, far outdistancing the factor of inflation. For instance, in New York State prior to 1970 there was no awards of one million or more dollars. In 1979 and in 1980 there were more than six one million dollar awards. Similarly, escalation in the number of suits involving product liability against pharmaceutical companies, automobile manufacturers, and so forth, has been widely documented and publicized.

Various explanations have been propounded. For one, we Americans are becoming a litiginous society seeking to redress all misfortunes by suing and recovering money to salve real or imaginary injury. More specifically, the legal profession, in particular that segment which practices personal injury litigation, has as their cornerstone the contingency fee which permits even the most frivolous suit to be instituted by the plaintiff, knowing that it will cost him or her nothing. For the attorney, successful prosecution may yield enormous financial benefit by virtue of the contingency fee which averages 33 percent of the award. This makes it highly profitable even though success may attend only a minority of cases. In England two factors have prevented the near disaster medical malpractice has become in the U.S.A. First, the contingency fee is illegal; and second, if the plaintiff loses, he or she must pay the court costs including the expenses accrued by the successful defendant.

Now for the meat of the case, the size of the jury's award to the successful plaintiff. In 1960 in New York State a total of $1,236,501 was paid by the Employers Mutual of Wausau to plaintiffs. In 1970 the same company paid $8,947,546. In 1974 this company stated that they would not continue to issue insurance policies to doctors in New York. Although Employers Mutual has not issued a new policy to doctors over the past seven years, in 1980 they paid out $49,174,000 to plaintiffs in the State of New York for medical malpractice occurring prior to 1975. In fact, this company has paid a total of $145,000,000 in the past three years. The Medical Society of the State of New York founded in 1975 a Mutual Liability Company and in the year of 1980 paid out some $21,000,000 in awards. It is an elementary fact of life for an insurance company to remain

continued on page 256

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Editorial

Anatomical donations

A severe shortage of anatomical donations threatens the education of future physicians, limits comprehensive medical research, and impedes the development of innovative surgical techniques. Gifts of the human body are essential to further understanding of diseases such as cancer, diabetes, and heart disease. These gifts also play a vital role in training physicians, improving the skills of surgeons, dentists, and other health professionals.

In order to assure the continuation of high quality research in human anatomy, the schools in the Greater New York area involved in the education of medical, dental, and other health professionals have formed the Anatomical Committee of the Associated Medical Schools of New York.

At present, only about half of the 600 cadavers needed each year come from donations and unclaimed bodies. During the last few years, the Committee has been forced to import over 300 bodies annually from other medical schools to provide basic anatomical education for medical students. At an average cost of approximately $500 per body, which includes collection, preparation, and transportation, these medical schools spend approximately $150,000 per year to fulfill this basic teaching need.

While this expenditure may seem small, it is, in fact, a contributing factor to the skyrocketing cost of educating physicians, therapists, dentists, podiatrists, and other health professionals, which is borne, in large measure, by students and their parents through increased tuition payments.

A potential solution to this problem is offered by Article 43 of the Public Health Law, known popularly as the Uniform Anatomical Gift Act. This act was passed by the New York State Legislature in an attempt to make anatomical gifts more readily accessible to medical schools for educational and research purposes. The Uniform Anatomical Gift Act provides that any individual over 18 years of age may donate all of his or her body for anatomical study or research.

The Anatomical Committee has found through past experience that the public is responsive once they are aware that the problem exists. It is for this reason that the Anatomical Committee is dedicated to informing the public of the great need for anatomical donations.

Physicians are in a unique position to advise patients about anatomical donations.

The following information will be helpful in order to guide patients who wish to donate:

- —The final disposition of the body may be specified by the donor and/or surviving relatives, according to the faith of the deceased.
- —Donors may choose a particular institution as recipient. If the donors have no preference, they may allow the Associated Medical Schools to designate the recipient. This will permit a more equal distribution.
- —The donor may change his or her mind and revocation of the pledge is easily implemented.
- —Patients interested in making an anatomical donation may request personal attorneys to draft a clause for inclusion in a will.

Physicians who want more information about procedures for anatomical donations should contact the Associated Medical Schools, 19 East 98th Street, New York, N.Y. 10029, (212) 831-4010, or The Foundation for the Advancement of Medical Knowledge, 21 E. 90th St., N.Y. 10028. Donor forms are available on request.

Your help in making the public aware of the serious need for anatomical gifts will be greatly appreciated. As physicians, you know the full importance of anatomical study and research. Our aim is to help ensure quality medical education in New York State, which educates 10 percent of the nation's physicians each year.

EPHRAIM FRIEDMAN, M.D.
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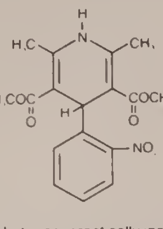

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2) Reduction of oxygen utilization: PROCARDIA regularly reduces arterial pressure at rest and at a given level of exercise by dilating peripheral arterioles and reducing the total peripheral resistance (afterload) against which the heart works. This unloading of the heart reduces myocardial energy consumption and oxygen requirements and probably accounts for the effectiveness of PROCARDIA in chronic stable angina.

Pharmacokinetics and Metabolism: PROCARDIA is rapidly and fully absorbed after oral administration. The drug is detectable in serum 10 minutes after oral administration, and peak blood levels occur in approximately 30 minutes. It is highly bound by serum proteins. PROCARDIA is extensively converted to inactive metabolites and approximately 80% of PROCARDIA and metabolites are eliminated via the kidneys. The half-life of nifedipine in plasma is approximately two hours. There is no information on the effects of renal or hepatic impairment on excretion or metabolism of PROCARDIA.

Hemodynamics: Like other slow channel blockers, PROCARDIA exerts a negative inotropic effect on isolated myocardial tissue. This is rarely, if ever, seen in intact animals or man, probably because of reflex responses to its vasodilating effects. In man, PROCARDIA causes decreased peripheral vascular resistance and a fall in systolic and diastolic pressure, usually modest (5–10 mm Hg systolic), but sometimes larger. There is usually a small increase in heart rate, a reflex response to vasodilation. Measurements of cardiac function in patients with normal ventricular function have generally found a small increase in cardiac index without major effects on ejection fraction, left ventricular end diastolic pressure (LVEDP) or volume (LVEDV). In patients with impaired ventricular function, most acute studies have shown some increase in ejection fraction and reduction in left ventricular filling pressure.

Electrophysiologic Effects: Although, like other members of its class, PROCARDIA decreases sinoatrial node function and atrioventricular conduction in isolated myocardial preparations, such effects have not been seen in studies in intact animals or in man. In formal electrophysiologic studies, predominantly in patients with normal conduction systems, PROCARDIA has had no tendency to prolong atrioventricular conduction, prolong sinus node recovery time, or slow sinus rate.

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria: 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta-blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure since severe hypotension can occur from the combined effects of the drugs. See Warnings.

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers

Increased Angina/Beta Blocker Withdrawal: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients usually receiving a beta blocker have developed heart failure after beginning PROCARDIA Patients with tight aortic stenosis may be at greater risk for such an event, as the unloading effect of PROCARDIA would be expected to be of less benefit to these patients, owing to their fixed impedance to flow across the aortic valve.

PRECAUTIONS: General: Hypotension. Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. See Warnings.

Peripheral edema Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents: See Indications and Warnings. Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Carcinogenesis, mutagenesis, impairment of fertility: Nifedipine was administered orally to rats for two years and was not shown to be carcinogenic. When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose. In vivo mutagenicity studies were negative.

Pregnancy: Pregnancy category C. Nifedipine has been shown to be teratogenic in rats when given in doses 30 times the maximum recommended human dose. Nifedipine was embryotoxic (increased fetal resorptions, decreased fetal weight, increased stunted forms, increased fetal deaths, decreased neonatal survival) in rats, mice and rabbits at doses of from 3 to 10 times the maximum recommended human dose. In pregnant monkeys, doses 2/3 and twice the maximum recommended human dose resulted in small placentas and underdeveloped chorionic villi. In rats, doses three times the maximum human dose and higher caused prolongation of pregnancy. There are no adequate and well-controlled studies in pregnant women. PROCARDIA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

ADVERSE REACTIONS: In multiple-dose U.S. and foreign-controlled studies in which adverse reactions were reported spontaneously, adverse effects were frequent but generally not serious and rarely required discontinuation of therapy or dosage adjustment. Most were expected consequences of the vasodilator effects of PROCARDIA.

Adverse Effect	PROCARDIA (%) (N = 226)	Placebo (%) (N = 235)
Dizziness, light-headedness, giddiness	27	15
Flushing, heat sensation	25	8
Headache	23	20
Weakness	12	10
Nausea, heartburn	11	8
Muscle cramps, tremor	8	3
Peripheral edema	7	1
Nervousness, mood changes	7	4
Palpitation	7	5
Dyspnea, cough, wheezing	6	3
Nasal congestion, sore throat	6	8

There is also a large uncontrolled experience in over 2100 patients in the United States. Most of the patients had vasospastic or resistant angina pectoris, and about half had concomitant treatment with beta-adrenergic blocking agents. The most common adverse events were the same ones seen in the controlled trials, with dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

Several of these side effects appear to be dose related. Peripheral edema occurred in about one in 25 patients at doses less than 60 mg per day and in about one patient in eight at 120 mg per day or more. Transient hypotension, generally of mild to moderate severity and seldom requiring discontinuation of therapy, occurred in one of 50 patients at less than 60 mg per day and in one of 20 patients at 120 mg per day or more.

In addition, 2% or fewer of patients reported the following: Respiratory: Nasal and chest congestion, shortness of breath. Gastrointestinal: Diarrhea, constipation, cramps, flatulence. Musculoskeletal: Inflammation, joint stiffness, muscle cramps. CNS: Shakiness, nervousness, jitteriness, sleep disturbances, blurred vision, difficulties in balance. Other: Dermatitis, pruritus, urticaria, fever, sweating, chills, sexual difficulties.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

In a subgroup of over 1000 patients receiving PROCARDIA with concomitant beta blocker therapy, the pattern and incidence of adverse experiences was not different from that of the entire group of PROCARDIA treated patients (see Precautions).

In a subgroup of patients with a diagnosis of congestive heart failure as well as angina, dizziness or light-headedness, peripheral edema, headache or flushing each occurred in one in eight patients. Hypotension occurred in about one in 20 patients. Syncope occurred in approximately one patient in 250. Myocardial infarction or symptoms of congestive heart failure each occurred in about one patient in 15. Atrial or ventricular dysrhythmias each occurred in about one patient in 150.

Laboratory tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have already been associated with clinical symptoms. Cholestasis, possibly due to PROCARDIA therapy, has been reported twice in the extensive world literature.

OVERDOSAGE: Although there is no well documented experience with PROCARDIA overdosage, available data suggest that gross overdosage could result in excessive peripheral vasodilation with subsequent marked and probably prolonged systemic hypotension. Clinically significant hypotension due to PROCARDIA overdosage calls for active cardiovascular support including monitoring of cardiac and respiratory function, elevation of extremities, and attention to circulating fluid volume and urine output. A vasoconstrictor (such as norepinephrine) may be helpful in restoring vascular tone and blood pressure, provided that there is no contraindication to its use. Clearance of PROCARDIA would be expected to be prolonged in patients with impaired liver function. Since PROCARDIA is highly protein-bound, dialysis is not likely to be of benefit.

DOSAGE AND ADMINISTRATION: The dosage of PROCARDIA needed to suppress angina and that can be tolerated by the patient must be established by titration. Excessive doses can result in hypotension.

The starting dose is one 10 mg capsule, swallowed whole, 3 times/day. The usual effective dose range is 10–20 mg three times daily. Some patients, especially those with evidence of coronary artery spasm, respond only to higher doses, more frequent administration, or both. In such patients, doses of 20–30 mg three or four times daily may be effective. Doses above 120 mg daily are rarely necessary. More than 180 mg per day is not recommended.

In most cases, PROCARDIA titration should proceed over a 7–14 day period so that the physician can assess the response to each dose level and monitor the blood pressure before proceeding to higher doses.

If symptoms so warrant, titration may proceed more rapidly provided that the patient is assessed frequently. Based on the patient's physical activity level, attack frequency, and sublingual nitroglycerin consumption, the dose of PROCARDIA may be increased from 10 mg t.i.d. to 20 mg t.i.d. and then to 30 mg t.i.d. over a three-day period.

In hospitalized patients under close observation, the dose may be increased in 10 mg increments over four to six-hour periods as required to control pain and arrhythmias due to ischemia. A single dose should rarely exceed 30 mg.

No "rebound effect" has been observed upon discontinuation of PROCARDIA. However, if discontinuation of PROCARDIA is necessary, sound clinical practice suggests that the dosage should be decreased gradually with close physician supervision.

Co-Administration with Other Antianginal Drugs: Sublingual nitroglycerin may be taken as required for the control of acute manifestations of angina, particularly during PROCARDIA titration. See Precautions, Drug Interactions for information on co-administration of PROCARDIA with beta blockers or long-acting nitrates.

HOW SUPPLIED: Each orange, soft gelatin PROCARDIA Capsule contains 10 mg of nifedipine. PROCARDIA Capsules are supplied in amber glass bottles of 100 capsules (NDC 0069-2600-66).

The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

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Hypophosphatemia as Diagnostic Aid in Sepsis

Study of 141 patients

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The serum phosphorus levels of 141 patients with bacterial sepsis were found to be significantly lower than those of a control group of 75 patients without sepsis or any other disturbances which might possibly affect the serum phosphorus concentration. Hypophosphatemia of less than 3 mg. phosphorus per deciliter (0.96 mmol per liter, mean − 2 S.D.) was observed in 42.6 percent of our patients with gram-negative sepsis and in only 31.6 percent of the gram-positive group, a statistically significant difference ($p < 0.05$). Hypophosphatemia of less than 2 mg. per deciliter (0.64 mmol per liter) was detected only in patients with gram-negative sepsis (13 percent; $p < 0.001$). The serum phosphorus concentration was of no aid as a prognostic factor. The mean white blood cell and platelet counts were similar in gram-positive and gram-negative sepsis, and like the phosphorus levels, served no prognostic value. From the present study it can be concluded that among the three preliminary indirect laboratory tests supporting a diagnosis of sepsis, that is, leukocytosis, thrombocytopenia, and hypophosphatemia, only the latter may be suggestive of the type of infection, gram-positive or gram-negative. Without positive blood cultures, in the presence of a characteristic clinical picture and a high index of suspicion, the existence of hypophosphatemia, especially in values under 2 mg. per deciliter (0.64 mmol per liter) lends support to the diagnosis of sepsis.

Hypophosphatemia is known to exist in a number of clinical states, namely, congenital hypophosphatemia, phosphaturia associated with hypokalemia, hypomagnesemia, acute gouty attacks, diabetic ketoacidosis, and renal tubular acidosis. In addition, rare cases of hypophosphatemia have been reported in several types of malignant conditions, especially leukemia and in patients on poor phosphorus bath hemodialysis.[1,2] In a study published by Betro and Pain,[3] 2 percent of the patient population in a general hospital were hypophosphatemic, usually owing to intravenous dextrose infusion, insulin or antacid administration, vomiting, nasogastric suction, primary hyperparathyroidism, and hepatic dysfunction, especially due to alcoholism.

The ease and rapidity with which serum phosphorus levels can now be obtained by routine SMA-12 (sequential multiple analysis) examination in most medical centers provides quick and inexpensive diagnostic information for a number of clinical states. An immediate diagnosis of sepsis, although sometimes difficult to establish, is of utmost importance in order to institute the early treatment on which a good prognosis depends.

In 1969, Riedler and Scheitlin[4,5] reported on the incidence of hypophosphatemia in sepsis. They observed low serum phosphorus concentrations in 69 percent of 54 patients with gram-negative sepsis and in 24 percent of 37 patients with gram-positive sepsis. To the best of our knowledge, no further studies concerning the clinical and prognostic significance of hypophosphatemia in sepsis have been performed.

In the present study, the incidence of hypophosphatemia in a large number of patients with sepsis was recorded with the intent of determining its clinical, diagnostic, and prognostic implications in comparison with other early findings in sepsis, that is, leukocytosis and thrombocytopenia.

Materials and methods

The medical records of 141 hospitalized nonuremic patients (blood urea nitrogen less than 20 mg. per deciliter, or <0.17 mmol per liter) with creatinine levels under 1.3 mg. per deciliter (<118 micromols per liter) diagnosed as having sepsis between the years 1976 and 1980 were surveyed. The pertinent data collected included serum phosphorus concentrations, routine hematologic and biochemical laboratory tests, identification of the etiologic agent and its portal of entry, and the course, treatment, and outcome of the sepsis. The patients were all over 18 years of age, and included 78 males, or 55 percent, and 63 females, or 45 percent. A diagnosis of sepsis was reached on the basis of a clinical picture of septic fever and chills, and confirmed by leukocytosis with a shift to the left as well as positive cultures from blood, urine, bile, and sputum samples. Patients with any other determinable cause of hypophosphatemia were excluded from the study.

Seventy-five of the 141 septic patients had positive blood cultures while in 18 patients the urine, bile, or sputum samples provided positive identification. In 48 patients the diagnosis of sepsis was based entirely on clinical grounds.

The control group for serum phosphorus levels consisted of 75 patients with a similar age and sex distribution (37 males and 38 females), hospitalized during the same years. None had disorders known to influence the serum phosphorus concentrations which were (mean plus or minus Standard Deviation) 3.88 ± 0.46 mg. per deciliter, or 1.25 ± 0.15 mmol per liter, for males and 3.85 ± 0.475 mg. per deciliter, or 1.24 ± 0.15 mmol per liter, for females. The mean ± S.D. for the group as a whole was 3.85 ± 0.47 mg. per deciliter, or 1.24 ± 0.15 mmol per liter. The statistical analysis was performed according to t-test and chi squared.

Results

Of the 75 patients with positive blood cultures, 54, or 38.3 percent, had gram-negative sepsis, 19, or 13.5 percent, had gram-positive sepsis, and in 2 patients both types of organisms were identified (Table I). Hypophosphatemia of below 3 mg. per deciliter, or 0.96 mmol per liter (mean − 2 S.D. of the control group) was found in more patients with gram-negative sepsis (42.6 percent) than in those with gram-positive sepsis (31.6 percent), a difference of statistical significance ($p < 0.05$). This conclusion was even more significant ($p < 0.001$) when only septic patients with serum phosphorus levels of under 2 mg. per deciliter, or 0.64 mmol per liter, at time of the diagnosis were included: 13 percent in gram-negative versus none among gram-positive sepsis patients (Fig. 1). Owing to the distribution of the patients in group B, the 15 patients with gram-negative and the 1 patient with gram-positive cultures could not be compared, nor could statistical analysis be performed. The percentage of patients with hypophosphatemia (<3 mg. per deciliter, or <0.96 mmol per liter) in the group with repeated negative blood cultures was 41.6 percent and approached that of the patients with proved gram-negative sepsis (42.6 percent) in the first group (Fig. 1). In 2 of these 48 septic patients with negative cultures, the serum phosphorus concentrations were less than 2 mg. per deciliter. Neither the white blood cell counts nor the platelet counts were helpful in distinguishing gram-positive from gram-negative sepsis (Fig. 2).

TABLE I. Number of patients with sepsis classified according to cultures

Group	Gram Positive	Gram Negative	Both
A. Septic patients with positive blood cultures	19	54	2
B. Septic patients with positive UBS* cultures	1	15	2
C. Septic patients with negative cultures	0	48	0

* UBS—urine, bile, sputum.

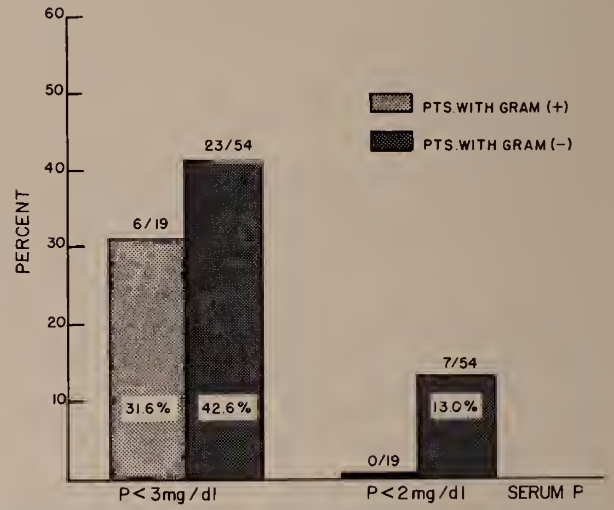

FIGURE 1. Percentage and number of septic patients with sepsis and low concentrations of phosphorus at time of diagnosis.

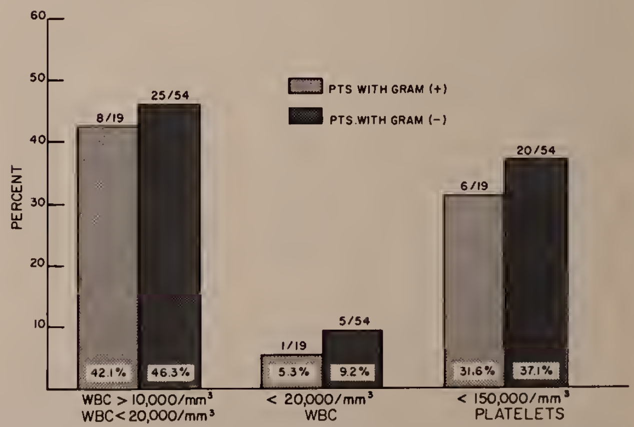

FIGURE 2. Percentage and number of septic patients with leukocytosis and thrombocytopenia at time of diagnosis.

The prognosis was not appreciably different ($p < 0.05$) in patients with serum phosphorus levels of above or below 3 mg. per deciliter, nor were the leukocyte or platelet counts of prognostic value.

Comment

An early diagnosis is essential for the successful management of septic patients. The clinical evaluation of the patient is generally performed at least 24 to 48 hours prior to receiving blood culture analyses, a fact which precludes their being useful as an early diagnostic aid. Therefore, the clinical diagnosis of sepsis must be supported by several preliminary, indirect laboratory tests such as differential white blood cell and platelet counts.[4–7]

Although advanced immunologic techniques enable us to identify certain bacterial antigens as they appear in the organism, they are at present available in only a limited number of medical centers. Thus a tentative diagnosis of sepsis which could be supported by a relatively simple and readily available laboratory test such as serum phosphorus quantitation would indeed be very useful.

Hypophosphatemia in septic patients, although reported in the past,[4,5] has not yet received widespread attention among clinicians. Because only two studies, both by the same authors, dealing with this subject have been published,[4,5] we decided to examine the significance and prognostic value of the association of serum phosphorus levels with sepsis as compared with those of the white blood cell and platelet counts. We observed hypophosphatemia to be a common laboratory finding in septic patients, especially in those with gram-negative sepsis. In fact, in the present series, 42.6 percent of our patients with gram-negative sepsis were hypophosphatemic compared with 31.6 percent in the gram-positive group, a statistically significant difference ($p < 0.05$). An even more significant difference ($p < 0.001$) was observed among those patients with extremely low serum phosphorus concentrations (<2 mg. per deciliter, 0.64 mmol per liter), that is, 13 percent in the gram-negative group and none of the gram-positive one.

Similar results have been reported in the past by Riedler and Scheitlin,[5] who found hypophosphatemia in 41 percent of their gram-negative patients and in only 14 percent of the gram-positive ones, with hypophosphatemia being defined as less than 2 mg. per deciliter (0.64 mmol per liter). In another study,[4] hypophosphatemia was considered to be either absolute (<2 mg. per deciliter, <0.64 mmol per liter) or relative (phosphorus/blood urea nitrogen <0.04). In the latter report,[4] the incidence in the gram-negative septic group was 69 percent but only 24 percent in the gram-positive one.

The minute discrepancy between our results and those previously reported might be accounted for by the fact that only absolute hypophosphatemia was included in our series, which therefore did not involve patients who would be considered hypophosphatemic by others.

Interestingly enough, hypophosphatemia was noted in 42 percent of our patients with sterile blood cultures, a figure which closely approximates that observed in patients with proved gram-negative sepsis (42.6 percent). This lends credence to the supposition that the presence of low serum phosphorus levels, especially under 2 mg. per deciliter, or 0.64 mmol per liter, might support a clinical diagnosis of sepsis, particularly when caused by gram-negative bacteria, even in the absence of a diagnostic blood culture.

Moreover, in the present study no significant difference between the two groups of septic patients, gram-positive and gram-negative, was noted in the white blood cell and platelet counts, an observation which enhances the usefulness of serum phosphorus levels in tentatively distinguishing a gram-negative from a gram-positive etiology. According to Riedler and Scheitlin,[4,5] normophosphatemic patients fared better than those with hypophosphatemia, the mortality rates being 29 percent and 41 percent respectively. This observation was not confirmed in our series, nor were the differential white blood cell and platelet counts of prognostic significance.

The exact cause of this hypophosphatemia is not clear. It might be due to phosphorus consumption by bacteria in circulation being more pronounced with gram-negative bacteria. Another possibility might be acid-base balance disturbances, especially when associated with acidosis.

Conclusion

In conclusion, hypophosphatemia in the absence of any explicable cause, in an appropriate clinical setting supports the diagnosis of sepsis, and may even tilt the scale toward a gram-negative etiology. However, the presence of hypophosphatemia or its degree is of no prognostic significance concerning the rate of recovery from sepsis.

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Intraabdominal Abscesses

Clinical observations and new diagnostic techniques

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In the past three years, 103 patients were operated on for intraabdominal abscesses at Beth Israel and LaGuardia hospitals. In 38 patients, the abscesses were in the lower quadrant, 37 subphrenic, 15 pelvic, 13 intrahepatic, 12 retroperitoneal, and 1 splenic. In 57 patients, the abscesses were diagnosed and localized by clinical methods plus standard radiographic studies. Ultrasonography was performed in 39 patients and the abscesses correctly identified in 77 percent. Computed tomography scans were performed in 28 patients with a diagnostic accuracy of 96 percent. Gallium-67 scans were performed in 20 patients and were positive in 70 percent. All patients were operated on and 116 abscesses drained. The mortality rate was 3.9 percent. This study emphasizes the importance of clinical acumen in the successful management of intraabdominal abscesses. Of the newer diagnostic studies, computed tomography appears to be the most accurate and reliable.

Intraabdominal abscesses are serious complications of abdominal disease or surgery, or both. Treated promptly and by appropriate drainage, these abscesses are associated with low mortality and morbidity rates. Untreated, they often lead to death.

Intraabdominal abscesses may be classified as visceral, intraperitoneal, and retroperitoneal. Visceral abscesses are located within the substance of an intraabdominal organ such as the liver or spleen. Intraperitoneal abscesses are areas of localized peritonitis, walled off by omentum, contiguous viscera, peritoneum, and so forth. They are exemplified by subphrenic and pelvic abscesses. The retroperitoneal space is the area between the peritoneum and the transversalis fascia lining the posterior aspect of the abdominal cavity. Pancreatic and perinephric abscesses are included in the retroperitoneal category.

In recent years, new diagnostic studies have been introduced to facilitate the diagnosis of intraabdominal abscesses. These include ultrasonography, computed axial tomography, and gallium-67 scintigraphy. This study was performed to evaluate the impact of these techniques on the surgical management of intraabdominal abscesses.

Clinical material

During the years 1977 through 1980, there were 103 patients with 116 intraabdominal abscesses treated on the surgical services of the Beth Israel and LaGuardia Hospitals. There were 56 males and 47 females whose ages ranged from 9 to 95 years. Their median age was 54.6 years.

The location of the abscesses is depicted in Figure 1. The subphrenic space, the right lower quadrant, and the left lower quadrant were the most frequent sites of infection. The location of the abscess was often determined by previous intraabdominal surgery. Of the 103 patients, 55 (53 percent) had an antecedent surgical procedure within the peritoneal cavity. These patients had a total of 66 abscesses of which 19 (28.8 percent) involved the subphrenic spaces and 12 (18.2 percent) each the subhepatic space and left lower quadrant. There were 9 (13.6 percent) pelvic and 6 (9.1 percent) intrahepatic abscesses in addition to 4 (6.1 percent) each involving the right lower quadrant and the retroperitoneum. The surgical procedures antedating these abscesses are listed in Table I. Operations on the biliary tract, colon, and gynecologic organs were the most frequent procedures noted. It is of interest that 20 of the 21 right subphrenic or subhepatic abscesses followed biliary tract surgery, and all 8 left subphrenic abscesses occurred after gastroduodenal procedures.

In 48 (47 percent) of the 103 patients, no prior intraabdominal surgery had been performed. Most of

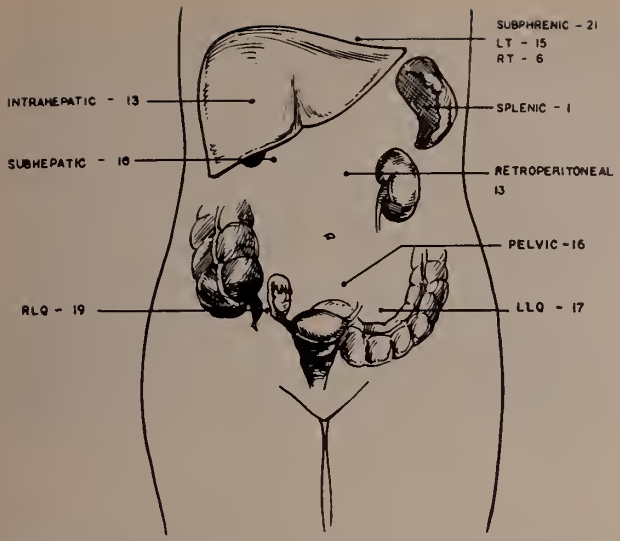

FIGURE 1. Location of 116 abscesses in 103 patients. RLQ—right lower quadrant; LLQ—left lower quadrant.

the 50 abscesses in this group of patients were located inferior to the umbilicus. There were 14 (28 percent) abscesses in the right lower quadrant and 8 (16 percent) each involving the left lower quadrant and retroperitoneum. There were 7 (14 percent) hepatic abscesses and 5 (10 percent) each in the pelvis and subhepatic space. Only 2 abscesses were in the subphrenic space, and 1 was within the spleen. The diseases of etiologic importance in the pathogenesis of these abscesses are listed in Table II. Perforated appendicitis and colonic diverticulitis were the most frequent.

Cultures from the abscesses grew a wide spectrum of microorganisms in 84 (82 percent) of the 103 patients (Table III). In 74 (88.1 percent) patients, only aerobic bacteria were found and in 4 (4.8 percent), only anaerobes. In the remaining 6 patients (7.1 percent), both aerobes and anaerobes were cultured. The most common aerobic bacterium isolated was *Escherichia coli* which was present in 60.7 percent of all positive cultures. *Bacteroides fragilis* was cultured from 9.5 percent of all abscesses, but this microorganism constituted 80 percent of all anaerobes cultured. In 19 (18 percent) patients, cultures of the abscesses yielded no growth. In 17 (16.5 percent) patients, septicemia was proved by positive blood cultures, and it is of note that 15 of these patients had abscesses superior to the level of the umbilicus.

The 103 patients exhibited a variety of symptoms and clinical findings. Fever was present in 91 (88.3 percent) patients, and leukocytosis above 10 times 10^3 was noted in 85 (82.5 percent). White blood cell counts ranged from 3.8 to 38 times 10^3 with a mean of 16.5 times 10^3. Findings on abdominal palpation indicative of peritonitis were noted in 38 (36.8 percent) patients, 23 of whom also had an abdominal mass. In 25 (24.3 percent) patients without localizing signs, the admitting diagnosis was fever of unknown origin. There were 17 (16.5 percent) patients with a complaint of nonspecific abdominal pain.

All patients had chest and abdominal roentgenograms. In 35 (34 percent) patients, the chest films disclosed a pleural effusion or atelectasis, or both. In patients with abscesses superior to the umbilicus, positive findings were present in 60 percent. In contrast, only 9.4 percent of patients with infraumbilical abscesses had abnormalities noted on roentgenograms of the chest. With respect to the abdominal roentgenograms, positive findings were noted in 52 (50 percent) of the 103 patients, and the most frequent abnormality was air-fluid levels. Less commonly, an abnormal density or ileus pattern was noted. Abnormalities on abdominal roentgenograms were noted in 12 of 19 (63.2 percent) patients with right lower quadrant abscesses, 8 of 13 (61.5 percent)

TABLE I. Prior intraabdominal operations in 55 patients with 66 abscesses

Prior Surgical Procedure	Number	Percent
Biliary tract	21	31.8
Colon (including appendix)	17	25.8
Uterus, tubes, and ovaries	15	22.7
Stomach and duodenum	8	12.1
Retroperitoneum	3	4.5
Spleen	2	3.0
TOTALS	66	100.0

TABLE II. Underlying diseases of etiologic significance in 48 patients with intraabdominal abscesses and no previous intraabdominal surgery

Underlying Disease	Number	Percent
Perforated appendicitis	14	29.2
Diverticulitis	11	22.9
Gynecologic infections	7	14.6
Biliary tract disease	6	12.5
Idiopathic	4	8.3
Renal infection	2	4.2
Pancreatitis	2	4.2
Leukemia	1	2.1
Osteomyelitis	1	2.1
TOTALS	48	100

TABLE III. Microorganisms identified from intraabdominal abscesses in 84 patients

Bacteria	Percent of Positive Cultures
Escherichia coli	60.7
Streptococcus faecalis	19.0
Pseudomonas aeruginosa	9.5
Bacteroides fragilis	9.5
Klebsiella pneumoniae	8.3
Staphylococcus albus	8.3
Streptococcus viridans	7.1
Proteus mirabilis	7.1

TABLE IV. Results of ultrasound studies in 39 patients with 45 abscesses in various locations within abdomen and retroperitoneum

Location of Abscess	Positive	Negative	Positive/ Total	Percent Positive
Intrahepatic	7	2	7/9	77.8
Subphrenic	7	1	7/8	87.5
Pelvic	6	1	6/7	85.7
Subhepatic	5	2	5/7	71.4
Left lower quadrant	4	1	4/5	80.0
Right lower quadrant	3	1	3/4	75.0
Retroperitoneal	2	2	2/4	50.0
Splenic	1	...	1/1	100
TOTAL	35			

patients with retroperitoneal infections, and 9 of 16 (56.3 percent) with pelvic abscesses. Positive findings were less frequent with intraperitoneal abscesses located above the level of the umbilicus.

In recent years, ultrasound, gallium-67 scintigraphy, and computed axial tomography have been employed to improve the diagnostic accuracy as well as preoperative localization of intraabdominal abscesses. In this group of patients, ultrasound studies were performed in 39 patients with 45 abscesses. Findings suggestive of an abscess were noted in 30 (76.9 percent) of the 39 patients, and 35 (77.8 percent) of the 45 abscesses were accurately localized. The correlation between the sites of abscesses and positive ultrasound studies is listed in Table IV. Abscesses were usually identified as space-occupying lesions with solitary or multiple echogenic areas. Abscesses larger than 3 cm. in diameter were often accurately diagnosed by this technique, but smaller collections were diagnosed less frequently.

Gallium-67 scans were obtained in 20 patients and in 14 (70 percent) were correctly interpreted as indicative of an abscess. The accuracy of this technique in relation to the location of abscesses could not be determined because of the multiplicity of sites involved and small number of patients studied.

Computed axial tomography was performed in 28 patients with 31 abscesses. This diagnostic study correctly identified and localized 30 (96.8 percent) of the 31 abscesses in 27 patients. A diverticular abscess of the sigmoid colon was incorrectly interpreted as a sigmoid neoplasm in the only false negative study in this series. The other 30 abscesses correctly identified were distributed throughout the abdomen and retroperitoneum.

Only 7 patients had ultrasound, gallium-67 scintigraphy, and computed axial tomography performed preoperatively. In 4 of these patients, results of all 3 studies were positive; however, the computed axial tomography findings were positive in all 7. There were 21 patients that had two of these three newer diagnostic techniques performed, and in 15 (71.4 percent) both were correctly interpreted as indicative of abscess formation. In the other 6 patients, only one diagnostic technique was positive. A total of 59 patients had either ultrasound, gallium-67 scintigraphy, or computed axial tomography, and in 54 (91.5 percent), the abscess was accurately localized.

All 103 patients in this group were operated on to achieve open drainage of the abscesses. There were only 4 postoperative deaths, giving a fatality rate of 3.9 percent. Two deaths occurred in patients with impaired immune systems due to leukemia and chemotherapy. A 78-year-old man died of persistent peritonitis following operation for perforated appendicitis. Operation was delayed in this patient because of the difficulty establishing the diagnosis in the presence of few clinical signs and symptoms. The fourth death occurred in a patient with a diverticular abscess who refused surgery until septic shock supervened.

Comment

In many patients, the diagnosis of an intraabdominal abscess is readily apparent following a thoughtful history and careful physical examination. In others, the presenting complaints are few and the findings on examination do not permit localizing the infectious process. In this latter group of patients, additional diagnostic measures are necessary to elucidate the cause and location of the purulent collection. It is important that these studies are carefully planned and performed in order to yield the maximum information in the shortest time.

The mortality rate associated with intraabdominal abscesses depends on several factors, not the least important of which is the promptness of surgical drainage. Undrained hepatic, pancreatic, and other retroperitoneal abscesses are almost uniformly fatal.[1,2] Drained subphrenic abscesses are associated with a mortality rate of 33 percent to 39 percent,[2] and appendiceal abscesses, 2 percent.[1] The low mortality rate of 3.9 percent in this present series is related to accurate abscess localization and prompt drainage.

Other factors that influence the mortality and morbidity of intraabdominal abscesses are the nature and extent of any underlying disease states that may impair immune responsiveness and the location of these purulent collections within the peritoneal cavity. An awareness of the myriad symptoms and signs that may manifest an intraabdominal abscess is essential to prompt the necessary diagnostic

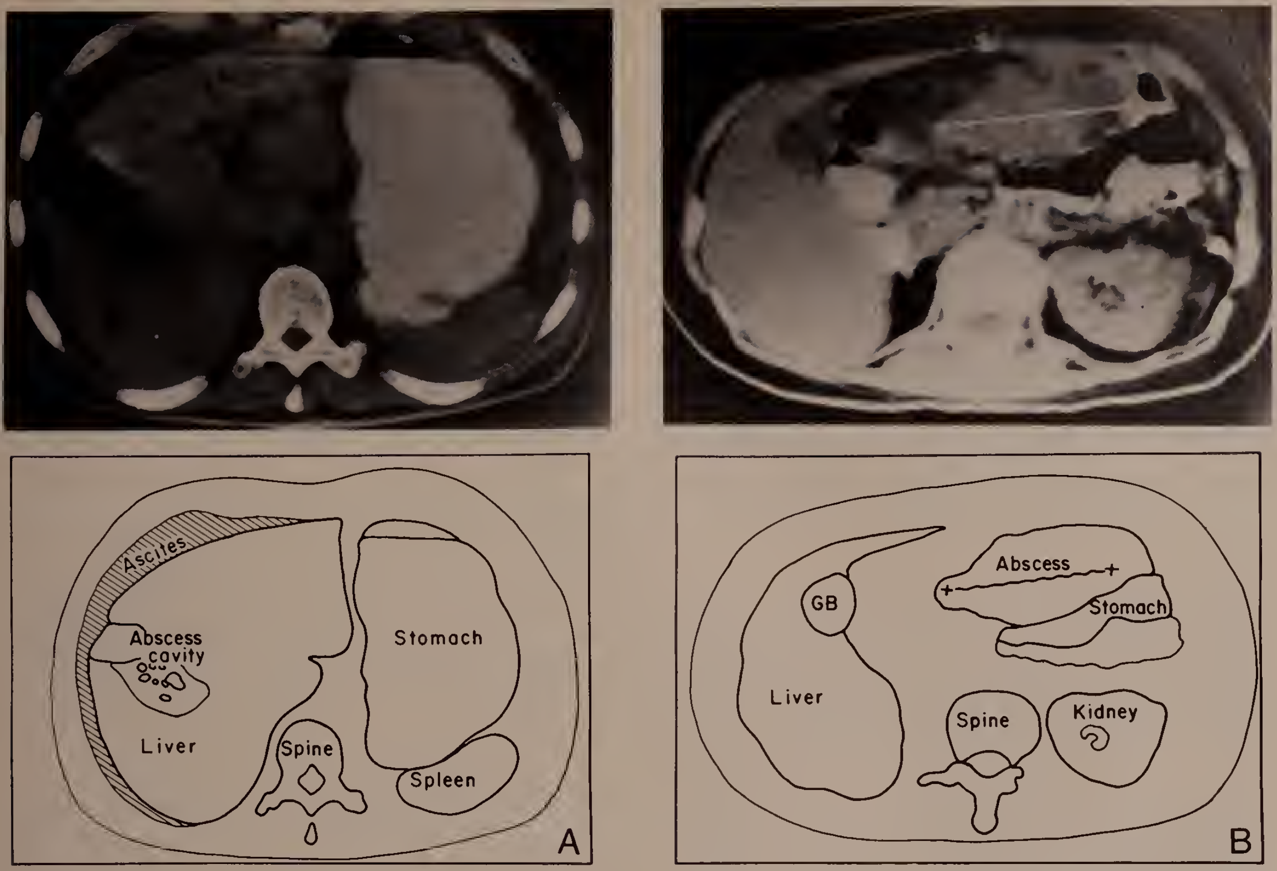

FIGURE 2. Computed tomography scans. (A) A 47-year-old man with abscess in right lobe of liver evidenced by air-fluid level. (B) A 48-year-old woman with left upper quadrant abscess following subtotal colectomy for perforation of transverse colon due to ulcerative colitis.

studies.

Chest and abdominal roentgenograms are often helpful in the initial evaluation. In some patients, they are diagnostic and preclude the necessity for additional studies. Abscesses located superior to the level of the umbilicus are more often associated with positive findings on chest x-rays whereas infraumbilical abscesses are more apt to be identified on roentgenograms of the abdomen.

Ultrasound is also a relatively simple, noninvasive, and inexpensive technique that is very helpful in detecting purulent collections. The accuracy of this technique is proportional to the size of the abscess. Collections less than 2 cm. in diameter or situated posterior to gas-filled intestine are the most difficult to identify. The accuracy of ultrasound ranges from 61 percent to 75 percent according to reports by Richardson,[3] Hill,[4] and Norton.[5] In our experience, ultrasound accurately diagnosed 35 of 45 abscesses, or 77.8 percent.

Gallium-67 scintigraphy has been reported by others to be a useful and accurate method of identifying intraabdominal abscesses.[6] Its accuracy ranges from 64 to 92.9 percent according to Norton[5] and Hopkins.[6] In our experience, it had an accuracy of 70 percent in 20 patients with proved abscesses. However, the utility of this diagnostic test is limited because of the generalized distribution of the isotope following its injection and its excretion by the kidneys and the gastrointestinal tract. There is a relatively high concentration of gallium-67 in the liver and spleen, and this makes the identification of abscesses in the adjacent subphrenic and subhepatic spaces particularly difficult.

Computed axial tomography is undoubtedly the most helpful diagnostic study in patients with suspected intraabdominal abscesses. In this group of patients, its accuracy was 96.8 percent. This experience confirms the reports of other investigators.[7,8] Figure 2 illustrates the findings noted in a patient with an intrahepatic abscess and another patient with a subhepatic abscess.

More recently, the usefulness of computed axial tomography has been expanded to include the percutaneous catheter drainage of some intraabdominal abscesses.[7,9] Successful drainage by this technique has precluded the necessity for laparotomy in most patients so treated. Our experience with this application of computed tomography is limited to a few patients treated in recent months. To date the results have been gratifying; the technique has been most successful in patients with subphrenic and intrahepatic abscesses.

Based on the results of this study, our approach to the patient with a suspected intraabdominal abscess is to obtain only those studies necessary to achieve an accurate diagnosis and prompt drainage of the abscess. Not all of the previously discussed techniques are necessary in every patient. In some patients, only chest and abdominal roentgenograms are necessary. However, if these studies give negative findings, computed axial tomography should be next employed. If tomography is diagnostic, then a decision for or against percutaneous drainage is made. Ultrasound and gallium scintigraphy are performed only if clinical suspicion persists following normal findings on computed axial tomogram. Infrequently, diagnostic laparotomy is necessary in the absence of confirmatory studies.

Summary

There were 103 patients with 116 intraabdominal abscesses treated during the years 1977 through 1980. In 53 percent of patients, the abscesses followed a surgical procedure within the peritoneal cavity, and in 48 percent, no prior operations had been performed. In the former group, the abscesses were most frequent in the subphrenic and subhepatic spaces whereas in the group with no prior surgery, the abscesses were usually located below the level of the umbilicus. Analysis of the results of ultrasound, gallium-67 scintigraphy, and computed axial tomography indicate that the last is the most accurate in terms of both diagnosis and localization of the abscesses. Accurate diagnosis and prompt drainage resulted in a low mortality rate of 3.9 percent.

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Small Intestinal Bleeding

Method for intraoperative localization

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It is estimated that lesions of the small intestine other than those of the duodenum cause bleeding in only 1.4 percent of all patients with gastrointestinal hemorrhage. The recognition of vascular abnormalities, in particular, has been greatly facilitated in recent years by arteriography. However, the intraoperative localization of these lesions can still be a frustrating experience for the surgeon. From the New York Hospital-Cornell Medical Center, three such patients are reported. One was bleeding from an arteriovenous malformation, one from a leiomyoma, and one from an area of ulceration of Meckel's diverticulum. A method of supraselective catheterization of the feeding vessel and intraoperative injection with methylene blue to guide the small bowel resection was successfully employed.

Lesions of the small intestine, other than those of the duodenum, are unusual causes of gastrointestinal hemorrhage. When present, they pose frustrating problems both in diagnosis and management. Vascular anomalies, in particular, have become increasingly recognized as sources of bleeding into the intestine. The intraoperative localization of such sites in the small intestine can still be difficult. Three such patients have recently been encountered at The New York Hospital and a simple method employed that combines diagnosis and appropriate surgical treatment. A series of three similar cases successfully managed by this technique was recently reported by Athanasoulis et al.[1]

Technique

Patients in whom hemorrhage into the small intestine, acute or chronic, is suspected are taken to the arteriography suite. Selective catheterization of the superior mesenteric artery is performed according to standard technique. After identification of the bleeding site, a second number 3 French catheter is advanced coaxially through the outer catheter, and as far distally as possible into the feeding vessel and secured, so-called supraselective catheterization.

The patient is then transferred directly to the operating room with the catheter in situ. To preserve patency, the catheter is periodically flushed with a heparinized saline solution. Under general anesthesia, a laparotomy is performed through a midline incision. Prior to manipulation of the intraperitoneal viscera, five ml. of methylene blue are injected by way of the indwelling arterial catheter. This stains a small segment of intestine which can then be resected with the certainty that the site of hemorrhage is contained within. A primary end-to-end anastomosis is performed. The catheter frequently can be palpated within the mesentery and is removed at the conclusion of the procedure.

Case reports

Case 1. A 61-year-old black woman with melena, weakness, and orthostatic dizziness for three days was admitted in 1979. Since 1970 she had recurrent melena and anemia requiring eight hospitalizations. Upper gastrointestinal series was performed five times (results: three normal, one showing a "scarred duodenal bulb," and one showing a "possible duodenal diverticulum") and barium enema was done five times (results: four normal and one showing diverticulosis). Endoscopic examination on three occasions showed mild esophagitis; proctosigmoidoscopic findings were normal two times and on a third examination an adenomatous polyp was excised from the rectum; colonoscopy to the cecum revealed no abnormalities. Past medical history was notable for mild hypertension for 30 years without current medication and thyroidectomy and hysterectomy in the remote past for benign disease.

On admission to New York Hospital, physical examination was unremarkable. Nasogastric aspirate revealed no blood; stool was guaiac-positive. The hemoglobin was 7.5 Gm. per deciliter and the hematocrit was 24. A superior mesenteric arteriogram demonstrated a hypervascular lesion in the jejunum. Two days later the arteriogram was repeated and a supraselective catheter placed for intraoperative injection of methylene blue (Fig. 1A). This stained a 20-cm. long segment of jejunum with a 1.5-cm. tumor. A small bowel resection was performed and pathologic examination demonstrated a leiomyoma and jejunal diverticulum (Fig. 1B). The patient recovered uneventfully and has had no further bleeding at two-year follow-up.

Case 2. A 67-year-old white man was admitted because of recurrent melena. Melena was first noted in 1977, at which time nasogastric aspirate was negative, barium enema showed diverticulosis, and upper gastrointestinal

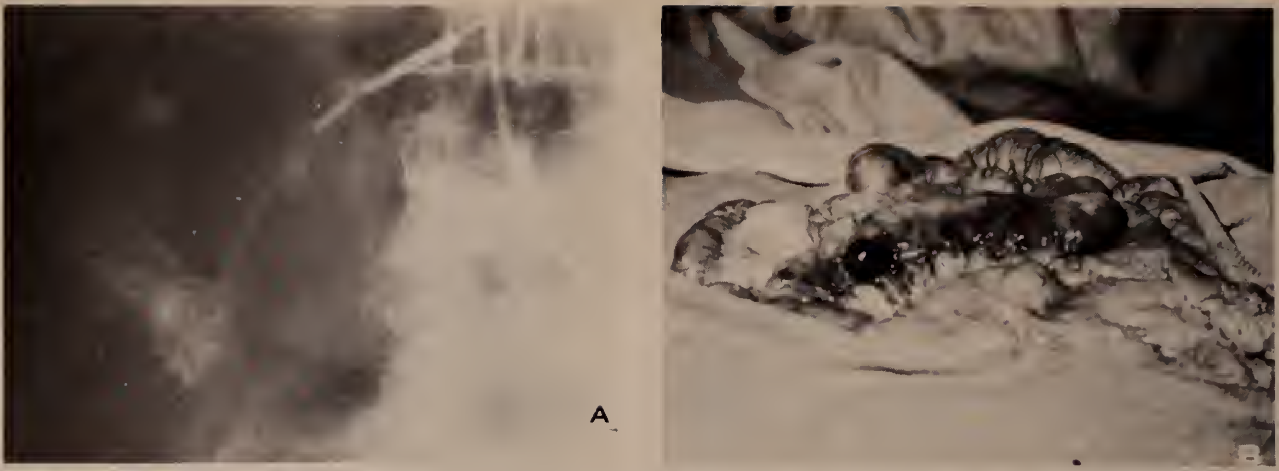

FIGURE 1. Case 1. (A) Supraselective arteriogram demonstrates hypervascular mass lesion with catheter in enlarged third jejunal artery. (B) Operative photograph demonstrates stained segment of small intestine and extraluminal portion of leiomyoma.

series showed an "irritable duodenal bulb." He was readmitted 11 months later with abdominal pain and hematocrit of 23; nasogastric aspirate and results of proctoscopy were negative; barium enema again showed diverticulosis: upper gastrointestinal series demonstrated a sliding hiatus hernia and "duodenitis"; endoscopy visualized a duodenal ulcer without active bleeding. Two months later he was again readmitted due to weakness and hematocrit of 19 despite antacids, cimetidine, and oral iron treatment; colonoscopy gave normal results; upper gastrointestinal series and endoscopy showed "possible varices and deformed duodenal bulb": repeat endoscopy demonstrated a healing duodenal ulcer only. His past medical history was notable for diabetes mellitus and mild ethanol abuse.

In 1978 he was readmitted because of a decreasing hematocrit from 39 to 29. Physical examination was unremarkable. Stool was guaiac-positive. Endoscopy showed mild gastritis; no ulcer was seen. An arteriogram demonstrated an arteriovenous malformation in the terminal ileum (Fig. 2A). The arteriogram was repeated six days later and supraselective catheter placed for intraoperative methylene blue injection (Fig. 2B). Resection of the segment of stained small intestine, truncal vagotomy, and pyloroplasty were performed. Pathologic examination showed telangiectasis of the ileum. Postoperative course was uneventful and at seven-month follow-up the hematocrit is normal.

Case 3. A 27-year-old white man was admitted in 1978 with melena and light-headedness for one day. He had a nine-year history of recurrent melena and hematochezia; previous UGI series, barium enema, and proctosigmoidoscopy had given normal findings. Past medical history was otherwise unremarkable.

On admission, physical examination revealed no abnormalities. Stool was guaiac-positive. The hematocrit was 26. An arteriogram demonstrated an arteriovenous malformation in the distal ileum or right colon (Fig. 3). Colonoscopy to the cecum revealed no abnormalities. The arteriogram was repeated six days later and a catheter placed for intraoperative methylene blue injection. At laparotomy a segment of distal ileum containing a Meckel's diverticulum was stained and resected. Pathologic examination revealed a Meckel's diverticulum with gastric mucosa and a chronic ulcer. Postoperatively the patient did well and bleeding has not recurred.

Comment

Colcock and Brassch[2] have estimated that only 1.4 percent of all gastrointestinal hemorrhages originates from lesions of the small intestine. Due to this infrequency and the inaccessibility of such lesions to conventional barium roentgenographic and endoscopic examination, diagnosis is often delayed. It is not unusual for such patients to have undergone prolonged medical and surgical treatment for presumed bleeding from peptic ulcer disease or diverticulosis without improvement.

In the early 1960s several methods of diagnosis were suggested for the actively bleeding patient. Intestinal intubation with a long tube to aspirate samples at various levels was suggested by Brief and Botsford.[3] Identification of blood in the aspirate can be done by the gastric method as suggested by Healey et al.[4] or by radioactivity determinations after the administration of labelled red blood cells as described by Pillow and coworkers.[5] Haynes, Pittman, and Christakis[6] and Pittman[7] described a method for identification of blood on a suitably positioned string by a Wood's lamp after parenteral administration of fluorescein. These methods are cumbersome, inaccurate, and applicable only during active bleeding. The advent of selective mesenteric arteriography in the last 15 years has largely replaced these older methods. The value of its aggressive application has been stressed by many authors.[8–16]

Treatment by surgical resection of the involved segment of small intestine is simple and curative. The intraoperative localization of such lesions, however, can be even more difficult than their initial diagnosis. Exploratory laparotomy alone will fre-

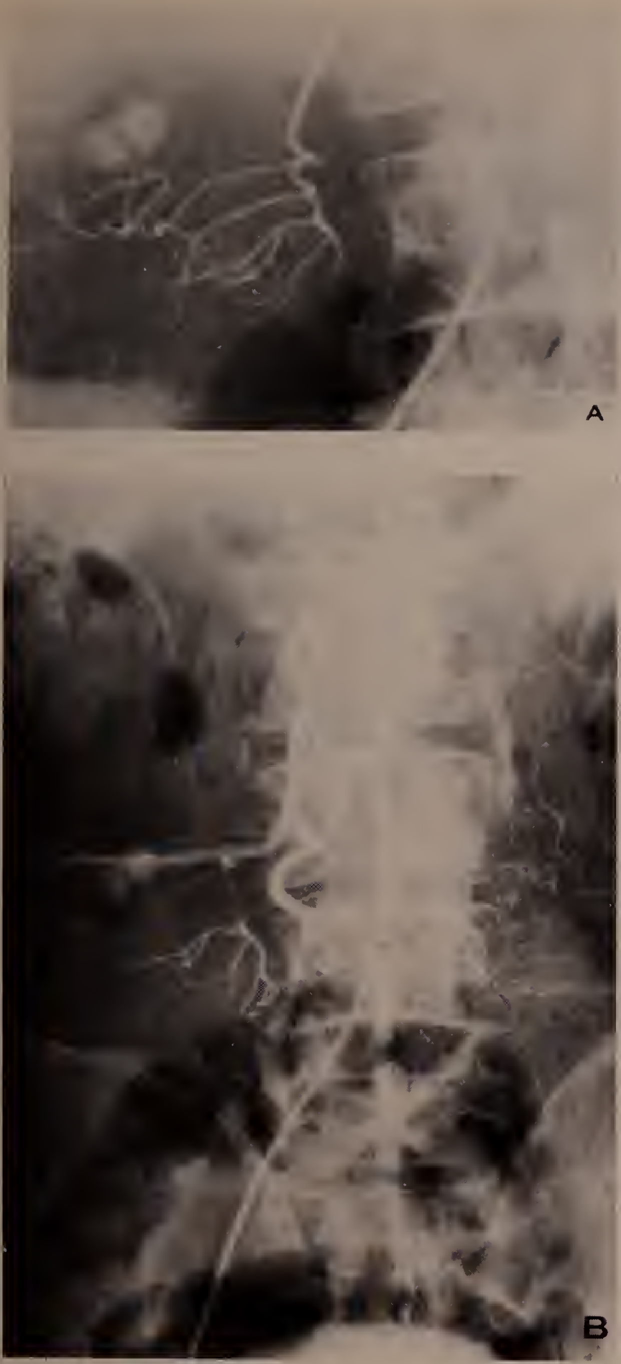

FIGURE 2. Case 2. (A) Superior mesenteric arteriogram demonstrates arteriovenous malformation of ileum. (B) Supraselective arteriogram.

quently result in frustration and failure, as noted by Retzlaff, Hagedorn, and Bartholomew.[17] This is due to the presence of arteriovenous malformations, angiodysplasia, intestinal telangiectasis, and small tumors that may not be externally visible. If, at surgery, no lesion can be seen or transilluminated, Ferguson[18] has suggested aspiration until blood is found and, if no lesion can be visualized after enterotomy, resection of 2 feet of intestine. Margulis, Heinbecker, and Bernard[19] in 1960 and Alfidi et al.[20] in 1971 described their successful experiences with a technique of intraoperative angiography which, however, requires the availability of sophisticated equipment in the operating suite. In 1978, Evans et al.[21] described the findings of elevated venous pressure and oxygen pressure in mesenteric venous blood. However, this is an unreliable guide to resection in many lesions. Fogler and Golembe[22] recently reported a cumbersome method involving injection of methylene blue directly into exposed branches of the superior mesenteric artery at laparotomy and observing the more rapid clearance of dye from an area containing an arteriovenous malformation.

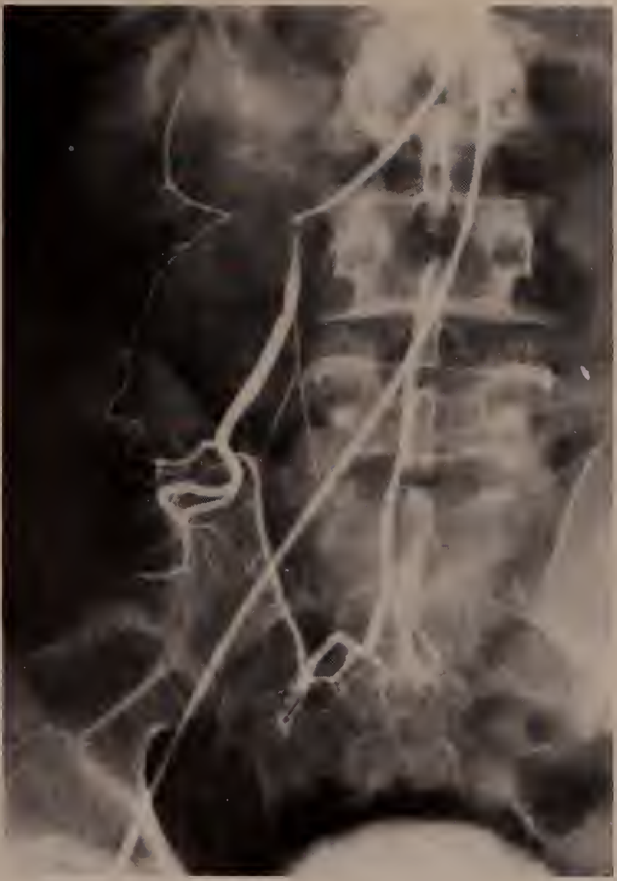

FIGURE 3. Case 3. Superior mesenteric arteriogram with catheter on ileocolic artery demonstrates bleeding from ileal branch of the superior mesenteric artery. Delayed films showed small collection of contrast material in ileum.

The combination of arteriographic diagnosis and intraoperative localization with methylene blue injection through the indwelling catheter seems to be a simple and highly effective technique for treatment of these lesions. It is applicable in both the acutely bleeding patient and in cases of chronic gastrointestinal hemorrhage. No special equipment is required in the operating room and a minimal segment of intestine can be resected with the certainty that the site of bleeding is contained therein. No complications related to the arteriography or adverse reactions to the methylene blue injection have been observed. Athanasoulis et al.[1] reported their success with this method in three patients (two arteriovenous malformations and one case of superficial ulcerations of the ileum), and our experience confirms their results.

The cooperation of an experienced team of angiographers is essential for the success of this method. It is hoped that when appropriate lesions are identified, surgical consultation will be requested prior to the removal of the arterial catheter, so that the patient may be spared a second such procedure.

Summary

Three cases of hemorrhage from a leiomyoma, a Meckel's diverticulum, and an arteriovenous malformation of the small intestine are described. A simple technique combining selective mesenteric arteriography for diagnosis and intraoperative localization by injection of methylene blue through a supraselective arterial catheter is presented. Early angiography in the patient with acute or chronic gastrointestinal bleeding of obscure etiology combined with appropriately directed surgical resection is advocated.

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[1]. Gordon, E.E. and Haas, A., Indust. Med. & Surg. 28:217, 1959. (See cases 2, 10, 15, 18, 35, 36 in Table I; cases 20 and 31 in Table II).

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Abortions obtained late in pregnancy are accompanied by greater morbidity and mortality rates and are psychologically more trying for both patients and staff than "early" abortions. Of the one million abortions obtained each year in the United States, one third are to teenagers with one fifth of these occurring in the second trimester ("late"). To examine possible correlates of late abortions, as well as the relationship between enrollment in the FLEP (Family Life Education Program) of the Mount Sinai Adolescent Health Center with the stage of gestation at the time of abortion, the differential characteristics of 113 pregnant teenagers who sought abortion were studied. The following variables were found to be statistically significantly related to the gestational stage of pregnancy at the time an adolescent seeks an abortion: enrollment in FLEP, contraceptive use, age, and school performance. Conversely, ethnicity, nulliparity, menstrual irregularity, method of payment, previous abortion, and age at menarche were not found to be relevant. These variables suggest that the problem of late abortions among adolescents is one that may be greatly influenced by intensive health education and counseling.

Medical complications of abortions are a function of several factors: underlying complications, age, parity, use of anesthesia, and choice of procedure. In view of the fact that second trimester abortions usually require procedures which have a much higher risk of medical complications than first trimester procedures, delay in procuring abortion becomes an additional risk factor. The morbidity rate rose from 4.2 to 20.6 per 100 women between first and second trimester abortions in the nearly 68,000 cases (all age groups) of the Joint Program for the Study of Abortion, which excluded women with preexisting complications. Major complications included unintended major operations, infection due to retained products of conception, one or more blood transfusions, and three or more days of fever. The mortality rate for all age groups was calculated to be 6.5 deaths per 100,000 abortions.[1] Women undergoing second trimester procedures faced a risk of death seven times greater than those aborted in the first trimester.[2]

Adolescents who seek abortion have characteristics which predispose to a higher morbidity rate than that found in adults. Adolescents usually arrive at a medical facility wishing to terminate their pregnancy at a time when they have already reached the end of the first trimester or are in the second trimester, placing them instantly in a high-risk category. Adolescents are uncommonly seen presenting themselves for abortion under eight weeks. Specifically, one third of all one million yearly abortions are to teenagers,[3] with about one fifth of them applying for abortion in the second trimester. Those in the second trimester are often left until 16, 17, or 18 weeks for saline instillation.

Moreover, second trimester abortion may also be associated with a higher percentage of psychologic complications than abortion in the first trimester. Inasmuch as the literature indicates that the overall incidence of severe psychologic reactions following abortion is quite low,[4] there has been scant interest in the specific effects of a second trimester abortion.

In addition to the physical and emotional costs of second trimester abortion, there is, clearly, increased personal and institutional expense.

The purpose of this study is to determine if the medical and counseling services provided by FLEP (Family Life Education Program) at the Mount Sinai Adolescent Health Center is associated with the timing of pregnancy interruption. FLEP provides a comprehensive program of sex education, contraception, gynecologic care, pregnancy diagnosis, and counseling to unmarried teenage residents of East Harlem, an inner-city low-income area. Patients are accepted for FLEP regardless of parental consent, since insistence on consent would deny access to many in need of care. Fee for service is on a sliding scale, but no patient is denied care because of inability to pay. A registered nurse screens new patients requesting contraception or pregnancy diagnosis to evaluate their urgency of need. In addition, the nurse guides the patient in the use of the services of the Adolescent Health Center, makes the appointments with the social worker and primary physician, and ascertains how to contact the patient for follow-up. The patient is given the contraceptive method most suited and acceptable to her after the following: medical workup by her physician; a group counseling session conducted by the nurse; interview by the social worker of all patients under the age of sixteen and of all those identified as having problems which tend to make them poor contraceptors; and individual counseling and examination by the nurse-midwife. The patient's emotional maturity, life-style, and reliability are also taken into account.

FLEP clinics are scheduled at hours convenient for the patients. Follow-up visits are emphasized, with each patient given a revisit appointment at least once every three months. The patient is contacted and urged to come in, should a revisit appointment not be kept. Furthermore, each patient is encouraged to visit the Adolescent Health Center at other times to see a registered nurse or her primary physician, should the need arise.[5]

Review of literature

Age. In most studies, delay in seeking induced abortion decreased with increasing age.[1,6–8] Indeed, the Cardiff researchers reported a majority of young girls presenting in the second trimester.[9] In the Boston study, a nearly linear inverse correlation was found between the age of the patients and the gestational age at abortion.[10] However, other studies did not substantiate these findings.[11,12] In a study of black women in New Haven there seemed to be a bimodal association, with both the very young and those over 33 being more likely to be late aborters.[6]

Marital status. Single women have been reported as being more inclined to be late presenters for abortion.[1,6–9,11] Marital status is clearly related to age but this association persisted in several studies, even when corrected for age.

Parity. Those seeking abortion late in pregnancy have been found to be more likely pregnant for the first time, a variable undeniably age-related.[7,8,10,11] Indeed, there was no association between early and late aborters and parity that could not be explained by age.

Other variables. Race, social class, education, employment, and accessibility of medical care were all intertwined, and none of the studies cited were controlled for other indicators of lower socioeconomic class when discussing any of these variables.[1,6–10,12,13] Consequently, one can only conclude that these variables individually or in combination all seemed to be associated with late-seeking aborters.

Contraception. The available studies indicate that unprotected sexual intercourse correlates with delay in seeking abortion.[6,7,11,14,15] This was the case at Yale within all racial groups,[6] and was especially so among younger women at Albert Einstein.[11] Many of the sociodemographic correlates of delay are also correlates of poor contraceptive practice, as indicated by research on abortion patients.[15,16] Yet, no differences in knowledge about contraception were found at Johns Hopkins between early and late presenters, although late aborters were more apt to have been inconsistent in their use of contraception. In Boston, actual differences were obvious in those seeking early pregnancy termination compared with those who delayed. For example, nonuse was more commonly found in late aborters: 78.9 versus 58.2 percent.[10] The ability to plan in one area is apt to carry over in another area; that is, the ability to plan for protected intercourse (contraception) is more likely to occur in those who can plan to have an early abortion.

Menstrual irregularity. A history of poorly stabilized menstrual periods was the strongest single determinant for delay in seeking pregnancy interruption in the Washington, D.C., sample.[12] Likewise, in the Park East[8] and Chelsea Hospital[7] studies, a history of regular periods was associated with earlier recognition of pregnancy and, in Boston, preceding menstrual irregularity was the basis for delaying in 18 percent of individuals.[10]

Methods

From the medical records at the Mount Sinai AHC (Adolescent Health Center), a sample was obtained by examining the records of all teenagers having positive pregnancy tests over an eight-month period from January to August, 1979. This provided a total of 180 cases. Of these, 67 cases, or 37.2 percent, could not be used because: (1) they carried pregnancy to term delivering live-born infants (n = 46); (2) their decision to either terminate or carry the pregnancy to term was not known (n = 17); (3) they had a spontaneous abortion (n = 2); (4) they never returned for the test result (n = 1); or (5) they were not pregnant (n = 1).

The records of the remaining 113 patients were examined to determine if the medical and counseling services provided by FLEP are associated with the timing of pregnancy interruption. In addition, the contribution of: (1) age, (2) prior visit to the AHC, (3) method of payment, (4) history of contraceptive use, (5) history of previous pregnancy, (6) history of previous abortion, (7) age at menarche, (8) irregular periods, (9) ethnic group, and (10) school performance to early pregnancy interruption were studied.

Some problems were encountered in obtaining accurate information from all the medical records. The records were not always complete, data had to be interpolated, and discrepancies in basic personal information were occasionally found in the same chart. It was not possible to resolve all of these problems, and this accounts for the different numbers of subjects in the tables. Nevertheless, there is no reason to believe that these discrepancies were different between the early and late aborters, or that any bias was introduced into the study from this source.

TABLE I. Demographic characteristics of teenagers undergoing early and late abortion

Characteristic	Abortion		Significance of Difference Between Groups
	Before 11 Weeks	After 11 Weeks	
Age	(N = 65)	(N = 48)	
Mean (years)	17	16.3	. . .
13 to 16	23	28	$\chi^2 = 5.815$
17 to 20	42	20	P = 0.02
Ethnic group	(N = 62)	(N = 46)	
Black	28	22	$\chi^2 = 0.145$
Hispanic	34	23	NS*
Method of payment	(N = 64)	(N = 46)	
Medicaid	37	31	$\chi^2 = 1.037$
Self-pay	27	15	NS

* NS—not significant.

TABLE II. Pregnancy and menstrual history of teenagers undergoing early and late abortion

Characteristic	Abortion		Significance of Difference Between Groups
	Before 11 Weeks	After 11 Weeks	
Pregnancy history	(N = 65)	(N = 48)	
Positive*	25	17	$\chi^2 = 0.109$
Negative	40	31	NS
Menses	(N = 55)	(N = 42)	
Regular	48	32	$\chi^2 = 2.025$
Irregular	7	10	NS

* Positive denotes patients with history of previous pregnancy.

TABLE III. Attendance at the AHC and enrollment in FLEP among teenagers undergoing early and late abortion

Characteristic	Abortion		Significance of Difference Between Groups
	Before 11 Weeks	After 11 Weeks	
Adolescent Health Center	(N = 65)	(N = 48)	
Prior attendance	45	31	$\chi^2 = 0.607$
New	20	17	NS
Family Life Education Program	(N = 65)	(N = 48)	
Prior attendance	35	15	$\chi^2 = 5.814$
New	30	33	P = 0.02

TABLE IV. Contraceptive practice, abortion history, and age at menarche among teenagers undergoing early and late abortion

Characteristic	Abortion		Significance of Difference Between Groups
	Before 11 Weeks	After 11 Weeks	
Contraception history	(N = 65)	(N = 48)	
Ever use*	42	16	$\chi^2 = 10.818$
Never use	23	32	P = 0.01
Abortion history	(N = 65)	(N = 48)	
Positive	20	12	$\chi^2 = 0.308$
Negative	45	36	NS
Age at menarche			
Mean (years)	11.75	11.75	

* Data are based on whether the adolescent had ever used a contraceptive; they do not necessarily indicate that all adolescents who had used a contraceptive experienced failure as an antecedent to abortion.

TABLE V. School performance among teenagers undergoing early and late abortion

Characteristic	Abortion		Significance of Difference Between Groups
	Before 11 Weeks	After 11 Weeks	
School performance	(N = 41)	(N = 36)	
Good	34	19	$\chi^2 = 8.124$
Poor	7	17	P = 0.01

Results

Sociodemographic associations. The characteristics of the two samples of teenagers are compared in Table I. The group terminating pregnancy after 11 weeks is, on average, 0.7 years younger. Teenagers in the 13-to-16 age group are significantly more likely to terminate pregnancy after 11 weeks than the 17-to-20 age group: 58 versus 35 percent, respectively. The teenagers in the late abortion group are no more likely to be black or Hispanic than the early abortion group, and no group is more likely to be on Medicaid or self-paying than the other.

Pregnancy and menstrual history. Nearly two thirds of girls in both groups were nulliparous (Table II). Although the incidence of menstrual irregularity in the group aborting after 11 weeks is nearly twice that of the early group, 24 versus 13 percent, the correlation between irregular menses and delay in seeking abortion is not statistically significant.

Previous health care. While there was no significant relationship between age of gestation at abortion and previous enrollment in the Adolescent Health Center for general medical care, there was a positive correlation between gestational age at abortion and previous enrollment in FLEP. Almost twice as many early as late aborters had been FLEP enrollees (Table III).

Contraceptive practice and abortion history. Teenagers aborting after 11 weeks are significantly more likely to have never used any form of contraception than are those aborting earlier: 67 versus 35 percent, respectively. Indeed, having ever used contraception is seen to have the greatest statistical association to gestational age than the other factors studied. In contrast, a positive history of abortion showed no association with gestational age, with both groups possessing a similar percentage of previous abortions: 31 versus 25 percent for early and late groups, respectively (Table IV).

School performance. Leaving school before the twelfth grade, repeating any school year or any indication of an inability to cope with school, were considered evidence of poor school performance. Late aborters show nearly a three-fold greater incidence of poor school performance over early aborters, 47 versus 17 percent, respectively, and school performance is strongly associated with late presentation, as seen in Table V.

Comment

Some of the factors such as ethnic group, history of previous abortion, and menstrual irregularity, found in some of the earlier studies to be related to late abortion, were not found to be related in this study. This may be because the sampling in this study was limited to black and Hispanic girls from low socioeconomic groups. These women are less representative of those aborting in the first trimester.

In view of the fact that participation in FLEP was associated with the presentation of teenagers at an earlier stage of gestation, it is recommended that community and educational efforts be targeted at providing information, counseling, and direct services to sexually active youth.

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Compression Syndromes At Wrist

Precise diagnostic procedures

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A method of detecting damage to digital nerves has been presented; it correlates well with clinical sensory loss and is more reliable than the heretofore customary use of the TSL (terminal sensory latency) of index fingers and fifth finger alone. This method permits a precise diagnosis of nerve compression in both median and/or ulnar nerves at the wrist.

Compression of the median and ulnar nerves in their respective tunnels at the wrist is quite common. The presumptive causes, as given in the literature, are varied, ranging from excessive fluid accumulation to encroachment of bone on adjacent nerve.[1–4]

Pressure neuropathic conditions still are confused with metabolic or other neuropathic as well as radiculopathic conditions. Exact diagnosis, therefore, is imperative; it provides for rational treatment, if any, and supports claims arising out of accidents and injuries, both industrial and civilian.

This article, illustrated with fotoprintouts, describes a precise method of documenting the effect of pressure on the nerve supply of all five fingers of the hand, both motor and sensory. The findings are presented sequentially, finger by finger, giving a total, objective picture of nerve damage in the presence or absence of subjective complaints, the thumb being at the bottom of the raster recording.*

The literature shows that pressure on mixed nerves can affect the motor as well as the sensory components to different degress, and that sensory supply to one digit may be affected when the sensory supply to another is not.[5,6] Contrary to prior suggestions,[4,5] the index and middle finger, singly or paired, and the fifth finger as sole indicators in sensory latency studies is inadequate, for if they are uninvolved, the diagnostic picture may become distorted.[7–9]

Method

The amplifier used (Teca Company Model TE4) was a two-channel electromyographic machine with fotosensitive paper printout. The electrodes employed were disk electrodes for recording from muscle surface at a 1½-cm. interelectrode distance. A monopolar electrode, teflon coated, was used for intramuscular recording, with a ring electrode as reference. Two ring electrodes were used for sensory latency determination.

Calibration

The time base is given by a row of slanted columns, each of which is made up of 10 distinct dots 0.1 msec. apart; the entire column then represents 1 msec. The appearance is that of a ladder in which the uppermost dot of the column overlaps with the lower dot of the next column. The distance between two columns therefore is 1 msec.

The amplification can be set on the amplifier to any value from 5 microvolts to 10 mv. per height of column.

The height of the time base ladder is 1 to 5 mv. for evoked motor potentials, and 50 microvolts for evoked sensory potentials.

It should be clearly understood that evoked motor potentials will vary in size, configuration, and duration, not only in compression syndromes at the wrist. A shift to the right, that is, increase in latency, may be due to compression anywhere along a given nerve.

A complete electrodiagnostic evaluation is necessary to exclude these other possibilities; that includes motor and sensory conduction velocities from Erbs point down. If that is done, the TML (terminal motor lacency) then will reflect compression at the wrist. When compression is present, there is a shift to the right, sometimes small, at other times of considerable magnitude. Changes in amplitude and configuration reflect the intensity of the pressure exerted on motor fibers and the amount of damage resulting therefrom.

Sensory potentials can be recorded either with orthodromic or antidromic stimulation. (Fig 1A) We prefer the latter for the following reasons:

1. The evoked potential is of high amplitude since the sum total of all accessible sensory fibers is stimulated at the wrist.

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* Writing on the fotosensitive paper is done by an electron beam which can be made to imprint in the direction of the moving paper (continuous recording) or in parallel lines across the paper (raster recording). The latter has been used here.

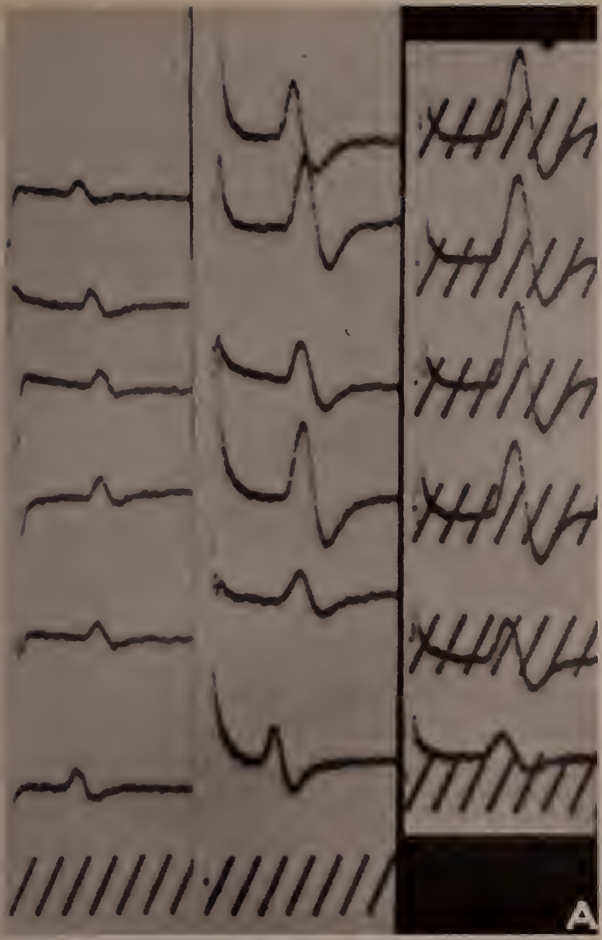
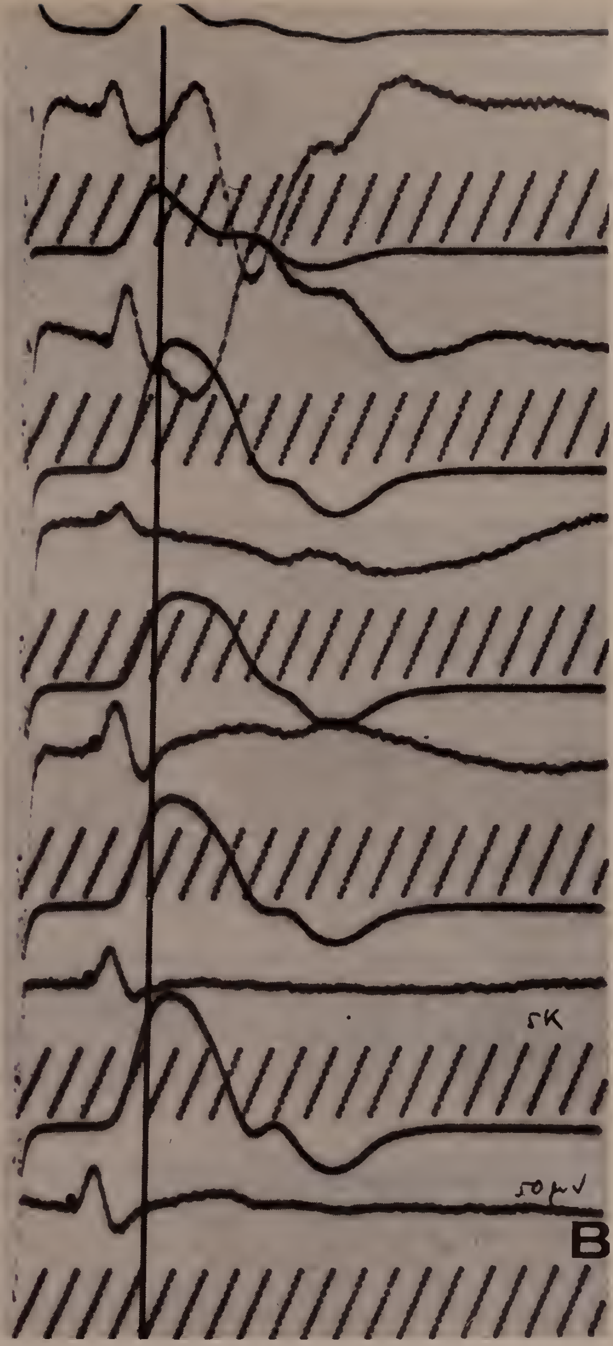


FIGURE 1. (A) Methods of TSL (terminal sensory latency) recording; left: orthodromic; center: antidromic; right: amplitude versus stimulus. (B) Simultaneous recording of TML and TSL, normal values.



2. The stimulus is less objectionable. Nociceptive fibers in the skin above the carpal tunnel seem to be less dense or more remote than in the skin of the fingers.
3. Supramaximal stimulation is not used. It appears that a much smaller stimulus is required to evoke the sensory potential than the motor potential.

Furthermore, supramaximal stimulation almost always introduces a motor potential of an intrinsic muscle and thus confuses the record.

4. Simultaneous recording of motor- and sensory-evoked potentials is possible and this facilitates diagnostic conclusions (Fig 1B).

In a CTS (carpal tunnel syndrome) of moderate severity, the TML is shifted to the right toward and beyond the 4-msec. boundary line and the TSL (terminal sensory latency) too shows a right shift that goes beyond 4 msec. in the third finger. (Fig. 2A)

All median nerve potentials are of low amplitude and long duration, as is expected in dissociation due to pressure. The abductor pollicis brevis shows fibrillations. To be noted is that the median half of the fourth finger is normal because it is not involved; the ulnar-nerve innervated fourth and fifth fingers show higher amplitudes and are well below 4 msec.

In an advanced CTS the TML is shifted far to the right (8.1 msec.) and the TSLs for fingers 1, 2, and 3 are way beyond the 4 msec. (Fig. 2B) The median fourth finger is spared and the ulnar fourth and fifth fingers are of normal amplitudes.

Progressive shifts to the right of TSLs are shown, with the median fourth finger spared and the ulnar fingers uninvolved (Fig. 2C). The last column shows loss of potentials in fingers 2 and 3 corresponding to loss of sensation.

Involvement of both the median and ulnar nerves

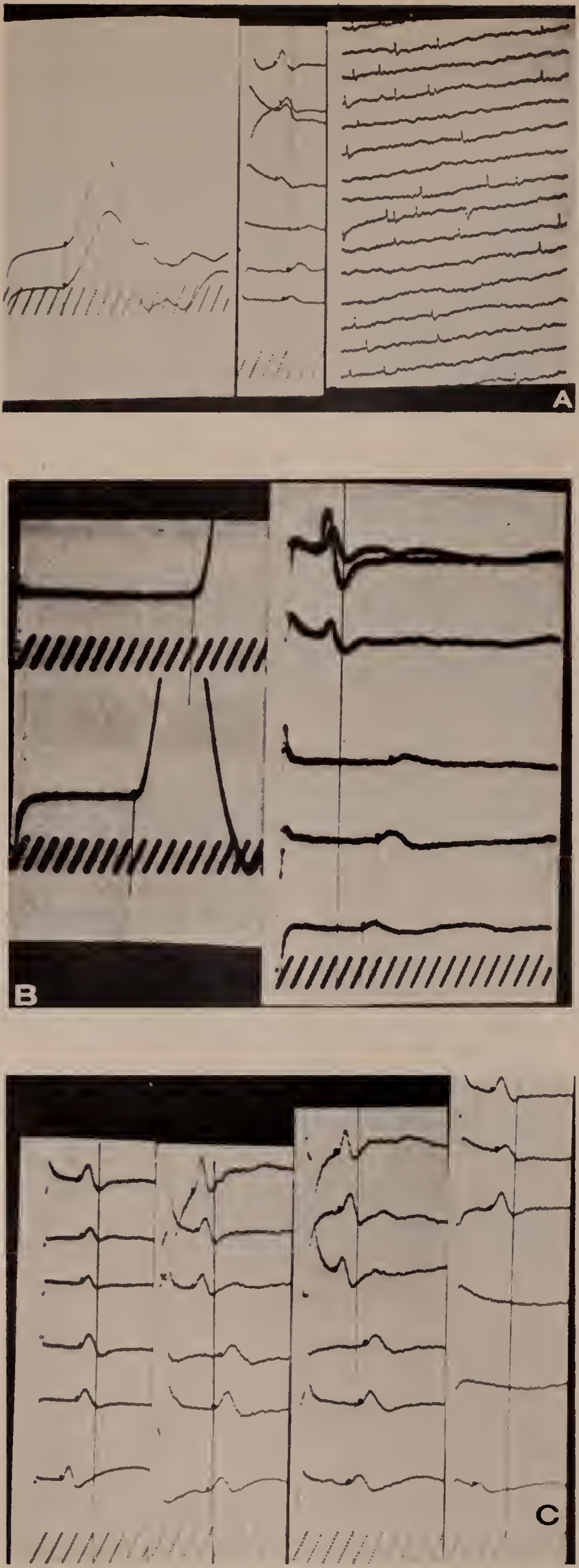


FIGURE 2. (A) CTS moderate. (B) Advanced CTS. (C) Progression in CTS, taken from several patients.

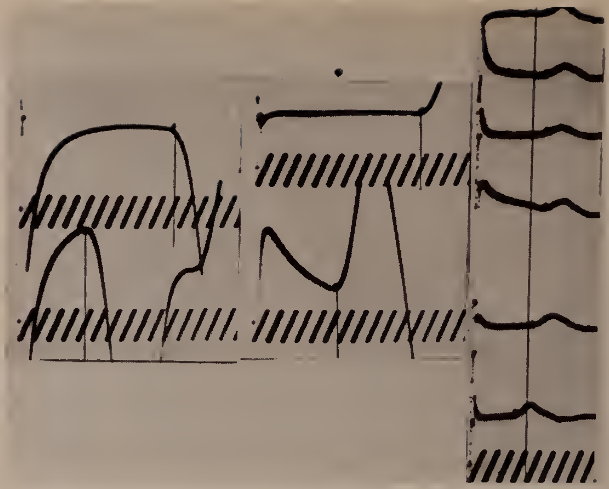


FIGURE 3. Combined CTS and UTS (ulnar tunnel syndrome).

in their respective tunnels, shown in the TML of both nerves (ulnar on the left, median on the right), is beyond 4 msec; the TSL of all fingers, except the thumb, is shifted beyond 4 msec. and is of low amplitude as well as long duration (Fig. 3).

Comment

It is possible to arrive at a reliable diagnosis of CTS and/or UTS by the method described here. This requires documentation of the TSL of all five fingers as a routine procedure. There are no shortcuts, since they are inadequate and lead to diagnostic errors and inappropriate intervention. Both compression syndromes show evidence of denervation in their respective intrinsic muscles.

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Scientific Sessions
held at New York University
April 21, 1980

New York Society for Cardiovascular Surgery

ALLAN ELLIA BLOOMBERG, M.D., Editor

Early Spring Meeting

The early spring meeting of the New York Society for Cardiovascular Surgery was held at New York University on April 21, 1980.

The following article appears in its entirety.

Stripping Varicose Veins

Indications and techniques

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The fact that diverse treatments for varicose veins are still being proposed is prime evidence that the ultimate in therapy has not yet been achieved. It is true that the exact etiology of varicose veins remains obscure and that the disease tends to be progressive. Nevertheless, certain basic abnormalities prevail in the vast majority of patients and if appropriate therapy is instituted, excellent results can be anticipated.

Injection treatment for varices has been utilized for many years. If the varices are small to moderate in size and there is no significant valvular insufficiency, sclerotherapy is effective. With marked valvular disease along the saphenous veins or incompetent "perforators," surgery is more effective since the proper ligation of incompetent sites immediately eliminates retrograde venous flow. The crux of effective surgery is the elimination of all sites of valvular incompetence. Stripping of the residual varices merely reduces the necessity for numerous injections postoperatively. Many of the varicose veins that are most prominent are usually branches of the long or short saphenous vein. Except in thin individuals the saphenous veins are not usually prominent. Surgery should be recommended if the varices become very large because a patient with varicose veins is much more susceptible to phlebitis and pulmonary embolism.

Chronic venous stasis can also cause brownish pigmentation and ulceration in the ankle region. Most patients come for treatment because of lower extremity fatigue, discoloration, or recurrent episodes of phlebitis. The majority of patients operated on have been women. Since many operations for varices are unilateral, saphenous vein segments for possible future arterial grafts usually remain available. When a patient requires bilateral varicose vein surgery, the long saphenous vein can be left intact in one or both legs. If all incompetent valves are ligated, thereby eliminating all significant retrograde flow, the medical result will be satisfactory.

Medical reports concerning the surgical treatment of varicose veins invariably stress the importance of a proper high ligation of the long saphenous vein. Unfortunately, in a significant percentage this ligation is not performed flush with the femoral vein and the remaining stump of saphenous vein is responsible for recurrent varices through missed branches close to the junction. In other cases, incompetent short saphenous veins or perforators are missed. Varices usually recur in about one year if any significant valvular insufficiency is missed.

When operating on recurrent varices, it is possible to detect all sites of persisting valvular incompetence by simple inspection and palpation. Every effort should be made to avoid scar tissue from the prior operation. Often, the previous incision was made several inches below the inguinal ligament. Even when the skin incision had been placed high enough for adequate exposure, the previous dissection was often not carried deep enough to expose all venous branches at the saphenofemoral junction. In most of the secondary operations, a short stump of long saphenous vein containing distended branches was found to be the cause of the recurrent varices. When the secondary operation is performed it is advisable to make the skin incision as close as possible to the inguinal ligament. The dissection is immediately carried down to the femoral artery. After a small segment of artery is exposed, the dissection is shifted medially to the femoral vein. At this level, the saphenofemoral junction is easily visualized and no significant dissection of the femoral vein is necessary.

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* *By invitation.*

If the dissection is attempted through scar tissue, the operation can be difficult because of friable secondary varices. The residual stump of long saphenous vein is ligated flush with the femoral and the remainder of the procedure is identical to that for a primary operation.

If the short saphenous vein has been missed during a previous operation, excellent exposure can be obtained if the patient is turned over to the prone position. The skin incision is made proximal to the previous scar. The short saphenous is ligated flush with the popliteal vein and residual varices are stripped out. All adjacent incompetent perforators are individually ligated. The postoperative management is identical, whether the patients have primary or secondary operations for varicose veins.

Ambulatory surgery

When surgery is performed for varicose veins, it is customary to hospitalize the patient for two to five days. The length of hospitalization has been gradually decreased so that at present a complete procedure can be performed on an ambulatory basis. The physical examination of the patient and all necessary laboratory tests are performed during the week before surgery. A complete medical questionnaire is filled out so that all pertinent medical problems can be considered. The patient is instructed to shave the lower part of the abdomen and the involved leg and to have nothing by mouth after dinner on the night before operation. On the day of surgery the patient reports to the "ambulatory room" at 7:30 A.M. The anesthetist reviews the medical history to determine the best type of anesthesia, and surgery is performed shortly thereafter. A combination of agents is required which will provide a smooth induction and a light plane of anesthesia, followed by a tranquil emergence, free from nausea, vomiting, headache, muscle pains, or vasomotor instability. Furthermore, the patient has to be able to walk shortly after surgery and be able to go home that same afternoon. Spinal anesthesia is undesirable because the patient is unable to walk within a few hours after surgery. For patients who have not had recent surgery, the requirements for this type of ambulatory surgery have been met very well by the use of a barbiturate-nitrous oxide-halothane sequence. For those patients who have had another recent anesthesia, halothane has been avoided and ethrane is usually used. In slightly-built women, anesthesia has been managed by a barbiturate-nitrous oxide sequence, but this may require supplementation with an analgesic, such as meperidine hydrochloride (Demerol). The use of such drugs is, however, sometimes associated with nausea and prostration. Intubation has been carried out if the patient has to be turned over to the prone position for surgery on the short saphenous vein. Premedication is kept to a minimum since it is important for the patient to stand while the varices are marked out immediately prior to surgery. Anesthesia is induced with thiamylal sodium (Surital). The electrocardiogram, blood pressure, and axillary temperature are monitored in the usual way. The head of the operating table is lowered and the stripping is performed very slowly to minimize operative bleeding. About three hours after surgery, the patient walks with assistance. At about 2 P.M. the patient attempts to walk by himself. After walking on his own for at least one hour he can be discharged. No one is permitted to leave the hospital unless someone is available to take him home. Practically all patients have been discharged between 2:00 and 4:00 P.M. If they are unable to walk normally by that time they are advised to wait another hour or two until the residual effects of the anesthesia have disappeared. All patients are advised to rest in bed after returning home that night but to return to work and all normal activities on the following day. In especially difficult patients, such as the grossly obese, the "bull-headed," or frail or very nervous types, it would be preferable to admit the patient to the hospital. Even with the most difficult type of patient, discharge from the hospital is always advised the morning after surgery at the latest.

There were no postoperative problems related to the operation or anesthesia, and all of the patients were able to go home on the day of the surgery. If the patient is very active, postoperative discomfort is not marked. Mild analgesics are usually sufficient to control any pain. Many patients lose only one day from work. Surgery involves a relatively small financial drain for the patient and hospital. The avoidance of hospitalization and return to full activity shortly after surgery minimize postoperative morbidity and mortality.

The following report appears in its entirety.

Saphenous Vein Preservation

LARI ATTAI, M.D.*
The Bronx, New York

Attending, Cardiothoracic Surgery, Montefiore Hospital and Medical Center

Autogenous saphenous vein continues to be the favorite conduit used by cardiac surgeons for aortocoronary bypass for treatment of patients with atherosclerotic heart disease. The saphenous vein is readily available in sufficient length from one or both legs in patients who did not have venous stripping. In a majority of our patient population the saphenous vein from the lower leg or the thigh has an optimal caliber and provides ideal flow characteristics; it is easy to handle technically and yields satisfactory short- and long-term patency rates. Its unlimited

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* *By invitation.*

length allows performance of multiple bypasses either individually or in a sequential manner. These characteristics make the saphenous vein, to date, the most ideal and most commonly used conduit for aortocoronary bypass. Our experience and the published data from the Cleveland Clinic suggest that even in the presence of phlebosclerosis or localized varicosities the saphenous vein can be used for bypassing coronary arteries with reasonably good patency rates. The segments of the saphenous vein that are dilated by aneurysm can be reinforced with synthetic graft or another segment of autologous vein to prevent further dilatation and possible rupture under systemic pressure.

I wish to amplify Dr. Nabatoff's plea for a more conservative approach, and would like to urge members of this Society who are involved in the management of varicose veins of the lower extremities to consider preservation of the saphenous vein whenever possible for future need as a conduit for aortocoronary bypass graft. Until such time when a suitable prosthetic or bioprosthetic conduit is available for use in small-vessel bypass, we depend heavily on the use of autologous saphenous veins. Currently, therefore, a more conservative treatment such as the type suggested by Dr. Nabatoff is preferred in the hope of preserving segments of the saphenous vein that are not affected by varicosities.

The following article appears in its entirety.

Prevention of Pulmonary Embolism With Use of Mobin-Uddin Filter

GIL HAUER SANTOS, M.D.*
New York City
STEVEN LANSMAN, M.D.*
New York City

From the Department of Surgery, Jacobi Hospital and the Albert Einstein College of Medicine–Montefiore Hospital and Medical Center

Pulmonary embolism is a major cause of death for hospitalized patients. It is estimated that from 50,000 to over 100,000 deaths a year in the United States can be directly attributed to it.[1,2] This is due to the large incidence of deep vein thrombosis of the lower extremities present in seriously ill patients, as well as in postoperative and post-trauma patients. The sudden dislodgement of a major thrombus producing immediate death is a very rare occurrence, and in the vast majority of patients there is migration into the pulmonary circulation of minor emboli which can precede a larger, lethal, episode. In other cases the combined effect of a large number of smaller emboli can also produce significant hemodynamic and respiratory disturbances that precipitate a fatal outcome.

When a patient's symptoms and history associated with clinical signs strongly suggest the diagnosis of pulmonary embolism, a careful evaluation is necessary. Pulmonary angiography is the definitive test to demonstrate pulmonary emboli. However, in several instances, a radioisotope perfusion lung scan in conjunction with chest roentgenograms will be appropriate and sufficient to confirm the diagnosis.

Following an episode of pulmonary embolism the chances of a fatal recurrence are very high, and immediate steps should be taken to prevent this recurrence. Unless there is a contraindication, the initial therapy for prevention of recurrence of pulmonary embolism is anticoagulation.

This can be achieved with intravenous infusion of 30,000 to 45,000 units of heparin per day. Initially, in our series, this dose was administered by intermittent boluses of 5,000 to 10,000 units every 3 to 6 hours and adequate heparinization was defined as elevation of the partial thromboplastin time to 1.5 to 2.5 times control values. More recently, heparin has been given as a continuous infusion of 1,000 to 2,000 units per hour and monitored by the activated partial thromboplastin time. Even under adequate anticoagulation, embolization can still occur. This was well documented in 1970 during the urokinase pulmonary embolism trial when an 18 percent recurrence rate, half of the cases fatal, was observed in patients with adequate anticoagulation.[3] Heparin's only effect on an established thrombus is to prevent its propagation.[4] The final resolution and recanalization are due to specific metabolic mechanisms.

There are patients, however, who cannot be anticoagulated due to their underlying pathologic conditions. For these patients, the mechanical interruption of the IVC (inferior vena cava) as suggested by Homans[5] in 1944, would prevent further migration of lower extremity emboli into the pulmonary artery. The indications for mechanical interruption of the IVC are:

1. Anticoagulation contraindicated
    Bleeding
        Gastrointestinal
        Genitourinary
        Cerebral hemorrhage
        Post-trauma
        Postoperative
2. Failure of anticoagulation
3. Prophylaxis
    Iliofemoral thrombosis
    Fractures in elderly
    Obesity associated with prolonged bed rest

Originally, this interruption was provided by direct access to the IVC, using simple ligature or clips that completely obliterated the flow of blood.[6] Direct application of clips or elaborate suture techniques that permitted the flow of blood but would prevent the passage of major emboli were also developed,[7,8] and in some instances are still recommended when another abdominal procedure is being performed concomitantly.[4] However, the high rates of mortality and morbidity[6,9–11] associated with the direct approach to the IVC in patients already maximally compromised by their underlying disease provided the impetus for the development of new ways to occlude the IVC without submitting the patient to any major surgery.[12–18]

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* *By invitation.*

This was made possible by the development of filters that can be introduced in the IVC with a simple dissection in the neck, taking advantage of the anatomic disposition connecting the right jugular vein in a straight line with the IVC. These filters are capable of preventing the migration of clots larger than a few millimeters, and at the same time they permit the flow of blood. Because they do not occlude the IVC immediately, there is the theoretic possibility that if occlusion occurs there will be time for sufficient collateral circulation to develop around the obstructive filter.

Material and methods

From the several filtering devices available it appears to us that the one introduced by Mobin-Uddin can accomplish this purpose in an efficient and simple way.

The filter implantation procedure is well-standardized and can be done expeditiously with the help of an x-ray image intensifier.[19–21]

With the patient supine, his head is turned to the left side, and the right side of his neck is properly draped. The incision is made parallel and one inch above the clavicle over the two heads of the sternocleidomastoid muscle. The internal jugular vein is then exposed just between these two heads. After proper dissection, control of the vessel is obtained proximally and distally. A transverse incision is then made on the vein, and the umbrella carrier is introduced. With the aid of the image intensifier, the distal end of the umbrella is positioned at the level of the third lumbar vertebra. The stylet holding the umbrella is then held tight while the umbrella carrier is pulled up, thereby disengaging the umbrella without changing its position inside the vein. It is very important to pull up the carrier and not push down the umbrella, otherwise the umbrella can go far lower than intended and can even go down into one of the iliacs, as it did in one of our cases. After the umbrella is disengaged a slight upward traction on the stylet holding it will make sure that the umbrella is properly engaged in the IVC. The stylet is then rotated, releasing the umbrella. After removal of the stylet the jugular vein can be repaired with a continuous vascular suture. When the vein cannot be repaired, it can be ligated with no untoward effects.

The procedure is usually done in less than one hour with local anesthesia and is well-tolerated by the patient.

We want to describe our experience during the five-year period from July, 1974, to June, 1979, using the Mobin-Uddin umbrella filter. Thirty patients had an IVC umbrella inserted in our service at the Bronx Municipal Hospital Center—Hospital of the Albert Einstein College of Medicine. One other patient had an unsuccessful attempt of umbrella insertion, due to the fact that it was not possible to pass the stylet containing the umbrella through the right atrium into the IVC; as described by Greenfield,[21] the patient required a direct approach to the IVC where a partial occlusion clip was applied.

Indications for insertion. The indications for umbrella insertion in 30 patients were:

1. Anticoagulation Contraindicated	
Intracranial hemorrhage	6
Gastrointestinal bleeding	4
Retroperitoneal hematoma	3
Postoperative bleeding	2
Multiple trauma	3
Brain tumor	2
Canada-Cronkhite syndrome	1
Thrombocytopenic purpura	1
Total	22
2. Failure of Anticoagulation	
Recurrent embolization	3
Significant bleeding	5
Total	8

In this series, 22 patients had the filter inserted due to an established contraindication for anticoagulation. (The reasons for this contraindication have been detailed.) One unusual patient in this group was afflicted with Canada-Cronkhite syndrome, with extensive gastrointestinal polyposis and positive guaiac test result contraindicating anticoagulation. Another three patients were anticoagulated, but continued to have embolization and were therefore selected for IVC filter insertion. Five anticoagulated patients developed significant bleeding, two had both gastrointestinal and genitourinary bleeding, two had gastrointestinal bleeding, and one had hemarthrosis that necessitated evacuation of blood. They were also referred for surgery.

Complications. Immediate complications were few: one misplacement of the filter, one dislodgement, and one recurrent embolization. There were no cases of retroperitoneal bleeding. One filter misplacement was due to the use of a small filter, 23 mm. Subsequently, we did not use that size anymore and elected to use exclusively the larger, 28 mm. filter.

One significant technical detail during the disengagement of the filter from the stylet is that after positioning the filter, the umbrella carrier has to be pulled back to release the filter. In one case, the stylet was pushed down and the filter went down into the right iliac artery. A second attempt of insertion in the same patient resulted in a filter getting into the inferior division of the right renal vein. This was due to improper interpretation of the fluoroscopy image. Finally, a third attempt was made and a third filter was properly placed in the IVC. This patient was discharged in 1976 and is doing well four years post insertion.

Results

Nine patients died in the hospital and 21 were discharged. Twelve patients are still being followed for periods up to 60 months. Nine patients died after discharge or were lost to follow-up. Of the 30 patients operated on, only one died due to failure of the umbrella to prevent subsequent embolization. In this case, the umbrella and embolus were found in the pulmonary artery. It is, however, possible that if a 28-mm. filter, as opposed to a 23-mm., had been used, this patient could have also survived. There is some disagreement as to the rate of recurrent embolization after the filter implantation; this can be as much as 3 percent[22,23]; but this incidence was higher when the small, 23-mm. filter was used. Of the remaining hospital deaths, three were from terminal carcinoma, three from sepsis, and one each from myocardial infarct and abdominal abscess. Unfortunately, only four patients had a postmortem examination and therefore further embolization was ruled out in the remaining five patients based only on clinical criteria.

Conclusion

The insertion of a Mobin-Uddin filter in the inferior vena cava is a useful tool to be employed in the prevention of recurrent pulmonary embolism. It is safe and associated with a low rate of morbidity.

Summary

Thirty patients had a Mobin-Uddin umbrella filter inserted in the inferior vena cava at the Bronx Municipal Hospital Center and the Hospital of the Albert Einstein College of Medicine during a five-year period beginning July, 1974, and ending June, 1979. The indications for IVC filter placement were contraindication for anticoagulation in 22 cases, and failure or adverse effects of anticoagulation in 8 cases. The postoperative results on these patients are reviewed with a final discussion on the technical aspects of IVC umbrella insertion.

One patient in this series died with massive pulmonary embolization consequent to umbrella dislodgement and migration into the pulmonary artery. This was the only patient that did not benefit from the procedure.

In one more patient, who did not enter this series, it was not possible to pass the introducer through the right atrium into the opening of the IVC.

The authors conclude that insertion of an IVC umbrella is a useful procedure for prevention of pulmonary embolization in patients who cannot receive anticoagulants, and in those patients who continue to have embolization while adequately anticoagulated.

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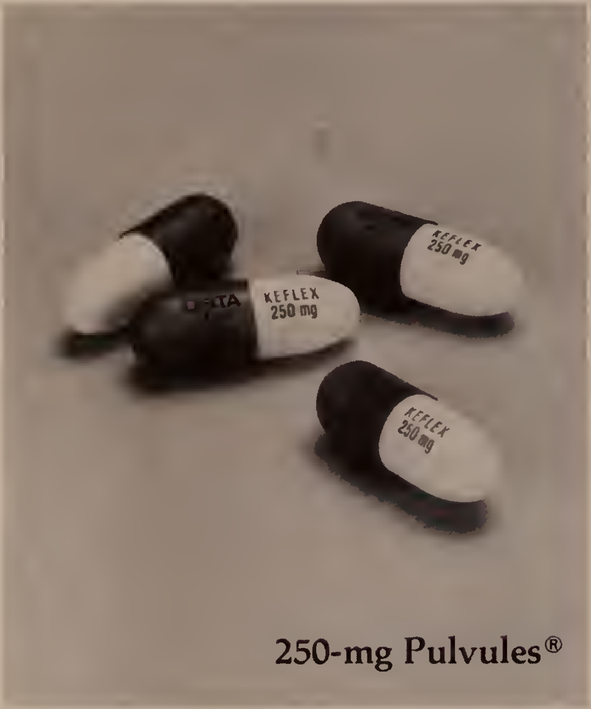

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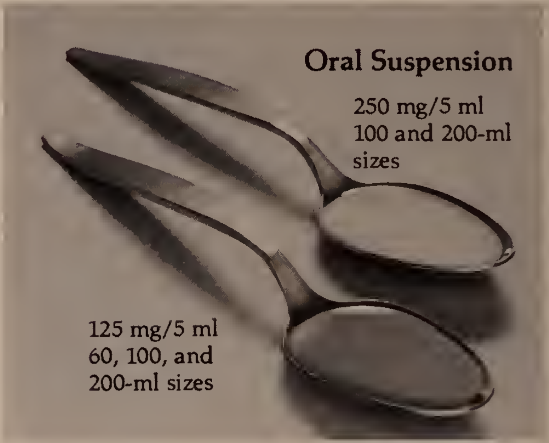

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Vascular Mass

Preoperative occlusion of Feeding vessel

Case history

Patricia Ann Randall, M.D.*: A three-year-old female was admitted to Upstate Medical Center, Syracuse, New York, for evaluation of a 4 by 5 cm. soft, elevated mass over the left shoulder posteriorly that had been present since birth but had recently increased slightly in size. The mass was not painful and caused no symptoms. As part of the evaluation, angiography was planned before attempting surgical excision of this mass.

Physical examination demonstrated a three-year-old black female in no acute distress. Vital signs were normal. Head and neck examination was normal. Cardiac examination was benign and without murmurs and the chest was clear. Over the left scapula was a large 4 by 5 cm. protruding mass without discoloration of the skin. The mass was soft, compressible, and a palpable thrill was present. A grade I-II systolic bruit could be heard over the lesion. The remainder of the physical examination was normal.

Results of all laboratory examinations were normal.

On the second hospital day, the patient underwent left subclavian arteriography.

Arturo A. Fajardo, M.D.†: A selective left subclavian arteriogram was performed. Rapid sequence magnification radiographs of the left upper thoracic wall, including the left shoulder joint was obtained.

A hypervascular mass, measuring 4.5 cm. by 3.3 cm. was noted in the left suprascapular region. The main blood supply of this mass was a large artery arising from the left mid-subclavian artery approximately 3 cm. distal to the origin of the left thyrocervical trunk. Multiple smaller arteries arising from the left lateral humeral circumflex branch contributed to the vascularity of this mass. Large and tortuous early draining veins were noted in and around the mass, emptying into the left external jugular vein (Fig. 1A).

Consultation with the pediatric surgeon was made and the decision reached to embolize the tumor's main blood supply prior to surgical excision. A Number 5 French polyethylene catheter was advanced without difficulty into the main feeding vessel. Using a 0.038 inch guide wire (Newton-B), a minicoil (Gianturco embolization coil 3 mm. diameter) was deposited into the distal segment of the feeding vessel. Complete occlusion was achieved following the deposition of a second minicoil. A postembolization left subclavian arteriogram confirmed the total occlusion of the tumor's main blood supply (Fig. 1B).

Dr. Fajardo's diagnosis

Hemangioma of the left posterior shoulder with satisfactory embolization of main arterial feeding vessel

Dr. Randall: One day later the patient was taken to surgery for excision of this mass.

David Dudgeon, M.D.:** Surgical removal of this large cavernous hemangioma was facilitated by preoperative arterial embolization. The mass clinically had been reduced in overall size and in the degree of tissue tension following embolization. The bruits, which had been audible prior to embolization, were no longer present at the time of surgery. Operative dissection and gross excision of all tumor was easily accomplished. The use of preoperative embolization did not hinder the identification of the remaining arterial blood supply and draining veins.

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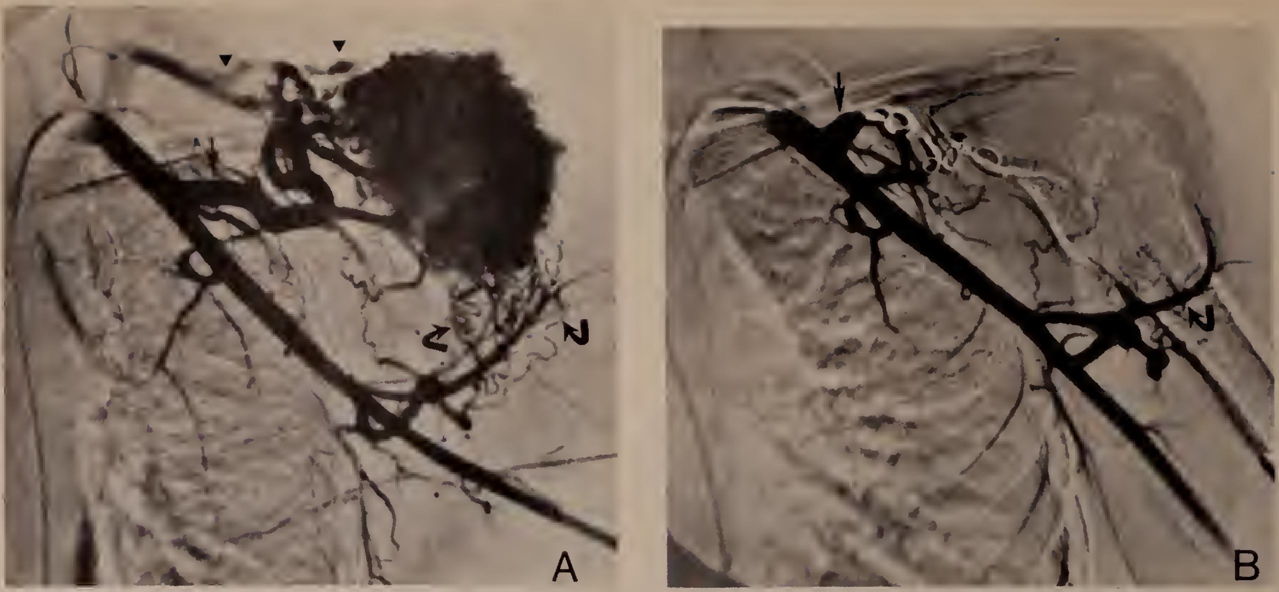

FIGURE 1. (A) Preembolization left subclavian subtraction arteriogram. The tumor's main arterial supply (thin arrow) comes off left subclavian artery. Smaller arteries (curved arrows) from left humeral circumflex artery contribute to tumor's vascularity. Large early draining veins (arrowheads) empty into external jugular vein. (B) Postembolization left subclavian subtraction arteriogram. Note the two Gianturco minicoils (fat arrows) completely occluding main feeding artery (thin arrow).

Although there was some capillary and venous oozing during the excision, the total blood loss was markedly less than usually experienced when preoperative embolization is not used.

Pathologic discussion

Bedros Markarian, M.D.: The surgical specimen was a soft, spherical mass measuring 3.5 by 4 by 3.5 cm. with an elliptical piece of dark-brown skin covering one surface. On cut section a red, soft, spongy mass which exuded blood was seen under the skin. Microscopic examination showed a tangle of thin-walled, small, and cavernous structures (Fig. 2) under the skin consistent with a hemangioma. Cavernous hemangiomas occur on the skin and mucosa as well as in visceral organs. This case appears to be a cavernous and capillary hemangioma of the skin.

Comment

Dr. Randall: Although the diagnosis of this left posterior shoulder mass was obvious clinically, arteriography was undertaken initially because it is a well-established diagnostic tool that yields valuable information in the preoperative evaluation of tumors of the limbs.[1–6] Selective arteriography of peripheral hemangiomas demonstrates definitively the exact type, extent, degree of vascularity, source of vascular supply, and drainage of these lesions.

Because of the current trend toward more interventional involvement of the vascular radiologist, and because of the inviting vascular anatomy of this patient's lesion, preoperative embolization of the main arterial feeding vessel of the hemangioma was successfully undertaken. The precedent of preoperative

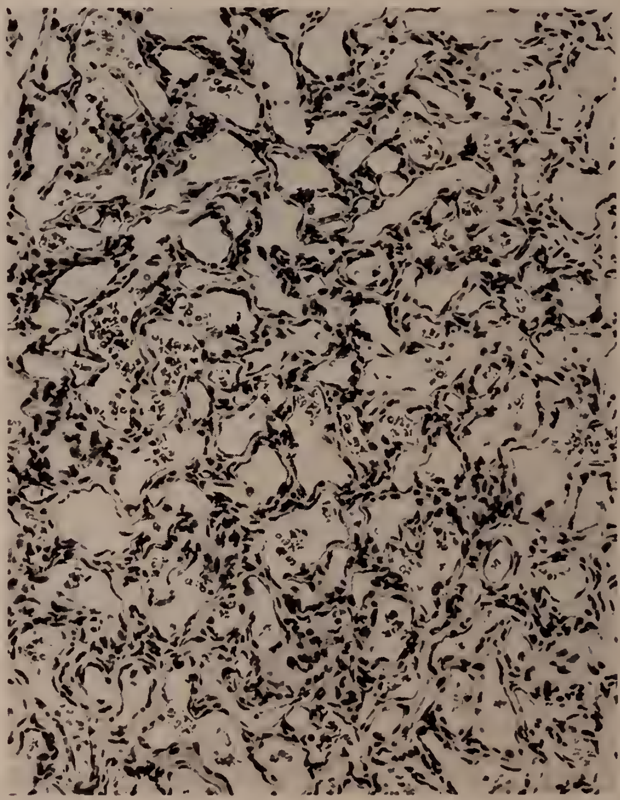

FIGURE 2. Photomicrograph demonstrating many thin-walled vascular structures separated by scant connective tissue (hematoxylin and eosin × 140).

embolization has been set as part of the treatment of vascular hypernephromas at our institution as well as elsewhere.[7] Vascular malformations of the face have been treated with gelfoam embolization as part of the definitive therapy.[8] Partial embolization of large peripheral hemangiomas has been performed for pain control.[9] Excellent cosmetic results have been obtained after transcatheter arterial embolization of the feeder vessels of orbital hemangiomas.[10] Embolization can be a possible method of preoperative treatment in angiomas or any vascular tumors, and for curing some vascular malformations.[11]

Final diagnosis

Capillary cavernous hemangioma of the shoulder

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Appendicitis still defies instant medical diagnosis

Acute appendicitis rarely kills anyone, thanks to modern surgery and infection-curbing drugs.

But appendicitis remains one of the most common causes of surgery in the United States today. It takes a major toll in medical and hospital costs, time lost from work, and pain and suffering.

The patient arrives at the hospital with sharp pain in the lower abdomen. Is it appendicitis? Or acute indigestion?

Surprisingly, the physician cannot always tell immediately whether the abdominal pain is appendicitis or not. It requires some tests and some hours of time.

But delay in operating can be dangerous for the patient, if indeed he does have a swollen, inflamed appendix. Surgeons have long known that it is necessary to take out an occasional healthy appendix to avoid delaying too long the decision to operate.

If the surgeon waits too long for a definite diagnosis of acute appendicitis requiring surgery, the inflamed appendix may rupture. This greatly complicates the surgery and is a life-threatening event.

A recent study among hospitals in Wisconsin, reported in the September 18 Journal of the American Medical Association, indicates that a more careful evaluation of each patient may cut back somewhat on the ratio of healthy appendices that are removed.

Don E. Detmer, M.D., of the University of Wisconsin, Madison, conducted a study on behalf of the Wisconsin Professional Review Organization of 2,375 cases of acute appendicitis.

There were only four deaths in the entire group, a ratio of 0.17 percent. Infections from the incision occurred in only 5.3 percent of the cases.

Some 14 percent of appendices removed were normal, more in women than in men. The rupture rate was 13.4 percent.

Mean hospital stay for appendicitis was 5.4 days. For those with ruptured appendices the stay was 10.2 days.

A careful analysis of the ratios of normal appendices removed versus ruptured appendices led the researchers to conclude that it might be possible, with more careful diagnostic work in advance, to reduce the rate of surgery for healthy organs somewhat.

The conclusion of the Wisconsin study was that a small but real decrease in negative appendectomy rates could be achieved without producing more ruptures.

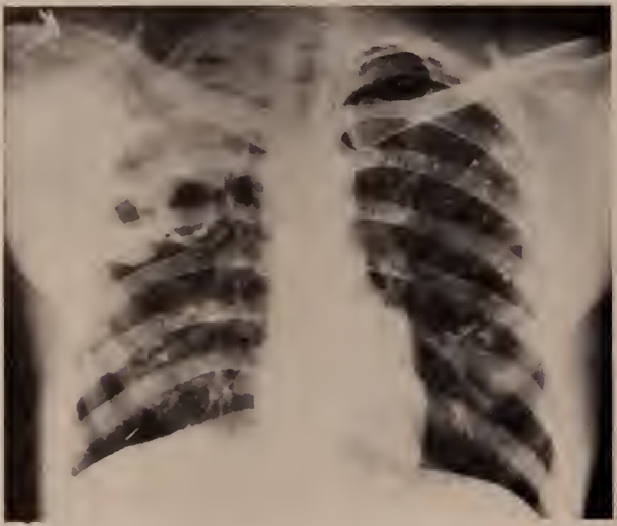
Radiologic Problem of the Month

Montefiore Hospital and Medical Center
The Bronx, New York

Editor

KAKARLA SUBBARAO, M.D.
Professor of Radiology at
Albert Einstein College of Medicine

Multiple Lucencies of the Chest



X-ray of a 58-year-old man complaining of cough and vague chest pains.

Elucidation

The posteroanterior view of the chest reveals multiple small calcifications scattered in the left lung, indicative of old, healed granulomatous disease. Multiple ring-shaped lucencies are noted in the right upper hemithorax; some of these are filled with fluid and some show varying air and fluid levels. Since the outer margin of some lucencies are well-defined, these spheroid structures cannot be in the lung, but are extraparenchymal. On questioning, the patient gave a history of having been previously treated for pulmonary tuberculosis about 30 years ago. Hence, these lucencies should represent lucite balls used for plombage in the late 1940s and in the 1950s. The air and fluid levels represent infection, tuberculous or otherwise.

In 1946 lucite plombage was utilized[1,2] for collapse therapy of pulmonary tuberculosis, when all other modes of treatment had failed. This trend of therapy has continued for a decade and was abandoned later. However, an occasional patient may be encountered who has survived this mode of therapy. This poses a diagnostic problem for the unwary physician, when encountered with a similar radiograph. The common complications of lucite plombage are (1) infection extending into the lucite spheres; (2) migration of these lucite balls into soft tissues and into other organs,[3] and (3) the formation of pleural and extrapleural fistulae. In order to overcome some of these problems, extraperiosteal plombage has been employed.

Another modified procedure adapted for therapy was placing these spheres in a nontoxic type of plastic bag made of cellophane that is then sealed and placed in the thorax, or the open end is carefully wrapped and sutured around a rib. Whatever modifications were made, complications could not be avoided. With technical developments in surgery and anesthesia, plombage is purely anecdotal.

The radiologic appearances of lucite plombage are quite characteristic. The perfectly round lucencies that are uniform in size, are all packed closely in the upper portion of the hemithorax. The outer edges of the walls of the spheres are usually not viable, as there is surrounding fibrotic reaction. Demonstration of outer walls indicates the presence of air surrounding the spheres, as from a fistula, connecting the plombage to airways. The air and fluid levels in some of the spheres definitely indicate extension of infection. In the study of Inada[1] development of fluid levels was an indication for removal of the plombage in 27 of his 63 patients. The fluid in these 22 cases revealed mostly tubercular infection but nontubercular organisms were also responsible.

In the differential diagnosis, one may presume these lucencies to be located in the lung and consider emphysematous bullae. The air and fluid levels are mistaken for septic emboli or cavitating metastases. However, awareness of this type of plombage and observing that these are extraparenchymal and closely packed in one area avoids confusion.

Diagnosis

Infected spheres in an old lucite plombage for upper lobe tuberculosis

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Electrocardiograms of the Month

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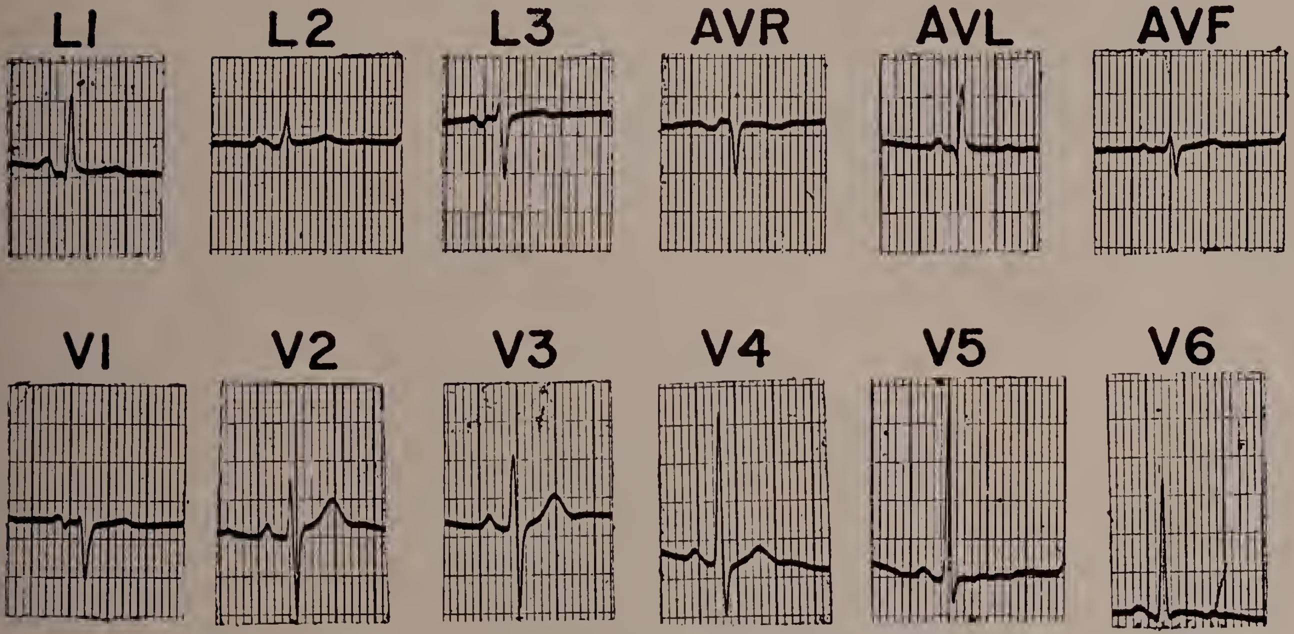
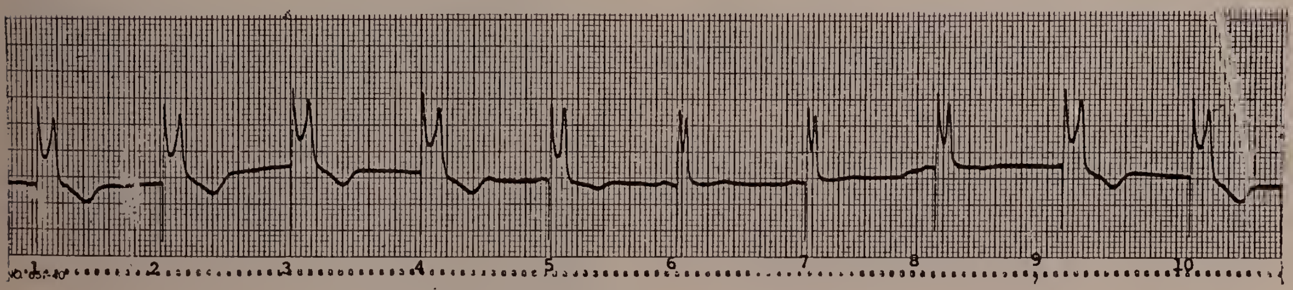


QUESTION 331. A 62-year-old male was admitted for elective prostatic surgery. He had no history of cardiac disease. The electrocardiogram was obtained on admission. What is the interpretation? Should patient be cleared for surgery?



QUESTION 332. Lead 2. What is the rhythm?

Electrocardiograms of the Month

ELUCIDATION

Question 331. The rhythm is regular sinus. The T waves are flat in V_5 and V_6 and low in 1 and L. These are nonspecific T wave abnormalities.

If a prior electrocardiogram was available and similar, no further action would be necessary and the patient could be approved for surgery. If a prior electrocardiogram was not available, a repeat tracing should be obtained the next morning and, if unchanged and the patient asymptomatic, surgery can proceed. These T wave abnormalities can be due to a variety of causes making clinical evaluation essential.

Question 332. There are pacemaker spikes firing at a regular rate of 60 per minute. Each spike is followed by a ventricular depolarization. Beats 1 to 4 and 9 and 10 are not preceded by a P wave, have similar ventricular configurations, and similar S-T and T waves. Beats 6 and 7 have a narrower ventricular depolarization wave, an upright T wave, and are preceded by a P wave by 0.12 second. Beats 5 and 8 are intermediate in configuration. They are preceded by P waves with a shorter P-R interval of 0.09 second.

The patient's ventricular pacemaker is functioning properly in the fixed rate mode. Beats 5 to 8 represent varying degrees of fusion between the paced beats and the sinus beats.

Pritikin diet offers no new aid for peripheral vascular disease

The Pritikin regimen, a high-fiber, low-fat diet and exercise program, offers no more relief from peripheral vascular disease than does the more moderate American Heart Association diet combined with exercise, say researchers at the University of Alberta, Edmonton.

In fact, there is some evidence that the lower fat and protein intake requirements of the Pritikin plan may lead to reduced resistance to infection, poor wound healing, and low intake of calcium and iron in dieters, possibly making the program unsuitable for pregnant women and other women of child-bearing age, warns Gordon Brown, M.D., clinical professor of medicine.

The findings, reported in the Medical News section of the Journal of the American Medical Association (October 23), resulted from a study of 50 patients with peripheral vascular disease at four Edmonton hospitals. Subjects followed either the Pritikin diet or the AHA diet (moderate in fat, fiber, and cholesterol) for one year and also exercised. Both patient groups were comparable in age, sex, smoking habits, exercise levels, and biochemical characteristics at the beginning of the study.

Improved fitness and loss of weight occurred and were comparable in both groups, but there was no evidence of increased blood flow in the limbs in either group.

"We cannot see any advantage of the Pritikin diet as compared with the American Heart Association diet" for such patients, Dr. Brown said.

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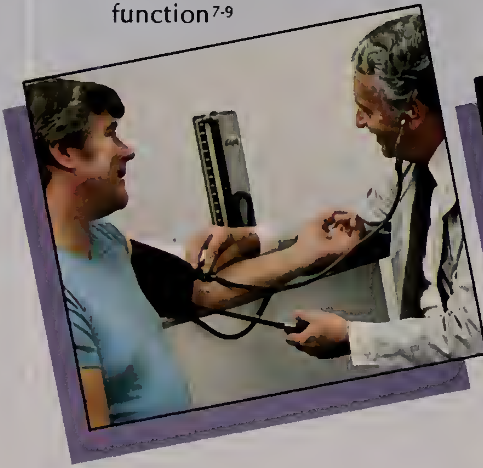

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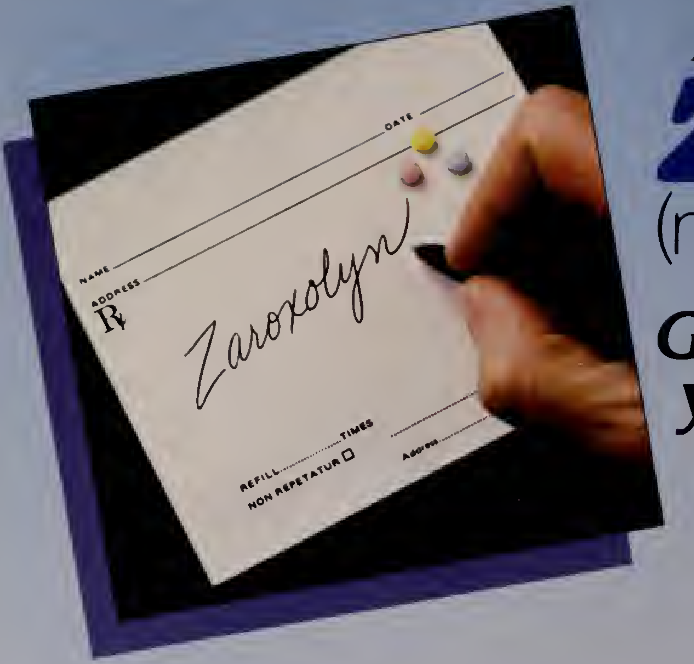

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A-297

Elevated Serum Angiotensin-Converting Enzyme in Pulmonary Granulomatosis

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Intravenous drug abusers are subject to a variety of medical problems which result in acute or chronic lung disease. Heroin and other drugs sold on the street are often diluted with a variety of fillers. Insoluble fillers such as talc can produce foreign body granulomas in the lung.[1] This type of granulomatous disease of the lung has many features of sarcoid, and at least one case has already been described in which the two diseases were thought to coexist.[2] Recently, the serum ACE (angiotensin-converting enzyme) assay has been described as a useful test in the diagnosis of sarcoid.[3] However, the enzyme is also elevated in several other granulomatous disease states including leprosy, Gaucher's disease, Lennert's lymphoma, and lymphangioleiomatosis.[4]

We report here another previously unrecognized cause of an elevated serum ACE level, namely, that associated with foreign body granulomas in the lung secondary to drug abuse.

Case report

A 54-year-old black male gave a 20-year history of alcoholism and drug abuse including "mainlining" and "snorting" a variety of drugs but predominantly heroin and cocaine. He had no previous history of lung disease until 1979 when he noted the onset of a nonproductive cough associated with shortness of breath and dyspnea on exertion. A chest roentgenogram showed diffuse bilateral reticulonodular infiltrates and hilar adenopathy (Fig. 1). On physical examination his skin showed multiple ulcers and scars secondary to "skin-popping" and "mainlining." No lesions suggestive of sarcoid were seen. Examination of the eyes including fundi disclosed nothing remarkable. There was no adenopathy and the lungs were clear to auscultation and percussion. On cardiac examination S_1 was normal; S_2 was widely split with an accentuated P_2. There was no hepatosplenomegaly. Marked clubbing of the fingers was noted, but the remainder of his physical examination gave normal results.

A tuberculin skin test using 5 units of purified protein derivative resulted in 10 mm. induration. Hemoglobin, white blood-cell count, and platelet count were all normal. Electrocardiogram, blood chemistries, and urine analysis gave normal results. Liver function tests showed a mildly elevated alkaline phosphatase and SGOT (serum glutamic oxaloacetic transaminase). The sedimentation rate was 100 mm. per minute, and the serum protein electrophoresis revealed diffusely elevated alpha-1 and gamma globulins. Testing for HB_sAG (hepatitis B surface antigen) gave negative results.

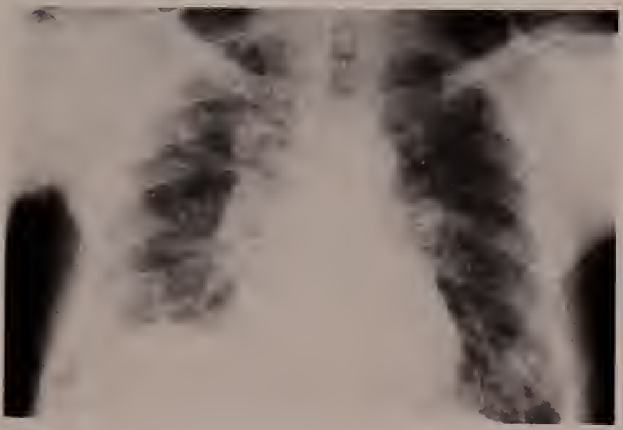

FIGURE 1. Chest roentgenogram. Posterior-anterior film showing bilateral hilar adenopathy and reticulonodular infiltrates.

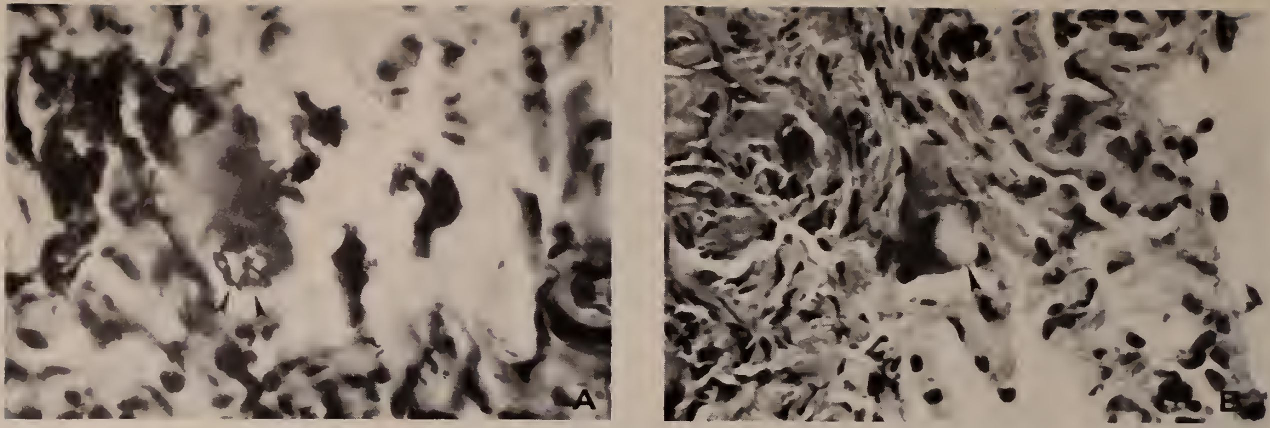

FIGURE 2. (A) Endobronchial mucosal biopsy shows granuloma containing large nonpolarizing particles (arrows) surrounded by foreign body giant cells (original magnification × 400). (B) Transbronchial lung biopsy showing granuloma within interstitium containing nonpolarizing particle (arrow) in foreign body cell (original magnification × 400).

On pulmonary function testing, FVC (forced vital capacity), FEV_1 (forced expiratory volume in 1 sec.), MVV (maximum voluntary ventilation), and lung volumes were all within normal limits. The peak flow and the flow-to-volume ratios at V_{50} and V_{25} were also normal. The D_{LCO} (diffusion capacity) was 6 ml. per minute mm. Hg with a predicted rate of 15 ml. per minute mm. Hg. The resting arterial pH was 7.43, pCO_2 (carbon dioxide pressure) 31 mm. Hg, and pO_2 (oxygen pressure) 84 mm. Hg with an alveolar-arterial oxygen gradient of 27 mm. Hg. With exercise, the arterial pH was 7.40, pCO_2 31 mm. Hg, and pO_2 40 mm. Hg with an alveolar-arterial gradient of 71 mm. Hg.

Cardiac catheterization showed a pulmonary artery pressure of 43/20 (mean pressure 29) mm. Hg and a pulmonary artery wedge pressure of 5 mm. Hg. A pulmonary angiogram demonstrated markedly enlarged main pulmonary arteries, but no pulmonary emboli.

Fiberoptic bronchoscopy showed normal endobronchial anatomy, but marked granularity of the mucosa was noted throughout. Endobronchial and transbronchial biopsies revealed numerous foreign bodies with granulomatous reaction in both the endobronchial mucosa and the interstitial lung parenchyma (Fig. 2).

Liver biopsy showed macronodular cirrhosis but no granulomas were seen. Results of the Kveim-Siltzbach test were negative and the serum lysozyme level was normal. Gallium scan demonstrated diffuse uptake in both lung fields but no parotid involvement.

Multiple serum samples for ACE were elevated to a level of 150 to 175 I.U. per liter. Our enzyme assays were performed by Upjohn Company using a method developed by Ryan in which the normal range for males is 35 to 125 I.U. per liter. This assay has been shown to be linearly related to Lieberman's assay by a factor of 3.6 to 1.[5]

Comment

Many of our patient's roentgenographic and clinical findings were suggestive of sarcoid. However, the presence of numerous foreign bodies within granulomas, the lack of evidence for sarcoid in other organs, and the negative results of Kveim-Siltzbach test favored a diagnosis of foreign body granulomatous lung disease rather than sarcoid.

Talc granulomatosis of the lung due to intravenous drug abuse is the best-studied form of foreign body granulomatous lung disease in addicts.[2] The granulomas in such patients contain birefringent, needle-like talc crystals and are usually located around small pulmonary arteries although they may be located predominantly in the interstitium.[1,6] The foreign bodies seen in the endobronchial and transbronchial tissue from our patient did not resemble talc morphologically and were not birefringent under polarized light. They were granular in appearance and located predominantly in foreign body giant cells. As yet the composition of these particles has remained undetermined. The granulomas were not well-developed, but were found both in the bronchial mucosa and in the lung parenchyma. Previous reports of foreign body pulmonary granulomatosis in drug addicts have not described granulomas within the bronchial mucosa. The presence of both endobronchial and parenchymal foreign body granulomas in our patient may have been due to the combination of inhalation and intravenous drug abuse. The granulomas in the lung parenchyma were located predominantly within the interstitium with no marked periarteriolar distribution. Pulmonary hypertension has been noted in many cases of talc-induced pulmonary granulomatosis, particularly in those cases in which the granulomas were located predominantly around the pulmonary arterioles.[6] In our patient a moderate degree of pulmonary hypertension was also found in spite of the absence of periarteriolar granulomatous disease.

The angiotensin-converting enzyme assay has been described as a useful test in the diagnosis of sarcoid.[3] In that disease the cause of the elevated ACE level is unknown, but the enzyme is thought to be released by monocytic cells that have been transformed from phagocytic into storage or secretory cells such as the epithelioid cells of sarcoid or the Gaucher cell of Gaucher's disease.[7] The enzyme is also produced by the endothelial cells of most capillaries and some arteries as well as by the brush border cells of the proximal convoluted tubules of the kidney.[8]

Recent reports have noted a number of other disease states in which "borderline" elevation of the serum ACE has been found.[4,9] Foreign body granulomatosis of the lung may be yet another disease in which similar ACE-secreting cells are found. These cells may be "sarcoid-like" in that they share the common activity of ACE synthesis. Interestingly, Lieberman and his associates[10] demonstrated that in rabbits with pulmonary granulomatosis induced by intravenous Freund's adjuvant, the alveolar macrophages were induced to synthesize and release ACE. In some respects this animal model may be similar to the disease state found in humans with foreign body pulmonary granulomatosis induced by intravenous drug abuse.

The finding of an elevated ACE level in a patient with foreign body pulmonary granulomatosis emphasizes the point, as stated by Siltzbach,[11] that the ACE assay should only be used as an adjunct in the diagnostic evaluation of sarcoid and should not replace the clinical, radiologic, and pathologic findings of recognized value in the diagnosis of this disease.

Summary

Foreign body granulomatosis of the lung due to intravenous drug abuse is a well-recognized disease entity. Most of the previously reported cases have been associated with the deposition of talc in the pulmonary parenchyma that elicits a foreign body granulomatous reaction. Our case was unusual in that a nontalc foreign body granulomatous reaction developed in both the endobronchial mucosa and the pulmonary parenchyma, presumably due to the combination of inhalational and intravenous drug abuse. Of additional interest was the fact that the serum angiotensin-converting enzyme was significantly elevated. This enzyme has been reported as being elevated in a variety of granulomatous disease states in addition to sarcoid but never previously in foreign body granulomatosis of the lung.

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Scombroid Fish Poisoning

In central New York State

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Sporadic reports of histamine-like systemic reactions following human consumption of certain species of fish (scombroid poisoning) have been reported since the latter eighteenth century.[1] Most of these cases have occurred in coastal regions; only one previous case, in New York City, has been recorded in New York State.[2] The identification of scombroid poisoning in a patient who arrived at a hospital emergency department remote from the seacoast initiated the following investigation.

Case report

An Oriental woman and her 22-year-old son bought fresh tuna fish from a Japanese fish dealer in Brooklyn, New York. Although the fish was refrigerated from time of purchase to time of cooking, no information was available concerning refrigeration from time of capture to time of sale.

The tuna was pan fried in oil and then eaten. Both mother and son experienced an immediate burning oral sensation followed by flushing, ocular chemosis, tachycardia, palpitations, and generalized erythema.

En route to the hospital, symptoms in both subsided spontaneously. The mother was totally asymptomatic by the time the son was seen in the emergency department. The son's blood pressure was 130/72 mm. Hg, pulse 78 per minute, and regular; respirations were 18 per minute, and oral temperature was 36.7°C. His face was diffusely red and there was an acutely pruritic macular rash on his trunk and extremities. His conjunctivae were injected, but his oral mucosa was normal. No rales or wheezes were heard on auscultation. There was no abdominal tenderness or hepatosplenomegaly. The rash and erythema quickly cleared following 50 mg. of diphenhydramine hydrochloride, intramuscularly.

Materials and methods

The patients brought the uneaten remainder of the suspect tuna fish along with them to the emergency department. A portion of the fish was cultured for bacteria; the remainder was immediately frozen for heavy-metal[3] and histamine[4] analysis. No urine or serum was obtained from either patient for histamine analysis.

Fresh tuna was purchased later at a local market, frozen for one month, thawed, and then delivered refrigerated to the mother who prepared the fish as before, using the same pan. This tuna was frozen immediately and served as a control for the toxicologic investigation.

Results

Gas chromatography/mass spectrometric analysis of the two fish samples demonstrated a histamine concentration of 335 mg. per 100-Gm. meat in the suspect fish, whereas histamine levels in the control tuna were 4 mg. per 100 Gm. of fish meat.

Aerobic cultures of the suspect fish grew out gram-positive rods; there was no anaerobic growth. Elevated levels of heavy metals were not detected in the fish by x-ray fluorescence spectrometric evidence.

Comment

The identification of an uncommon disease, outside the geographic location in which it might be expected to occur, presents a special diagnostic problem. However, recognition of the clinical syndrome allows proper therapy despite the unexpected location in which the disease occurs. Most patients affected by scombroid poisoning have mild symptoms and generally respond to parenteral or oral antihistamines. Patients with more severe illness require induced vomiting, parenteral epinephrine, and steroids.[1] Tracheal intubation may be necessary with severe scombroid reactions. Although not previously reported in the treatment of scombroid poisoning, we suggest that oral-activated charcoal treatment may be useful in patients in whom the time from ingestion to treatment has been prolonged (30 to 60 minutes), since histamine should bind to this substance.

Scombroid poisoning, recognized as a public health hazard, is due to improper refrigeration of salt water scombroid fish such as tuna, skipjack, bonito, saury, mackerel, seerfish, maki-maki, dolphin fish, and butterfly kingfish.[1] These fish contain substantial amounts of free histidine in their muscle that with spoilage can be converted by bacterial decarboxylation to histamine.[1,5] *Proteus* organisms have usually been implicated.[1,6,7] The high histamine content can be found in both affected "fresh" and processed (canned) fish.[7] The distribution of histamine in fish flesh has some anatomic variation;[5] thus, the degree of histamine reaction occurring in groups of people eating from the same spoiled fish may vary.

The maximum allowable level of histamine in fish is suggested to be 10 mg. per 100 Gm. of fish flesh.[7] However, technical difficulties have existed in the isolation, identification, and quantification of histamine in complex biological materials. Because of some of these considerations, we have developed a more specific procedure for identification and quantification of histamine in fish, using the gas chromatography/mass spectrometric method.[4]

The exact mechanism(s) of producing the histamine symptoms in man is unknown. Oral histamine is normally bound by gut mucin and converted to N-acetylhistamine by *Escherichia coli* in the bowel lumen.[7,8] That histamine in contaminated scombroid fish should be absorbed and cause symptoms has caused some investigators to postulate some other mechanism for the symptoms.[1,9] Histamine may not act along with but rather in consort with some other as yet unidentified substance(s).[1] The exquisite sensitivity of the gas chromatography/mass spectrometric method to identify substances may provide the investigative tool to unravel this puzzle.[4]

Summary

Two patients with scombroid poisoning arrived at an emergency room in central New York State, distant from the sea coast. Recognition of the disease despite its exotic presentation permitted prompt relief by antihistamines. A brief review of scombroid poisoning and its treatment has been presented.

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Acknowledgment. The authors wish to extend their appreciation to Miss Kandice Kelly for her secretarial assistance in the preparation of this manuscript.

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compare the analgesic effect

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Comparison of pain relief
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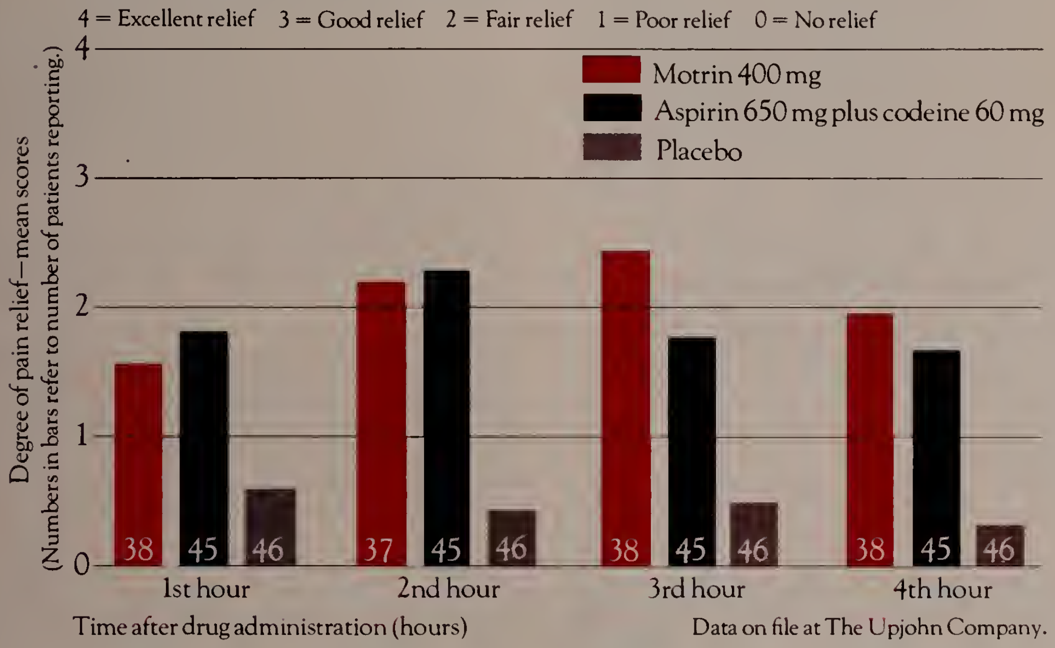

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Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. *Aspirin:* Used concomitantly may decrease Motrin blood levels. *Coumarin:* Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy nor by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,* epigastric pain,* heartburn,* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,* headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence 3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400, or 600 mg t.i.d. or q.i.d.
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MED B-4-S

Plaster casts for injured joints may do more harm than good

Immobilizing joints in plaster casts starves the tissues and can lead to joint destruction, a Toronto orthopedic surgeon says.

Quoted in the Medical News section of the Journal of the American Medical Association (November 6), Robert B. Salter, M.D., of the University of Toronto, thinks orthopedic surgeons who "make a fetish out of applying plaster casts" should look instead to the use of motion to heal injured or diseased joints.

Based on both animal and human studies, Salter has found that CPM (continuous passive motion) can have a dramatic effect on joint healing. Salter's work deals with synovial joints, which are free-moving joints lined with synovial membrane that secretes synovial fluid into the interior spaces of the joint. Examples of synovial joints are the knee, elbow, and hip.

In CPM, the joint is moved by a mechanical device through a pre-set range of motion during a specified time period; for example, one cycle every 40 seconds. This movement allows a continuous flow of synovial fluid through the joint. According to Salter, synovial fluid is the only source of nutrition available to the joint cartilage, which lacks blood vessels and nerves.

In one study using rabbits with knee joint injuries, Salter divided his animals into three groups; some were completely immobilized in plaster casts, some were allowed to move within a cage, and some were given CPM treatment.

After three weeks, the immobilized rabbits showed poor joint healing and half the normal range of motion. Ten weeks later, their joints were stiff and almost destroyed by overgrown synovial membrane.

Rabbits that were allowed movement in their cages showed healing after three weeks in about nine percent of the injuries and a return to near-normal range of motion after two weeks.

The most significant result occurred in the rabbits that had received CPM. Half their injuries showed healing at the end of three weeks, and range of motion returned almost completely after only one week.

In human studies, Salter reports that ten Toronto patients have undergone CPM. They were comfortable during the treatment and regained an excellent range of joint motion.

Salter speculates that elderly, arthritic individuals in rocking chairs may unwittingly be using that continuous, regular motion as a form of CPM to ease pain and stiffness in their joints. As further justification for CPM, Salter points out that the lowest incidence of degenerative arthritis in a joint occurs in those joints connecting the ribs with the spine, which move continuously with every breath.

Paracolostomy Hernia

Radiographic manifestations of an uncommon postoperative complication

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Paracolostomy hernia is an uncommon late complication usually seen in patients who have undergone end colostomies. We wish to discuss two cases and show their radiographic findings. To our knowledge, these findings have never been discussed in the English medical literature.

Case reports

Case 1. A 68-year-old white woman was admitted to North Shore University Hospital with a persistent and prominent fluctuant bulge to the left of her end colostomy. She was otherwise asymptomatic.

In 1959 she had had an abdominal perineal resection for rectal carcinoma. In 1971 a right hemicolectomy with an ileotransverse colostomy was performed for cecal carcinoma.

The only significant physical findings were bilateral paramedian abdominal scars, an end colostomy in the left lower quadrant, and a superficial, soft, grapefruit-sized, fluctuant, nontender mass lateral to the colostomy.

All laboratory findings were within normal limits.

A diatrizoate meglumine (Reno-M-DIP) enema revealed a dilated 10-cm. herniated colonic segment lateral to the colostomy os (Fig. 1A, B). The segment distended maximally after colonic opacification and returned to normal caliber after evacuation (Fig. 1C). The large bowel and distal small bowel were otherwise normal.

The presence of multiple bowel adhesions attached to the anterior abdominal wall precluded a simple

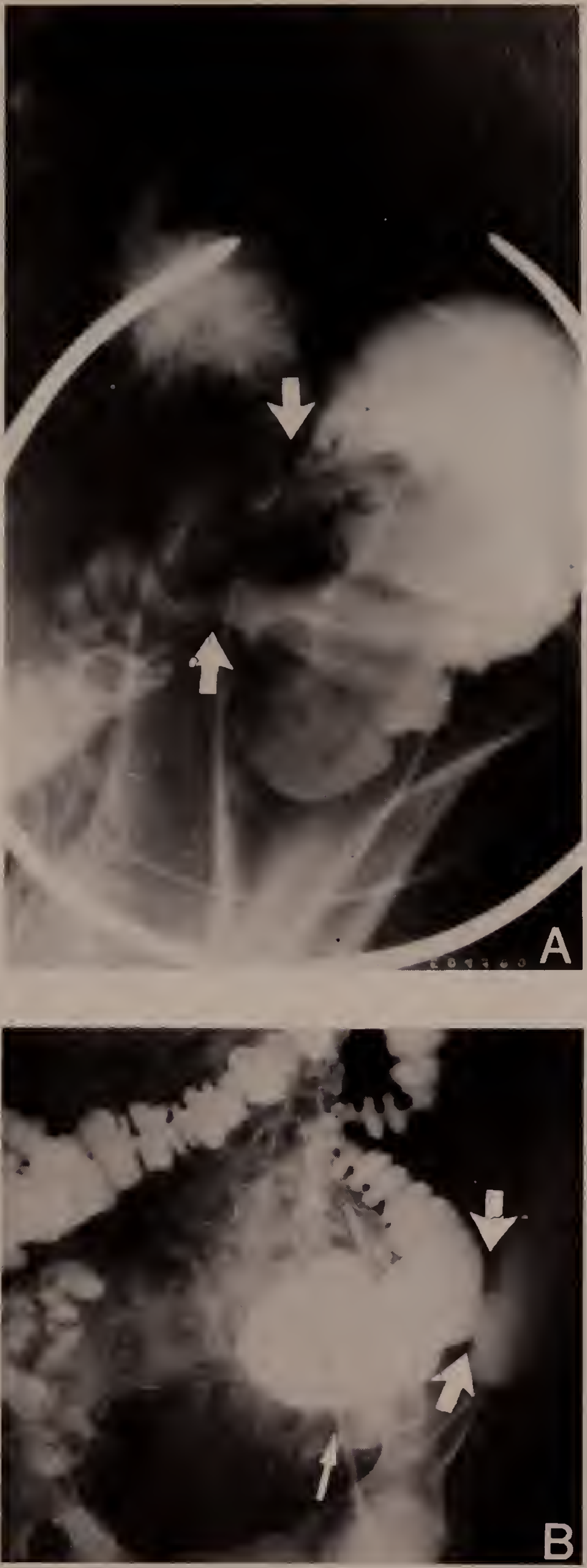

FIGURE 1. Case 1. (A) Fluoroscopic spot and (B) overhead films reveal entrance and exit of paracolostomy hernia (arrowheads) with enema catheter (thin arrow) in colostomy os.

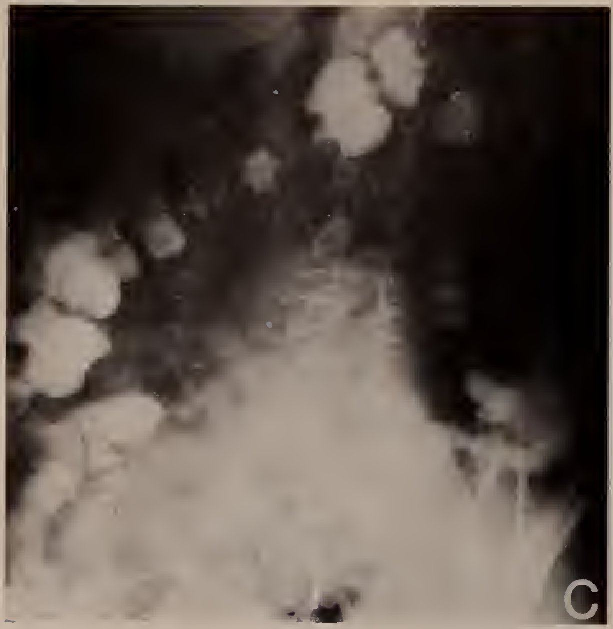

FIGURE 1. (C) Postevacuation overhead film shows herniated colonic segment of normal caliber. Enema catheter has been removed. Thin arrow identifies distal end of colon.

hernia reduction. The adhesions were lysed, a 24-cm. distal colonic loop was resected, and a new colostomy at the original site was created. The resected colonic segment was free of disease. The patient's postoperative course was uneventful.

Comment. Unlike most cases of paracolostomy hernia, the colostomy os was not part of the herniated segment. This factor, possibly related to the resection of a second colon carcinoma 12 years later, may have contributed to the resulting relatively complicated surgical procedure.

Case 2. A 67-year-old white man was admitted to South Nassau Communities Hospital for prostatism.

In 1950, he had had an abdominal perineal resection for rectal carcinoma. His only significant gastrointestinal symptom was occasional postirrigation leakage from the colostomy.

A barium enema revealed only the distal 20 cm. of large bowel, including the colostomy, with the hernia (Fig. 2A, B).

Comment. Unlike Case 1, the colostomy os was part of the hernia.

Comment

A paracolostomy hernia is usually asymptomatic. Whenever it produces a troublesome abdominal bulge, pain, altered bowel movements, bleeding, or leakage, the patient brings the problem to his physician's attention.[1] A retrograde contrast study is then done to rule out neoplastic or inflammatory disease and to evaluate a potential site of obstruction, or both.

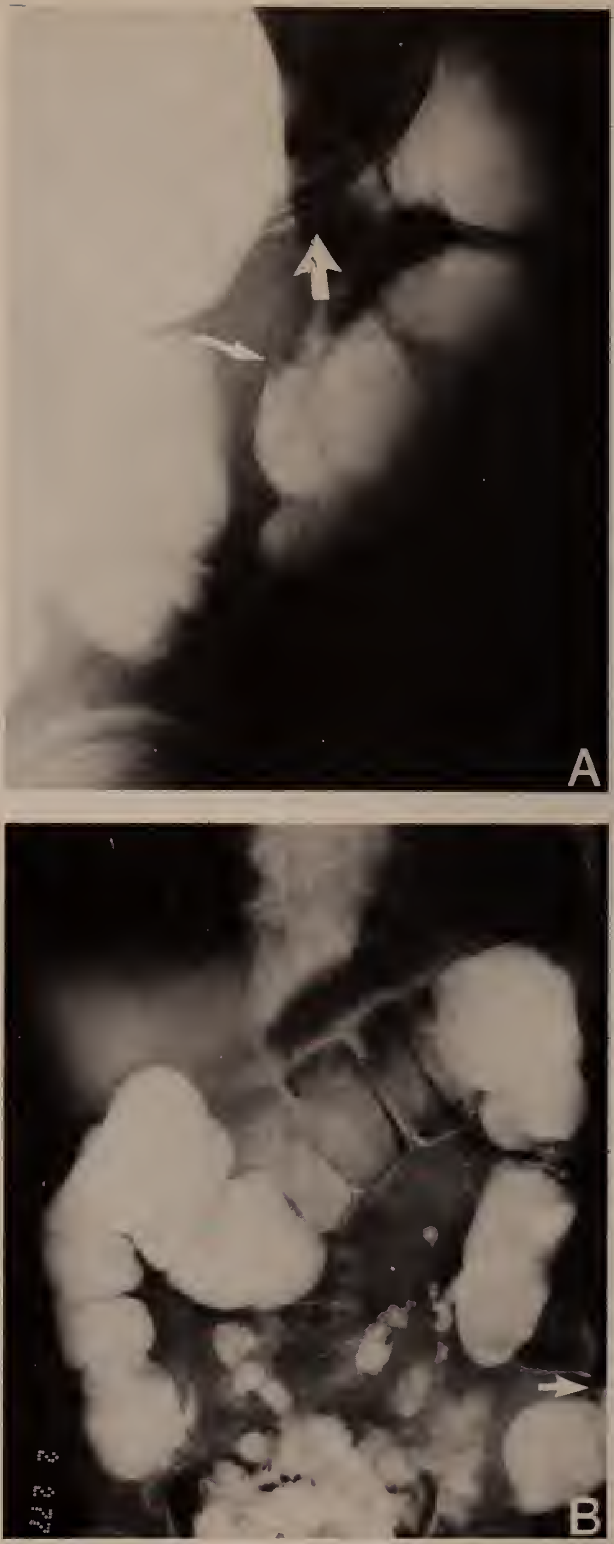

FIGURE 2. Case 2. (A) Spot and (B) overhead films reveal paracolostomy hernia with single connection (arrowhead) to proximal colon and enema catheter (thin arrow) in colostomy os.

Shackelford[2] has stated that paracolostomy hernias result from recurrent episodes of abdominal distention, thereby adding stress to an already weakened anterior abdominal wall. Rosin and Bonardi[3] claim such hernias more often occur whenever the colostomy is placed at the original paramedian incision, rather than made as a separate lateral stab wound.

Paracolostomy hernia is an infrequent postoperative complication. Over a 10-year period, Kronborg et al.[4] reported 42 paracolostomy hernias in 362 patients (8.6 percent) who underwent abdominal perineal resections. Only 4 of the 42 patients (9.5 percent) required reoperation. The other patients either required a hernial bandage or no treatment at all. Over a 24-year period, Burns[5] reported 16 paracolostomy hernias in 307 patients (5.1 percent) who underwent abdominal perineal resections; 6 of the 16 patients (37 percent) required reoperation.

A paracolostomy hernia must be differentiated from a colostomy prolapse. The hernia is a type of incisional hernia, in which peritoneal scar tissue, colon, and occasionally, small bowel protrude through the abdominal musculature and fascia or both and as a result bulge into the subcutaneous fat adjacent to the colostomy opening. The mucosal surface of the stoma is unaffected. Colostomy prolapse, as Shackelford[2] has stated, is really an intussusception at the stoma: the colonic mucosa everts onto the skin surface. It is a more common complication than paracolostomy hernia. Its significance depends on the length of the everted colonic loop. Cromar[6] divides prolapse into three progressive stages ranging from the more common simple and asymptomatic mucosal eversion, to extrusion of the entire colonic wall (including peritoneum and possibly a trapped small-bowel loop), to rare strangulation and ischemic necrosis of the intussuscepted bowel.

Summary

Two cases of paracolostomy hernia are presented. Pertinent x-rays are included. Usually the condition is asymptomatic. Occasionally, reoperation is required. To exclude causes other than primary weakness of the anterior abdominal wall, retrograde contrast studies are performed.

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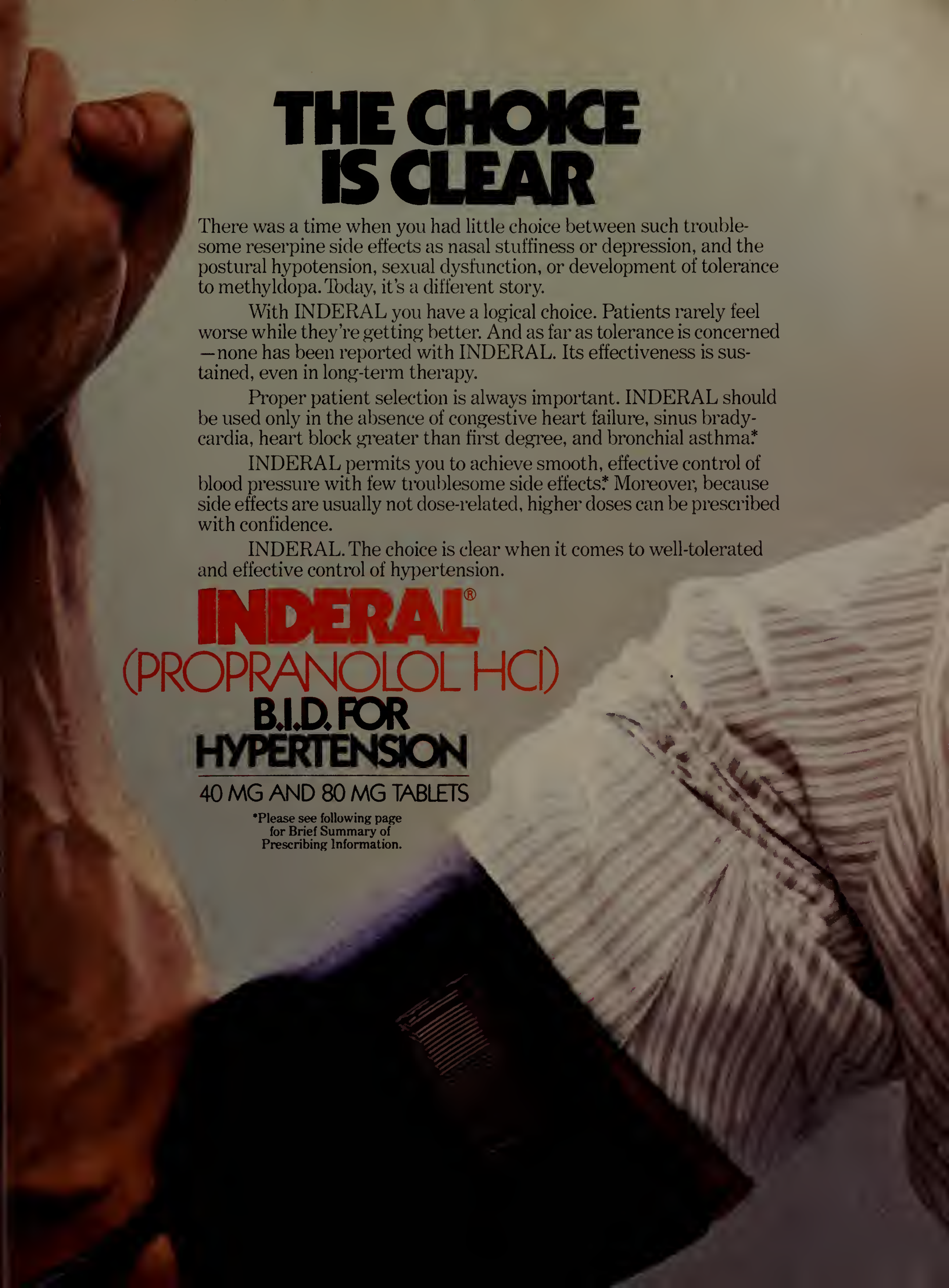

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BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG.

CONTRAINDICATIONS

INDERAL is contraindicated in: 1) bronchial asthma; 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

WARNINGS

CARDIAC FAILURE. Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect. The effects of INDERAL and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during INDERAL therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect. Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

USE IN PREGNANCY. The safe use of INDERAL in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia, congestive heart failure; intensification of AV block, hypotension; paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic. Dosage may be increased gradually until adequate blood pressure is achieved. The usual dosage is 160 to 480 mg per day. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval. This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day. If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control.

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies.

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED:

BRADYCARDIA—ADMINISTER ATROPINE (0.25 to 1.0 mg). IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROTERENOL CAUTIOUSLY.

CARDIAC FAILURE—DIGITALIZATION AND DIURETICS.

HYPOTENSION—VASOPRESSORS, *e.g.*, LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE).

BRONCHOSPASM—ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE.

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Rudimentary Uterine Horn Mimicking Ectopic Pregnancy

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Brooklyn, New York

From the Departments of Obstetrics & Gynecology and Pathology, Coney Island Hospital

The rare incidence of uterus unicollis bicornis with one unconnected rudimentary horn, approximately 1 in 100,000, makes its presentation both unsuspected and deceptive. Numerous cases of life-threatening complications have been reported related to pregnancy in the unconnected rudimentary horn. Dysmenorrhea, often present in genital malformations, is seen in about half the cases with this type of anomaly. Bleeding from the endometrium of the rudimentary horn with passage of blood through an attached fallopian tube may result in peritoneal irritation mimicking ectopic pregnancy. In the case presented here, such bleeding associated with concomitant pregnancy in the normal unicornuate uterus terminating in spontaneous incomplete abortion mimicked an ectopic pregnancy in its clinical presentation.

Case report

A 16-year-old nullipara was admitted with complaints of left lower quadrant pain increasing in intensity and vaginal spotting of four days duration. She had amenorrhea of 10 weeks duration. Her menarche was at the age of 12 years, and she experienced a moderate degree of pain during menstruation.

Physical examination revealed the patient to be in acute distress with a blood pressure of 136/86 mm. Hg and pulse of 120 beats per minute. Abdominal palpation revealed rebound tenderness, more marked in the left lower quadrant, with guarding. Pelvic examination revealed a slightly open cervix with spotting but the uterus could not be outlined due to guarding and abdominal rigidity. The patient refused culdocentesis without anesthesia, and examination under general anesthesia revealed a slightly open cervix and a slightly enlarged soft uterus with no distinct adnexal mass. Culdocentesis was then performed and 15 cc. of unclotted blood was obtained. Dilatation and curettage of the uterus obtained scanty tissue. Laparoscopy was performed to rule out either an ectopic pregnancy or a ruptured hemorrhagic corpus luteum. A slightly enlarged uterus was seen with a normal fallopian tube and ovary on the right side. On the left side, a mass, 3 by 4 cm., was seen within the fallopian tube approximately 1.5 cm. from the uterus. The color and appearance of this mass was similar to that of a normal uterus. A fallopian tube was attached to the distal end of this mass and blood was seen coming through the normal fimbrial end of the tube. The left ovary was normal in appearance and a small amount of blood was seen in the cul-de-sac. A diagnosis of unruptured left tubal pregnancy was made and laparotomy was performed.

At laparotomy, the mass was completely isolated by two Kelly clamps and excised. The ligamentous structure between the mass and the uterus was thicker than a normal fallopian tube and no lumen was visible grossly. Normal fallopian tube was identified lateral to the mass. The proximal end of this tube was occluded by suture and the tube was preserved in case future tuboplastic surgery became necessary.

Pathology

The resected mass was firm, pale brown-white with a smooth external surface and measured 4.5 by 3 by 2 cm. (Fig. 1). A small slit-like central lumen filled with blood was identified on section, with the bulk of the mass being formed by concentric whorls of pale white firm tissue (Fig. 2). Microscopic examination revealed the lumen to be lined by secretory endometrium, surrounded by normal smooth muscle bundles with organization similar to that of normal myometrium (Fig. 3). The serosal surface was congested with occasional leukocytic exudation, and no normal tubal structure was identified. It was concluded that the mass represented a rudimentary uterine horn. Other possibilities such as salpingitis isthmica nodosa, fibroma of the round ligament, leiomyoma of the tube, and endometriosis were excluded because of the unique histologic features characteristic of each of them, none of which was present in this case.

The endometrial curettings revealed degenerated placental tissue, confirming the presence of intrauterine pregnancy with incomplete abortion from the normal unicornuate uterus.

An intravenous pyelogram, performed subsequently, gave normal results, excluding other congenital anomalies in the urinary tract. A hysterosalpingogram was not performed in the following months because the patient became pregnant again and chose to continue her pregnancy.

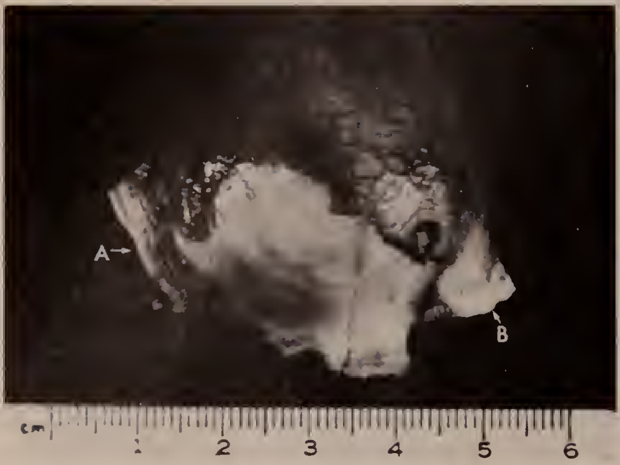

FIGURE 1. External surface of rudimentary horn. Arrow A: medial aspects of mass; proximal left tubal attachment. Arrow B: distal left tubal attachment.

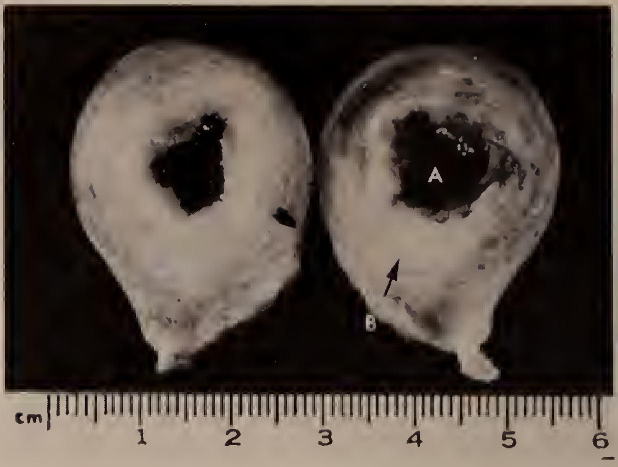

FIGURE 2. Cut surface of rudimentary horn. A: central lumen lined by endometrial tissue. Arrow B: dense smooth muscle.

Comment

Malformations in the development of the Müllerian system can result in several types of anomalies. Uterus unicollis bicornis with one unconnected rudimentary horn is a rare malformation with an approximate incidence of 1 in 100,000.[1] Many of the reported cases pertain to pregnancies in the rudimentary horn, resulting in rupture, death of the fetus,

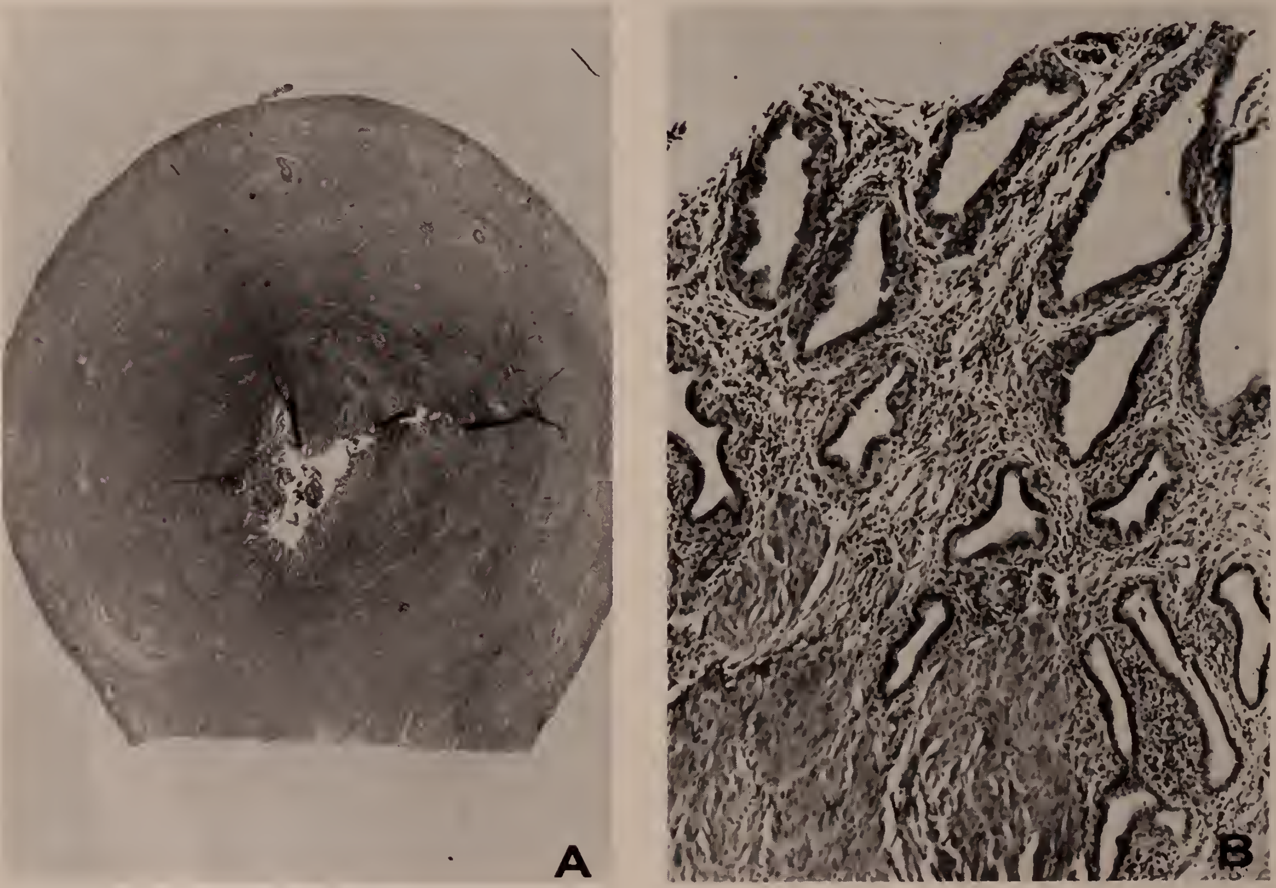

FIGURE 3. Microscopic views of rudimentary horn. (A) Dense smooth muscle forming wall (original magnification ×5). (B) Endometrial secretory-type glands (original magnification ×50).

and hemorrhagic complications in the mother.[1,2] Abdominal pregnancies subsequent to rupture of the rudimentary horn, and twin gestations, one in the normal unicornuate uterus and the other in the rudimentary horn, have been reported.[3,4] Failure of induced abortion in the normal unicornuate uterus due to a prenancy in the rudimentary horn has also been reported.[5,6] Complications in the absence of pregnancy include dysmenorrhea, which has been suggested to be due to the cyclic changes in the endometrium of the rudimentary horn.[5,7] The presence of active endometrium and the bleeding from the tube into the cul-de-sac in this case suggest a similar mechanism. These findings occurring concomitantly with an incomplete abortion from the unicornuate uterus had simulated ectopic pregnancy in our case. Elective removal of the rudimentary horn, if identified prior to gestation, would avoid the numerous complications and confusing clinical situations.[8] Associated abnormalities in the urinary tract should always be searched for in such cases.[9]

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Menstrual irregularity in young female athletes

Girls who begin strenuous athletic training before the onset of menstruation are more likely to experience menstrual disorders than girls who begin training after they have started to menstruate.

Reporting in the Journal of the American Medical Association (October 2), a group of Boston researchers describe the menstrual histories of 38 female college swimmers and runners. Onset of menstruation in the women who began athletic training early occurred at about 15 years of age. In contrast, menstruation had begun around 12 years in the women who started training after puberty, an age comparable to the general female population. Onset of menstruation was delayed five months for each year of training before puberty, the researchers calculated.

At the start of the athletic season, 83.5 percent of the women who had begun training before puberty had irregular or absent menstrual cycles, but only 40 percent of the women who began training after puberty experienced irregularity. During the season, both groups of women had an increased incidence of scanty or missed menstrual periods.

Other investigators have found that menstrual periods require a critical level of body fat to be present. The Boston researchers speculate that menstrual irregularities in female athletes may be due to an excessive ratio of lean tissue to body fat, even in those women who are of average or above average weight for their height.

The tension and stress of competition may also have an effect on menstrual cycles, they say, by increasing the secretion of substances which effect the release of female hormones.

Cessation or reduction of athletic training, or increased nutrition, can result in the resumption of menstrual cycles, the researchers found. For this reason, there should be no long-term ill effects from athletic training on the menstrual and reproductive futures of female athletes, although more studies are needed, they say.

Chondrosarcoma of Larynx

Computerized tomographic study

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Cartilaginous tumors of the larynx are rare lesions. As of 1975, approximately 200 cartilaginous tumors of the larynx were reported, of which 20 percent were chondrosarcoma.[1] It has been stated that "few otolaryngologists see more than one or two cases in their lifetimes."[2]

On the basis of their histologic features, cartilaginous tumors of the larynx are classified as chondroma, osteochrondroma, and low-grade chondrosarcoma.[3]

The etiologic origin of cartilaginous laryngeal tumors is unknown; however, two theories have been proposed: one suggests the abnormal ossification of laryngeal cartilage, and the other suggests chondroplastic predisposition to proliferation of bronchial tissues following chronic inflammation.[4–6]

The cricoid cartilage is involved 70 percent of the time,[4,7] and the thyroid cartilage is second in frequency[8]; rarely are the arytenoid and epiglottis cartilage involved.

Cartilaginous tumors of the larynx occur most commonly in the fourth to sixth decade of life. They are four times more common in males than in females.

Intrinsic growth of the tumor may cause hoarseness and dyspnea as a result of pressure on the true cord and narrowing of the airway. Extrinsic growth of the tumor into the esophagus would result in dysphagia.

Until recently, the radiographic examinations of the larynx consisted mainly of AP (anteroposterior) and lateral views of the neck, laminography, laryngography, and barium swallow. On AP and lateral views, as well as at laminography, the air contrast study of the larynx outlines a smooth mass covered by uninvolved mucosa. In 80 percent of patients the tumor will contain coarse calcification. Barium swallow is useful when the tumor growth involves the hypopharynx or esophagus; laryngograms are important when the tumor extends intrinsically to narrow the airway.[1]

The purpose of this report is to demonstrate the CT (computed tomography) findings in chondrosarcoma of the larynx and to emphasize the important role of CT in deciding the type of laryngeal surgery to be performed. Only one brief mention of CT findings in chondrosarcoma has been reported in the literature, but this was in a case of recurrent tumor on one side of the larynx.[9]

Case report

An 83-year-old white male was admitted to a nearby hospital with a chief complaint of respiratory stridor and increasing shortness of breath. An emergency bronchoscopy detected an extramucosal hard mass occluding 75 percent of the airway. A biopsy and tracheostomy were performed; the biopsy report was cartilaginous tumor. As is true in most such cases, the pathologist could not state with certainty whether the tumor was benign or malignant.

The patient was transferred to Beth Israel Hospital for preoperative CT scan and definitive treatment.

The past medical history was noncontributory, and the pertinent physical findings were limited to the presence of a tracheostomy tube.

CT scan was performed. Transaxial, coronal, and sagittal planes demonstrated an expensile irregular calcified mass involving the entire posterior plate of the cricoid cartilage. (Fig. 1A) In its intrinsic and downward extention the mass obstructed most of the subglottic space (Fig. 1B, C, and D). In its upward extension the mass reached to the level of the true vocal cord without definite involvement. The endotracheal tube was identified. No regional nodal masses were detected. The CT diagnosis of cartilaginous tumor of the cricoid cartilage was suggested preoperatively. It was clearly demonstrated that more than half the cricoid was involved.

Since clinical experience has demonstrated that conservative surgery is the procedure of choice in cartilaginous tumors and that preservation of the larynx is sometimes feasible, the CT was helpful in deciding that total laryngectomy would have to be done. The total laryngectomy confirmed the CT findings.

The pathologic finding was a low-grade chondrosarcoma of the cricoid cartilage.

Comment

Laryngeal chondrosarcomas are slow-growing le-

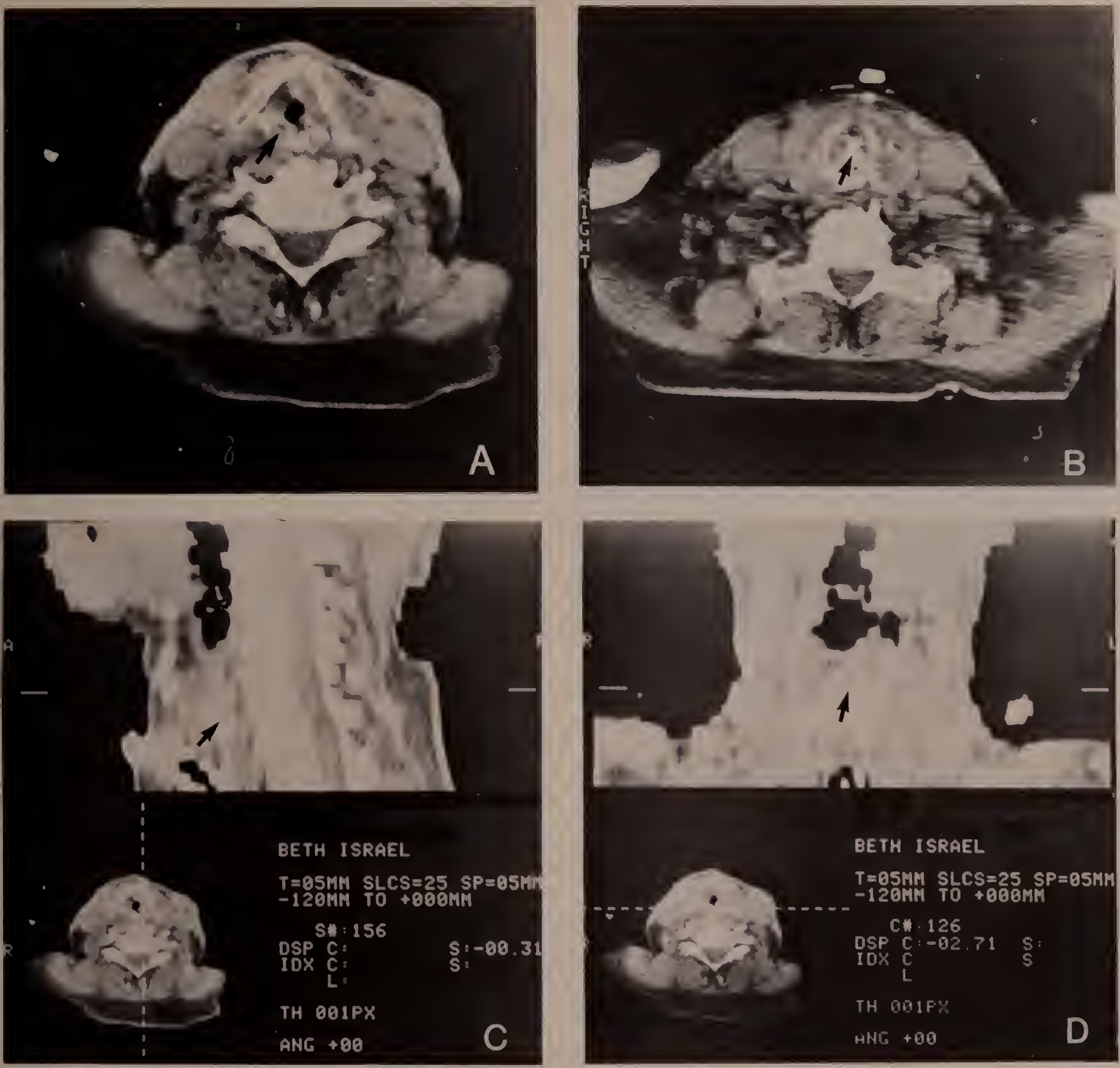

FIGURE 1. (A) Expansile lesion involving posterior plate of cricoid cartilage. (B) Transaxial cut obtained 2 cm. distal to that in (A) shows intrinsic extension of heavily calcified mass. Note tracheostomy tube anterior to skin. (C) and (D) Sagittal and coronal reconstructions show longitudinal extension of mass obstructing airway. Note tracheostomy tube distal to lesion.

sions, much less aggressive than chondrosarcomas elsewhere in the body. They usually grow locally and intrinsically, and metastasis and local nodal involvement are rare. Recurrence of the tumor, although not uncommon, may require five years to manifest itself clinically.[3] In view of these facts, conservative laryngeal surgery is warranted whenever possible to relieve airway obstruction and to maintain phonatory function of the larynx.[3,8,10] Radical surgery is reserved for extremely anaplastic tumors or masses which spread to involve the laryngeal structures to such an extent that conservative surgery would result in lack of laryngeal support leading to stenosis. This would occur when more than half the height of the cricoid must be resected.[8]

The five-year survival rate with conservative surgery of intrinsically growing laryngeal tumors is much more favorable than is that of tumors growing extrinsically. Prognosis of laryngeal tumors with regional nodal involvement is much worse than without nodal involvement.[11] Thus, depending on the extension of the tumor and regional nodal involvement, the decision of the type of surgical procedure is made.

Since 80 percent of cartilaginous tumors of the larynx contain calcification, its detection is an important diagnostic feature. CT scanning has the ability to measure tissue density and to detect minute calcifications that may not be identifiable by means of conventional radiology. Calcifications in the neck may be seen in extralaryngeal structures such as vascular calcification or thyroid adenomas. Transaxial CT scanning obviates superimposition of structures, thus distinguishing these cases from those with laryngeal disease.

Summary

A case of chondrosarcoma of the larynx has been presented. CT (computed tomography), a noninvasive technique, offers visualization of the larynx in a transaxial plane not possible by any other radiologic procedure. The combination of transaxial, coronal, and sagittal planes accurately delineates the origin, extension of the tumor, the presence of calcifications, and involvement of regional nodes.

This information is very important both prognostically and preoperatively, particularly in cases of cartilaginous lesions of the larynx where conservative surgery is necessary to maintain laryngeal function.

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"I'm from the State Medical Board, this computer has been practicing medicine without a license."

Carcinoma of Colon Appearing as Subcutaneous Emphysema of Lower Extremity

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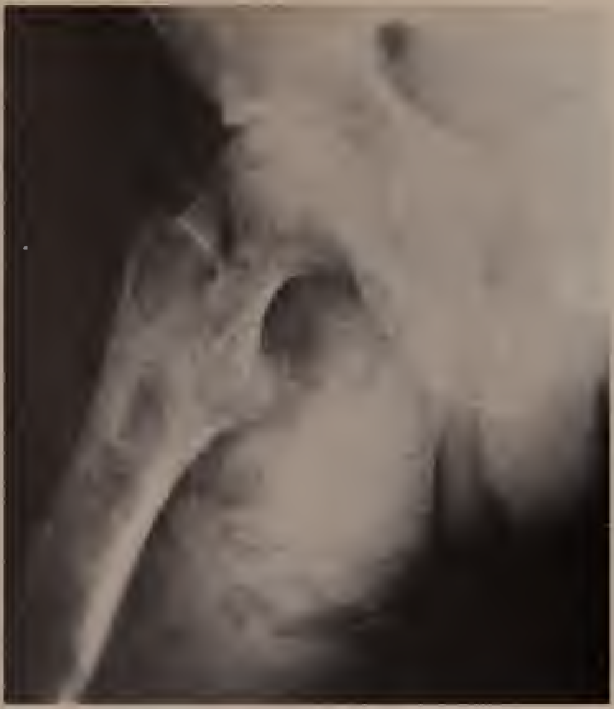

FIGURE 1. X-ray shows massive subcutaneous emphysema in soft tissues of right thigh.

This report documents a case in which a perforated carcinoma of the proximal ascending colon appeared as subcutaneous emphysema of a lower extremity. Different pathologic processes of the gastrointestinal tract rarely may be responsible for the formation of this subcutaneous air; only scattered reports in the literature document a perforated carcinoma as the source.[1–7]

Case report

A 55-year-old man was hospitalized with a history of pain and swelling in his right hip and buttock radiating to his groin; these had increased dramatically two weeks prior to admission. There was no history of prior infection, trauma, or urinary symptoms. Past medical history was significant only for a right inguinal herniorrhaphy at 15 years of age.

On admission, physical examination revealed swelling, erythema, and induration of the right buttock with a fluctuant mass palpable in the right midgroin and crepitation in the soft tissues of the right thigh and lower back.

Laboratory values included: white blood cell count 16,700 per cubic millimeter, hemoglobin 8.3 Gm. per deciliter, and hematocrit 24.8. Chemistries were unremarkable except for a slightly elevated lactic dehydrogenase of 219 U. per liter and hypoproteinemia with total protein of 4.8 Gm. per deciliter. Needle aspiration of the fluctuant mass yielded foul-smelling material, and the patient was started on antibiotics. The abscess was incised and drained, and the contents grew out *Escherichia coli*, enterococcus, *Pseudomonas*, and *Proteus*. X-rays of the right hip revealed no bony abnormality but there was extensive subcutaneous emphysema in the thigh (Fig. 1). A supine film of the abdomen revealed no acute pathologic condition. A barium enema demonstrated perforation of the ascending colon with extravasation of contrast material into the soft tissues of the retroperitoneum. In addition, an irregular narrowing of the proximal ascending colon at the site of perforation was seen (Fig. 2A). Three days later a repeat barium enema more clearly delineated the latter finding, and a constricting lesion with a central ulceration was clearly demonstrated in the proximal ascending colon (Fig. 2B). The patient underwent colonoscopy, and a friable, necrotic-looking lesion was found: biopsies of the lesion were reported as moderately differentiated invasive adenocarcinoma.

The patient underwent a right hemicolectomy with resection of the right lateral posterior retroperitoneum (Fig. 3). He did well postoperatively and was discharged.

Comment

Subcutaneous emphysema of the lower extremity is usually secondary to local infection with a gas-forming organism or secondary to trauma. If a patient appears with subcutaneous emphysema in a

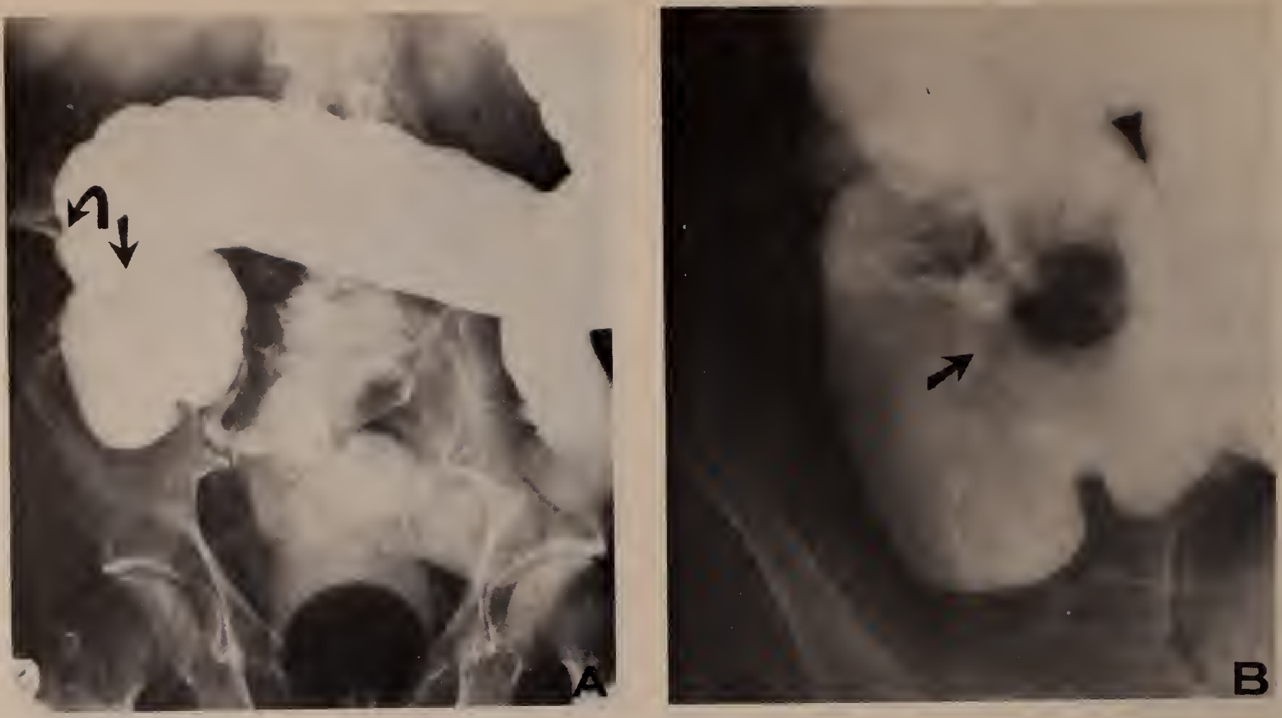

FIGURE 2. (A) Barium enema reveals irregularly narrowed ascending colon (arrow) and extravasation of contrast material (curved arrow). (B) Spot film from repeat barium enema demonstrates constricting, ulcerating lesion in proximal ascending colon.

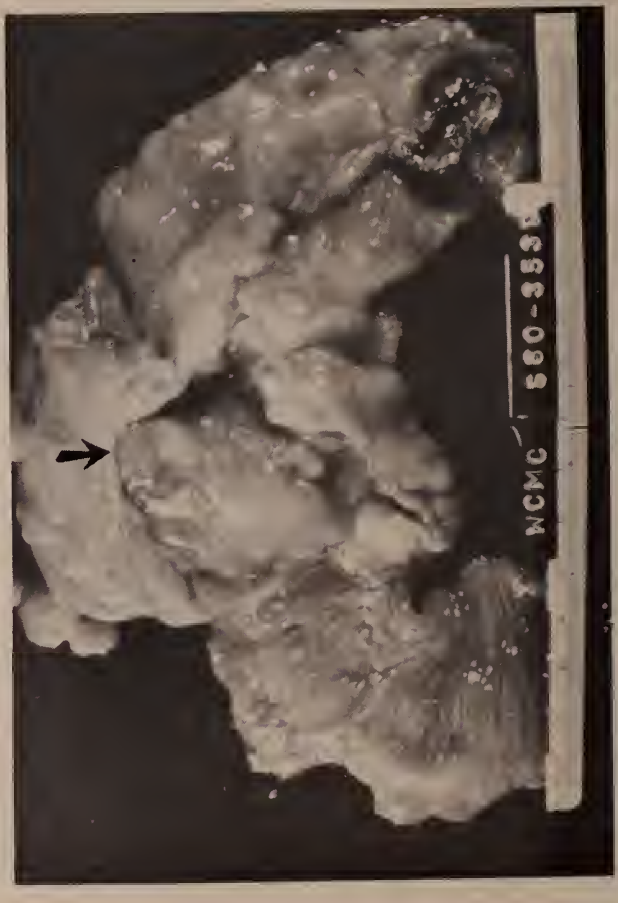

FIGURE 3. Gross specimen demonstrates adenocarcinoma with central ulceration.

previously normal lower extremity and there is no history of prior infection or trauma, one must consider a gastrointestinal origin for the subcutaneous gas. Although rare, there are scattered reports confirming a variety of pathologic processes of the gastrointestinal tract leading to dissection of air into the lower extremity.[1-7] In a review of the literature, Pickels[1] found eight cases secondary to perforated sigmoid diverticulitis or perforated appendicitis, carcinoma of the colon (sigmoid and cecum) in six, and rectal trauma in one.

The ascending colon is located in the anterior pararenal space and adjacent to the posterior pararenal space.[8] Therefore, perforation of this structure will lead to dissection of air into these spaces. Once perforation has occurred, retroperitoneal abscess formation is inevitable.

Abdominal roentgenograms may reveal extraperitoneal gas collections. Air in the posterior pararenal space collects parallel to the psoas margin, in the flank stripe, and posterior to the liver in the subdiaphragmatic space. Gas may even extend up to the mediastinum and neck. Extension of the gas may be related to spreading infection but is more likely a reflection of pressure gradient, since intestinal pressures may be as high as 60 cm. H_2O while soft-tissue tension is only 5 cm. H_2O.[1] The gas dissects inferiorly in the retroperitoneum, gaining access to the lower extremity through defects in the pelvic floor. It may pass under the inguinal ligament along with the femoral vessels, producing subcutaneous emphysema in the anterior thigh. Furthermore, the gas can continue on through the obturator foramen into the medial thigh, sciatic space, posterior thigh, and buttocks.

Although this mechanism is logical, its occurrence is rare. In addition, the gastrointestinal origin of lower-extremity subcutaneous emphysema is often obscure because of the misleading clinical picture. The patients frequently lack gastrointestinal symptoms, and physical examination of the abdomen is usually unrewarding.

Summary

This case points out the importance of considering the gastrointestinal tract as a source for subcutaneous emphysema of the lower extremity, particularly when there is no previous history of infection or trauma. There are very few reports confirming this association; even fewer document a perforated carcinoma of the colon as the cause.

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Combination painkillers may lead to kidney disease

The incidence of kidney disease due to ingestion of analgesic drugs has been cut in half since 1972 in Canada, and one Canadian physician thinks the reason is that combination analgesics have not been available there since then.

According to a report in the Medical News section of the November 6 Journal of the American Medical Association, Dr. Douglas R. Wilson of the University of Toronto has stated that he has evidence that analgesic-induced kidney disease can be prevented by banning analgesics that contain combinations of aspirin, phenacetin, and acetaminophen.

No analgesics containing both acetaminophen and aspirin have been available in Canada since the early 1970s. Since that time, the incidence of analgesic-induced kidney disease has dropped from 53 cases to 25 cases annually. Wilson's data come from a survey of Canadian kidney specialists.

According to Wilson, Canadians are not taking fewer analgesics now but are taking single drugs instead of combinations. Aspirin consumption has continued to increase, and the importation of acetaminophen doubled between 1972 and 1980.

Since analgesic-induced kidney disease has decreased despite increased use of single analgesics, the condition must be viewed as a drug interaction problem, Wilson concluded.

The question of whether analgesic combinations containing aspirin and either acetaminophen or phenacetin can lead to kidney disease is still a matter of controversy in the United States. Currently, several over-the-counter analgesic preparations marketed here contain a combination of aspirin and acetaminophen.

Cervical Radiculopathy Caused by Lipoma

Patient with multiple congenital skeletal anomalies and intraspinal and intrathoracic lipomas

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Motor and sensory deficit of the upper extremity may be the result of nerve root compression. Most cases are due to encroachment of the intervertebral foramina by productive bone changes and/or to degenerative disk disease at the respective level. Less commonly, tumor or neurofibroma, among others, may be the cause.

This report describes a patient who developed nerve root compression and subsequent motor and sensory deficit of the upper extremity as a result of compression of the nerve roots of C_5 to T_1 (the fifth cervical to the first thoracic nerves) by a lipoma. We were unable to find a similar case in the literature.

Case report

A 25-year-old black female, a legal secretary, was admitted to Mount Sinai Hospital on September 29, 1979, because of dysesthesia of the lateral aspect of the right arm, fourth and fifth fingers of the right hand, and progressive weakness of the right upper extremity, mainly of the hand. Her symptoms started two months prior to admission and became severe enough to prevent her from typing.

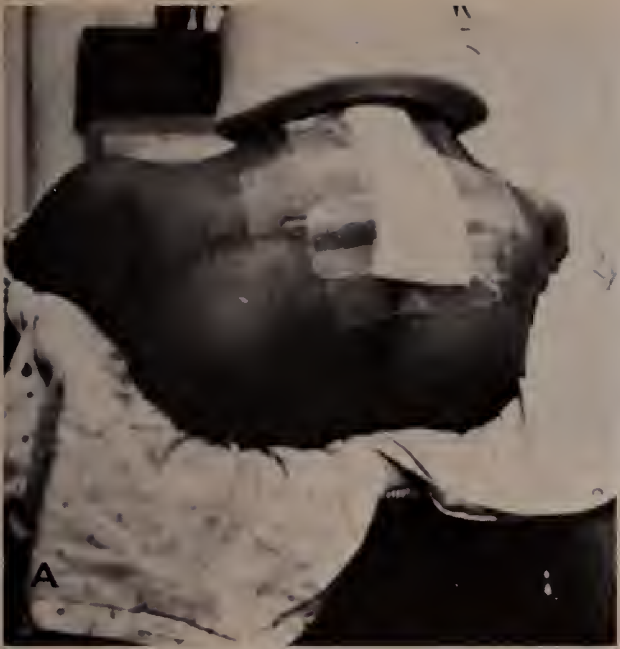
History. The patient was born with multiple developmental anomalies. The delivery was by cesarean section because of pelvic dystocia. She was the eldest of four siblings. There was no history of congenital malformation in her immediate family.

During her childhood she underwent surgical removal of a large lipoma over the upper back, umbilical hernia repair, and renal biopsy for unknown cause. A right axillary mass was removed at the age of five years. Right upper lung density has been documented on different occasions for the past 11 years. In March, 1979, she had an excision of follicular thyroid adenoma. There was no history of trauma.

Physical examination. Physical examination revealed a 5-foot, 9-inch tall and thin woman with grossly normal proportions and normal facies. She had a web neck with a large soft mass on the right side of the neck extending posteriorly. There was a diffuse soft mass over the upper back (Fig. 1A). The entire right upper extremity was thinner than the left, with atrophy of the intrinsic muscles of the hand. Both hands were broad and flat with broad web space between the second and third fingers and a bony deformity on the dorsum of the left hand, and clawing of the right. The fingers of both hands were long and slender (Fig. 1B). There were several brown hyperpigmented marks on the neck, and a large dark macule on the upper back. Range of motion of all joints was within the functional limits except for the right elbow which lacked about 20 degrees extension. The right wrist was limited in flexion and the left wrist was limited in extension. She was unable to make complete fists. There was decreased pinprick sensation in the fourth and fifth fingers of the right hand. The muscle strength of the shoulders, the elbows, and both lower extremities was good. The deep tendon reflexes were increased in both lower extremities with unsustained ankle clonus, and they were decreased in both upper extremities. She was independent in all activities of daily living. She was fitted with a cock-up splint to the right hand in functional position (30 degrees wrist extension and 45 degrees metacarpophalangeal flexion) with dynamic flexion assist for the fourth and fifth fingers to correct the clawing due to paresis of the intrinsic muscles.

Laboratory findings. Lumbar puncture showed normal cerebrospinal fluid. Thyroid function studies gave normal results. Chest roentgenogram (Fig. 2) showed an approximately 7 by 5-cm. mass in the right apical area and hyperexpansion of right lower lobe indicative of the restrictive component of her lung parenchyma. Scout films of the cervical spine revealed marked deformity with distortion of vertebral bodies (Fig. 3). There was no evidence of abnormal radiogallium activity in the right apical mass or in the neck; results of aortic arch angiogram were normal.

Electromyographic study was performed with an electromyographic machine (TECA, Model TE 4).



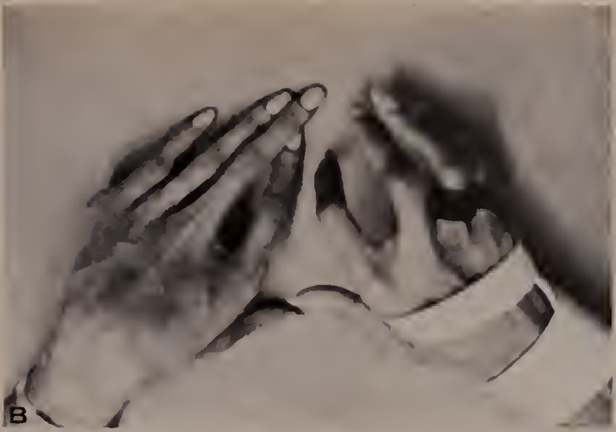


FIGURE 1. (A) Photograph showing large mass on right side of upper back. (B) Both hands show marked deformity.

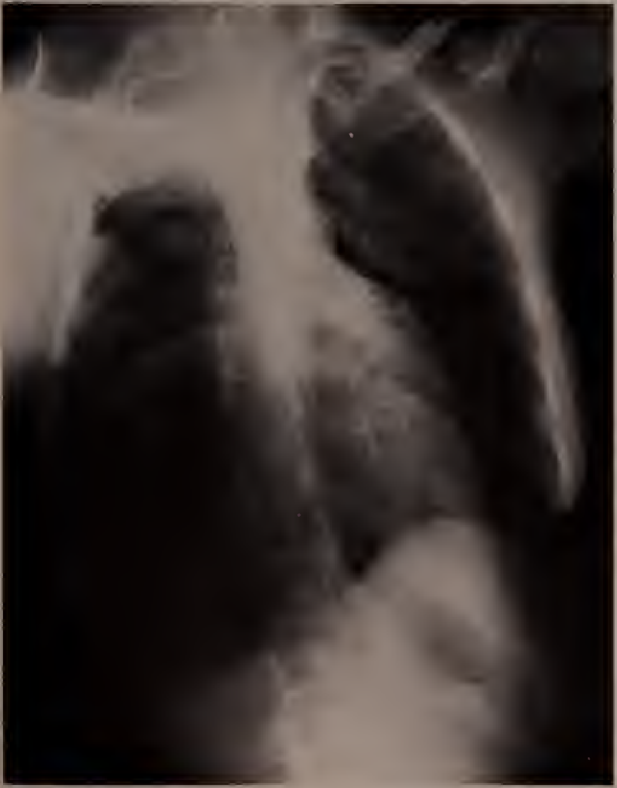


FIGURE 2. Chest x-ray, posteroanterior view, shows homogenous mass, approximately 7 by 5-cm., in apical area of right hemithorax. Note hyperextension of right lower lobe.

Monopolar needle electrode was used. Motor and sensory conductions of the median and ulnar nerves were achieved in both upper extremities. Segmental study of the ulnar nerve was done in the right upper extremity. Electromyographic study was performed on the thenar, flexor carpi ulnaris, first dorsal interosseus, brachioradialis, and deltoid muscles in the right upper extremity, and on the right cervical paraspinal muscles C_5 to C_8. In the left upper extremity the first dorsal interosseus muscle was examined. Motor conductions were normal except for prolonged motor and sensory distal latency with low amplitude in the right median nerve. Motor segmental study of the right ulnar nerve gave normal results. Electromyographic study demonstrated partial denervation of all muscles tested in the right upper extremity, mainly in ulnar nerve distribution. There was no clear evidence of denervation in the paraspinal muscles.

Results of the electrical study suggested a partial lesion of the right brachial plexus involving all three cords. Because of congenital anomalies of the cervical spine, needle examination of the paraspinal muscles was extremely difficult. It was thought that the lesion could be high, involving the roots C_5, C_6, C_7, and T_1. In addition, there was electrical evidence of mild carpal tunnel syndrome on the right side.

Computerized tomography of the upper thorax revealed a large, solid intrathoracic mass in the right side (Fig. 4). Metrizamide myelogram was performed at the second and third lumbar interspace. The study disclosed complete block at the cervicothoracic junction secondary to an extradural compression of the thecal sac (Fig. 5). The radiologic findings were suggestive of the diagnosis of neurofibromatosis.

Cervical laminectomy revealed an intraspinal extradural fatty tumor extending from C_6 to T_1, and arteriovenous malformation of the cord. Dural dilatation between the pedicles of C_6 and C_7 that formed the root sleeve for the exit of C_7 nerve was continuous with the swelling outside the spinal canal. The possibility that this was either a neurenteric cyst or a meningocele was considered. The fatty tumor was partially resected. Pathologic examination of

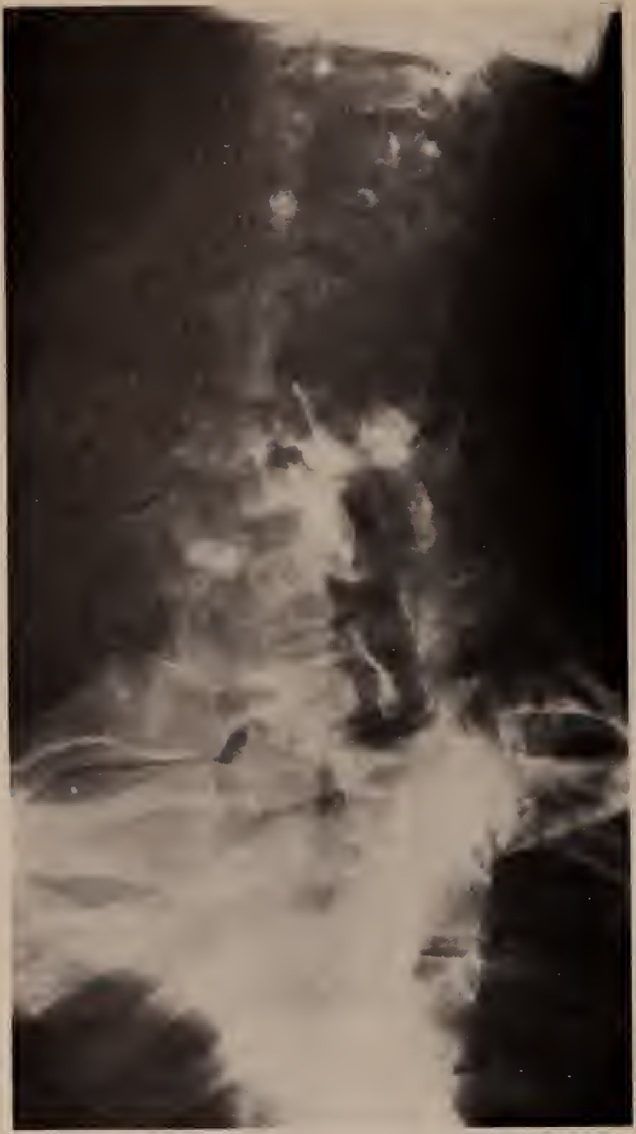


FIGURE 3. Anteroposterior view of cervical spine shows scoliosis: convexity to right with maximum curvature at level of C_5 and C_6. Marked congenital deformity of the spine C_4 to T_3. Note mass density at right apical area.

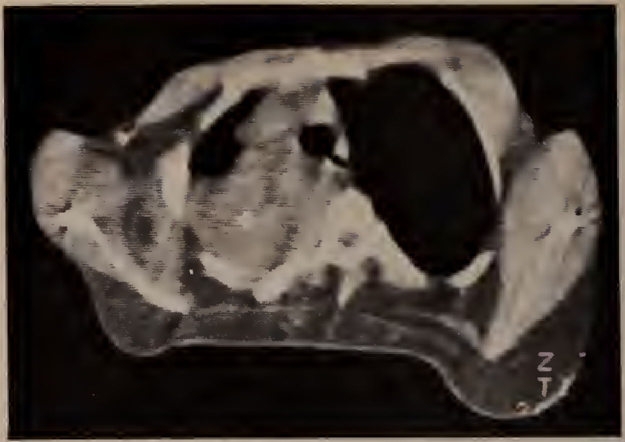


FIGURE 4. Computerized tomography of thorax shows large solid mass in right upper hemithorax. No evidence of extension into spinal canal.

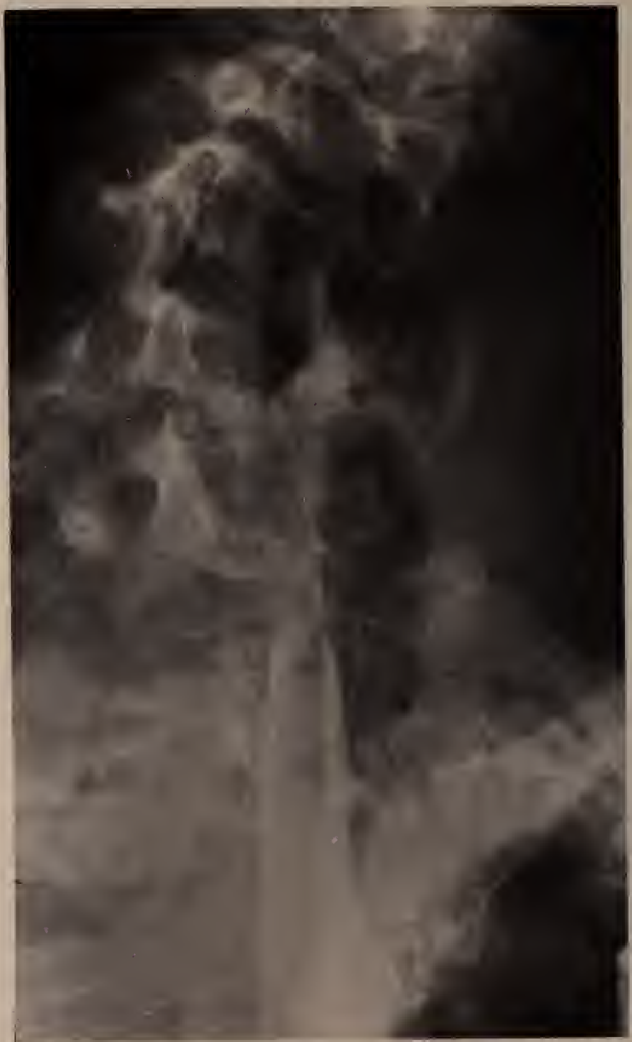


FIGURE 5. Metrizamide myelogram reveals complete block at level of cervicothoracic junction due to extradural compression.

the specimen showed fat and connective tissue compatible with lipoma.

After surgery, she experienced generalized weakness with loss of weight and development of respiratory infection. From then on, the hospital course became progressively downhill and 39 days after the excision of intraspinal lipoma, she expired due to severe respiratory illness.

The autopsy report revealed generalized autolysis of the central nervous system, severe bilateral necrotizing bronchopneumonia with abscess formation, fibrinous pleuritis, and severe hemorrhagic bronchiectasis.

A large subpleural intrathoracic angiolipoma in the right side of the lung, right ventricular hypertrophy of the heart, vascular malformations, thrombosis, splenomegaly (290 Gm.) with multiple splenic cysts and splenomas, partial thyroid resection with adenoma of the thyroid, and multiple small ulcers of the stomach have been found.

The autopsy did not show connection of the intrathoracic angiolipoma to the exterior. No neoplastic tissue or hemorrhage was present at the operative site. The transverse sections through the spinal cord segment failed to reveal abnormality. There was no evidence of involvement of the spine by lipoma.

Comment

The multiplicity of findings in this case makes final classification rather difficult. Lipomas represent about one percent of all spinal tumors.[1] Extradural lipomas are either discovered casually or as a cause of a progressive compression syndrome.[1] In 1834, Robarts[2] reported the first case of a thoracic epidural lipoma. In 1945, Ehni and Love[3] reviewed the Mayo Clinic material and found 3 cases of epidural lipomas of the total 740 spinal cord tumors, an incidence of 0.4 percent. In 1974, Bender, Van Landingham, and Manno[4] reported two cases of epidural lipoma producing spinal cord compression.

The first description of intradural lipoma was done by Gowers in 1876.[5] The most common level was found to be the lower cervical and thoracic region. Pain either in the neck or radiating to the arms is frequently the first symptom. Weakness, spasticity, and atrophy of the lower extremities with the usual alteration of reflexes are the most outstanding clinical manifestations of intradural lipomas. Sensory deficits are less marked.[1]

Cases of lipomas of the spinal cord resulting in paraplegia, as well as cases of compression of median, ulnar, and posterior branch of the radial and sciatic nerves, have been reported. Reviewing the literature, we were unable to find a case of lipoma producing cervical radiculopathy.

The physical appearance of the patient was that seen in Marfan's syndrome without other characteristic findings such as ectopia lentis, congenital heart disease, and so forth. She had several brown hyperpigmented marks on the neck and a large, dark macule on the upper back, but these were not the characteristic café-au-lait spots of neurofibromatosis.[6] Although multiple anomalies and dysmormorphic features were suggestive of congenital ectodermal dysplasia, they did not appear to fit a single known entity.[6] Association of tumors of the pituitary parathyroid and pancreatic islet cells with peptic ulcer and gastric hypersecretion (Zollinger-Ellison syndrome) is called multiple endocrine adenomatosis, or MEA.[6,7]

In 1968 this syndrome was classified by Steiner, Goodman, and Powers[7] as type 1 while an entity characterized by the occurrence of pheochromocytoma, medullary thyroid carcinoma, and parathyroid tumors associated often with marfanoid habitus[6,7] was classified as type II.

In 1972, Snyder, Scurry, and Deiss[8] described the association of lipoma with MEA. Despite the marfanoid habitus of the patient, the presence of lipoma, thyroid adenoma, and gastric ulcers was reminiscent of multiple endocrine adenomatosis. However, the absence of other features made the diagnosis of MEA unlikely.

Because of roentgenographic evidence of congenital abnormalities of the cervical spine, her symptoms were attributed to compression of the brachial plexus or nerve root by a bony abnormality. A history of removal of lipomas in childhood and the recurrence of the soft mass over the upper back and a large soft mass over the right side of the neck indicated that the symptoms could be due to compression from a lipoma.

Neither computerized tomography nor thoracic myelogram could reveal communication between the spinal cord and intrathoracic mass. Although the dural dilatation between the pedicles of C_6 and C_7 forming the root sleeve for the exit of C_7 nerve was thought during surgery to be continuous outside the spinal canal, postmortem examination did not reveal any evidence of dural connection. Pathologic finding of the tumor was fat and connective tissue compatible with lipoma.

Maier in 1962[9] reported extension of mediastinal lipomas into the spinal canal by way of the intervertebral foramina causing a dumbell type of tumor.

The case presented here is a very rare example of a single lipoma causing cervical radiculopathy with all its symptoms and signs.

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Brief Summary

*INDICATIONS: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective for the relief of moderate to moderately severe pain in those situations where the physician wishes to add a mild sedative effect

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Hypersensitivity to dihydrocodeine, codeine, promethazine, or aspirin.

WARNINGS: Salicylates should be used with extreme caution in the presence of peptic ulcer or coagulation abnormalities.

Drug Dependence: Dihydrocodeine can produce drug dependence of the codeine type and therefore has the potential of being abused. Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of dihydrocodeine, and it should be prescribed and administered with the same degree of caution appropriate to the use of other oral narcotic-containing medications.

Like other narcotic-containing medications, dihydrocodeine is subject to the provisions of the Federal Controlled Substances Act.

Usage in Ambulatory Patients: Dihydrocodeine and promethazine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery. The patient using Synalgos-DC should be cautioned accordingly.

Interactions with other Central-Nervous-System Depressants: Patients receiving other narcotic analgesics, general anesthetics, other phenothiazines, tranquilizers, sedative-hypnotics or other CNS depressants (including alcohol) concomitantly with Synalgos-DC may exhibit an additive CNS depression. When such combined therapy is contemplated, the dose of one or both agents should be reduced.

Patients who have demonstrated a hypersensitivity reaction (e.g., blood dyscrasia, jaundice) with a phenothiazine should not be reexposed to any phenothiazine, including Synalgos-DC, unless in the judgment of the physician the potential benefits of the treatment outweigh the possible hazards.

Usage in Pregnancy: Reproduction studies have not been performed in animals. There is no adequate information on whether this drug may affect fertility in human males and females or has a teratogenic potential or other adverse effect on the fetus.

Usage in Children: Since there is no experience in children who have received this drug, safety and efficacy in children have not been established.

PRECAUTIONS: Promethazine should be administered cautiously to patients with cardiovascular or liver disease. Synalgos-DC should be given with caution to certain patients such as the elderly or debilitated, and those with hypothyroidism, Addison's disease, and prostatic hypertrophy and urethral stricture.

ADVERSE REACTIONS: The most frequently observed reactions include light-headedness, dizziness, drowsiness, sedation, nausea, vomiting, constipation, pruritus, skin reactions, and rarely hypotension

DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. Synalgos-DC is given orally. The usual adult dose is two capsules every 4 hours as needed for pain.

DRUG INTERACTIONS: The CNS depressant effects of Synalgos-DC may be additive with that of other CNS depressants.

See Warnings.

Aspirin may enhance the effects of anticoagulants and inhibit the uricosuric effects of uricosuric agents.

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Herpes Proctitis

Associated findings

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Genital herpes simplex infections have been reported with increasing frequency in recent years, and with this increased awareness of infection has come the recognition of some of the complications and side-effects of viruses. In addition to the discomfort of the local pain and recurrent nature of the infection, sacral radiculitis has been noted. As early as 1953, Gayral[1] in France reported neurologic symptoms associated with genital herpes lesions. More recently, there have been several case reports of genital herpes infections with paresthesia, muscle weakness, changes in reflexes, and urinary retention.[2,3]

There have been relatively few descriptions of anorectal herpes or herpes proctitis.[1,4–8] In only two articles has the association of herpes proctitis and radiculitis been made.[9,10]

The purpose of this report is to describe eight cases of anorectal herpes infection with associated local anorectal pain, proximal muscle weakness of the lower extremities, paresthesia, and difficulty voiding. All the patients were seen at the St. Marks Clinic in New York City and all were male homosexuals.

Case reports

Case 1. A 24-year-old male arrived at St. Marks Clinic with a two-day history of anorectal pain, consisting of an intermittent sharp, throbbing pain with a constant burning sensation, difficulty in moving his bowels, and difficulty in squatting, secondary to proximal muscle weakness in his lower extremities. The patient had noted copious mucoid rectal discharge.

Further questioning revealed that the patient had a vague three and one-half week history of malaise, generalized muscular pain, and low back pain.

On examination, the patient was febrile to 100.8°F. orally. Rectal examination revealed copious purulent material obscuring all other rectal findings. Gram stain of this material demonstrated numerous PMNs (polymorphonuclear leukocytes) with gram-negative intracellular diplococci. Cultures were taken and a presumptive diagnosis of rectal gonorrhea was made. The patient was treated with 1 Gm. of probenecid orally and 4.8 million units of procaine penicillin intramuscularly.

The patient returned one week later for follow-up and reported no improvement of symptoms. His culture for *Neisseria gonorrhoeae* was negative. He noted that he had been febrile throughout this past week, with continued purulent rectal discharge, severe anorectal pain, and difficulty in starting his urinary stream.

Rectal examination, at this time, revealed a moderate amount of purulent material in the rectum, multiple shallow ulcerated areas approximately 3 mm. in size, with necrotic bases, along the anal canal, and a very tender ulcerated perianal area. Digital examination revealed no areas of induration or fluctuance.

Inguinal lymphadenopathy on the right side was noted. A clinical diagnosis of anorectal herpes was made and cultures were taken, which subsequently grew herpes simplex virus.

The patient's symptoms were treated and on his follow-up visit, one week later, improvement was noted. His only complaint was lower back pain. Anoscopy revealed a small amount of mucus within the rectum and two large ulcers near the external anal sphincter with erythema of the anal canal. The patient became asymptomatic within the following week, approximately 35 days after the onset of symptoms.

Case 2. A previously well, 25-year old male arrived at St. Marks Clinic with a five-day history of anorectal pain on defecation, sanguineous mucoid rectal discharge, proximal weakness in the lower extremities, and difficulty in starting his urinary stream. On physical examination, the patient had a normal external rectal area. Anoscopy revealed a foul-smelling yellowish-brown, blood-specked purulent material with small (approximately 1 mm. in size) mucosal ulcerations. On digital examination, a 2-cm. area of induration along the anal canal was noted.

The initial differential diagnosis included rectal abscess and anorectal herpes. At this time, the patient was cultured for *N. gonorrhoeae.* He was started on ampicillin, 500 mg. every six hours orally, for seven days.

On his follow-up visit, one week later, the patient was still complaining of difficulty in starting his urinary stream, but anorectal pain had significantly decreased as did the mucoid discharge. The repeat anoscopic examination, at this time, was remarkable only for erythematous rectal mucosa.

The patient was continued on ampicillin. By his return visit, one week later, all symptoms were relieved. All cultures were negative.

Ten months later, the patient returned with the same symptoms, that is, pain on defecation, sanguineous mucoid rectal discharge, proximal weakness in the lower extremities, and difficulty in starting his urinary stream. Anoscopy revealed an inflamed rectal mucosa with several ulcerated lesions covered with copious foul-smelling, yellowish-brown purulent material. Gram stain of this material revealed numerous PMNs without intracellular organisms. Cultures for *N. gonorrhoeae* and herpes simplex were taken.

Three days later, the patient noted a significant increase in anorectal pain and purulent discharge. He was started on ampicillin, 500 mg. every six hours, for seven days.

Presented in part at the Sexually Transmitted Diseases Symposium—II, San Francisco, California, June, 1980.

TABLE I. Herpes proctitis in eight patients

Data	Number of patients	Percent
Symptoms		
Anorectal pain	8	100
Proximal muscle weakness (lower extremities)	7	87.5
Difficulty in voiding	6	75
Difficult bowel movements	5	62.5
Paresthesia	3	37.5
Malaise	1	12.5
Low back pain	1	12.5
Physical findings		
Positive anoscopic findings	8	100
Discrete ulcerations	5	62.5
Hemorrhagic mucosa	3	37.5
Purulent rectal discharge	6	75
Nonrectal herpetic lesions	4	50
Associated anorectal *N. Gonorrhoeae*	1	12.5
Relapse (within one year)	3	37.5

On his follow-up visit, four days later, he had relief of all symptoms and the anoscopic examination demonstrated only inflamed rectal mucosa. Final laboratory results were negative for *N. gonorrhoeae* and positive for herpes simplex virus.

Comment

In a series of eight patients clinically diagnosed as having anorectal herpes, all had acute onset of anorectal pain consisting of an intermittent sharp, throbbing pain as well as a constant burning sensation and positive anoscopic findings (Table I). These findings include discrete punched-out ulcerations with erythematous borders in five of eight cases. Nonrectal herpetic lesions were found in 50 percent of the patients. Additional symptoms included proximal weakness in the lower extremities, difficulty in starting the urinary stream, difficult bowel movements, paresthesia, malaise, fever, and low back pain; 37.5 percent of the patients suffered relapses within one year.

The clinical course of this syndrome varied from 7 to 35 days, with an average of 21 days (Table II). The chronologic sequence of symptoms was usually, first, the onset of anorectal pain, followed within two to four days with difficulty in starting the urinary stream. Purulent rectal discharge was noted throughout the course of the syndrome, in the majority of patients. At about the same time, proximal muscle weakness in the lower extremities was noted, followed within one to three days by paresthesia in the lower extremities, then difficulty with bowel movements. The proximal muscle weakness was usually the first symptom to subside, lasting from 4 to 26 days, with an average of 17 days.

Physical findings included inflamed rectal mucosa, usually covered with a purulent discharge, consisting of mainly PMNs, and small (1- to 3-mm.) discrete ulcerations along the anal canal. Neurologic findings included slight decrease in sensation overlying varying dermatomes in the lower extremities and significant proximal muscle weakness of the lower extremities.

Of the eight patients, only one had associated anorectal *N. gonorrhoeae*, by culture. Bacterial cultures demonstrated no pathogens in any of the patients. Of the three patients cultured for herpes, two had positive cultures for herpes simplex.

There is very little that alters the course of the disease. Treatment of the symptoms included sitz baths, stool softeners, bulk agents, good rectal hygiene, and analgesics, both topical and systemic. Reassurance and general support by the health care personnel are extremely important in dealing with these patients.

Anorectal herpes virus infection should be included in the differential diagnosis of any complaint of anorectal pain. A thorough history must include whether or not rectal intercourse is practiced, in women as well as men. A complete genital and rectal examination must be performed, along with the appropriate cultures for *N. gonorrhoeae*, other bacterial pathogens, and herpes virus.

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TABLE II. Anorectal herpes simplex—onset/resolution (in days) of findings

Case Number	Anorectal Pain	Proximal Muscle Weakness	Low Back Pain	Difficulty in Voiding	Paresthesia	Difficult Bowel Movements	Malaise
1	1 to 17	1 to 12	. . .	1 to 10	. . .		
2	1 to 28	1 to 21	1 to 18	. . .	. . .	1 to 2	2 to 4
3	1 to 28	1 to 26	. . .	3 to 21	. . .	. . .	. . .
4	1 to 28	4 to 14	. . .	. . .	. . .	4 to 13	. . .
5	1 to 7	1 to 4	. . .	1 to 4	1 to 4	. . .	. . .
6	1 to 14	. . .	. . .	1 to 7	1 to 14	10 to 14	. . .
7	1 to 35	14 to 21	. . .	2 to 18	14 to 21	14 to 21	. . .
8	1 to 14	1 to 5	. . .	2 to 5	. . .	1 to 5	. . .
Average	1 to 34	1 to 26	1 to 18	1 to 21	1 to 21	1 to 21	2 to 4
Mean	1 to 21	3 to 17	1 to 18	2 to 11	5 to 13	6 to 11	2 to 4

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"Gold fever" can be health hazard

The high price of gold has inspired some enterprising individuals to turn a profit by extracting gold from ore at home. But fumes from their kitchen refineries have sent a few of these gold bugs to the hospital.

Writing in the Journal of the American Medical Association (October 23), a group of Colorado physicians report six cases of acute mercury poisoning caused by heating gold ore with mercury to produce an amalgam. Six patients in two families developed symptoms after inhaling mercury vapor from open pans on their kitchen stoves. Two of the patients were young children.

Mercury vapor is actively absorbed from the lungs. About 75 percent of an inhaled dose is retained in the body.

Symptoms of acute mercury poisoning by inhalation include salivation, a sensation of burning in the mouth and throat, shortness of breath, cough, tightness in the chest, nausea and vomiting, abdominal pain, and bloody diarrhea. Kidney damage can occur.

Metallic mercury that is not heated does not usually cause a toxic reaction even in large doses.

The six patients recovered after hospitalization and treatment with chemical agents that promote the excretion of mercury in the urine.

Intrathoracic Goiter

Diagnosis by ultrasound

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Ultrasonography has been found useful in the differential diagnosis of thyroid masses[1,2]; however, substernal goiters and nodules do not generally lend themselves to this type of evaluation.[3] The case presented here is one in which sonography contributed significantly to the preoperative diagnosis of intrathoracic goiter. No previous reports of this entity diagnosed by ultrasound could be found in the literature. However, there is one account where ultrasound was diagnostically important in a case of cervicomediastinal thymic cyst.[4]

Case report

A 47-year-old female was admitted to the hospital for evaluation of an anterior mediastinal mass detected on a routine chest x-ray film. There was no history of dyspnea, cough, stridor, dysphagia, or chest pain. The physical examination disclosed nothing remarkable except for slight enlargement of the right lobe of the thyroid.

A radiograph of the chest showed a smoothly marginated soft-tissue mass in the anterior mediastinum, displacing the trachea to the left of the midline (Fig. 1A). No calcification was present. An ^{123}I (radioactive isotope of iodine) radionuclide scan showed no appreciable accumulation of the tracer by the mediastinal mass (Fig. 1B). The radioactive iodine uptake was within normal limits. A sagittal ultrasound scan of the upper chest and neck showed the mediastinal mass to be solid in consistency and demonstrated continuity between the right lobe of the thyroid and the mediastinal mass (Fig. 1C).

At thoracotomy an intrathoracic goiter was removed. Histologic examination showed an encapsulated adenomatous goiter.

Comment

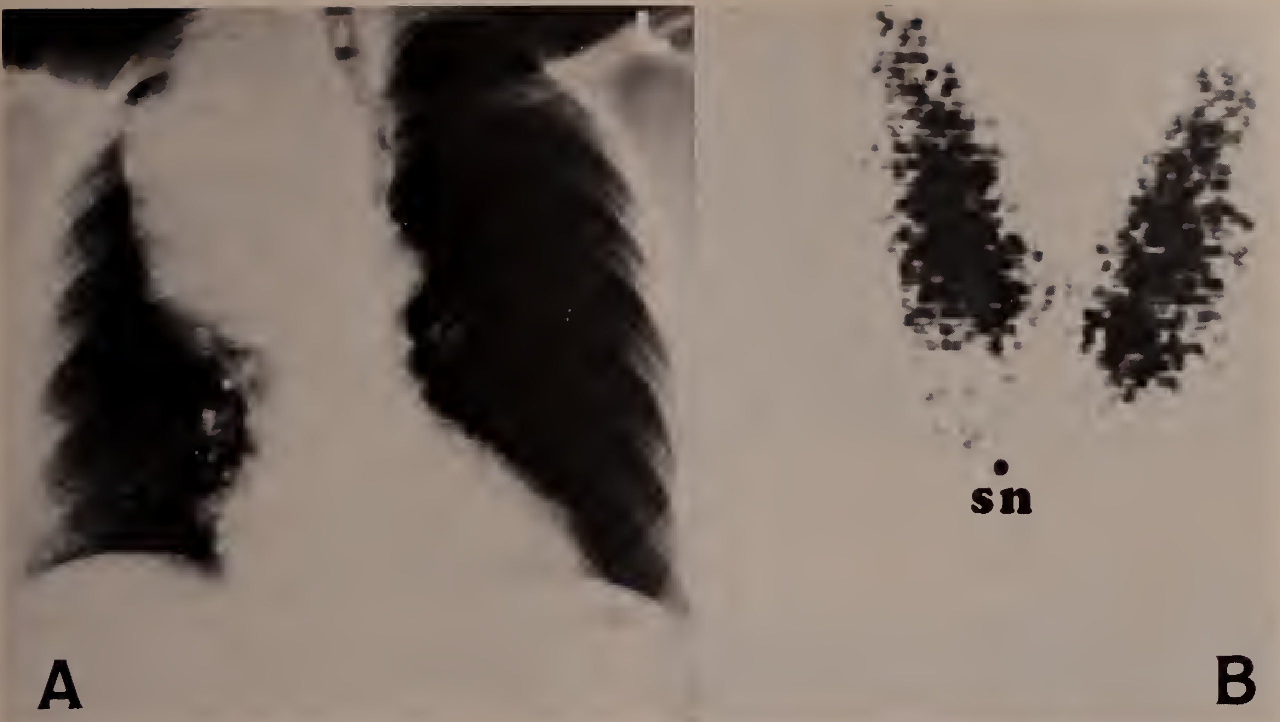
Intrathoracic goiter is an uncommon lesion and constitutes approximately 1.6 to 3.1 percent of surgically treated goiters.[5] A connection between the intrathoracic goiter and cervical thyroid is almost always present.[6] In 75 percent of cases the goiter is situated in the anterior mediastinum. Goiters in the posterior mediastinum, originally thought to be uncommon, constitute 25 percent of the total and are always seen on the right side (the aortic arch is believed to prevent descent of the thyroid into the left posterior mediastinum).[5]

The majority of patients with intrathoracic goiter are asymptomatic, with lesions usually discovered on a screening chest x-ray film.[6,7] The most common symptoms include: dyspnea, stridor, cough, dysphagia and, on occasion, symptoms of superior vena caval obstruction.[5,7]

The chest radiograph shows a smooth or lobulated, well-marginated soft-tissue mass in the anterior/superior mediastinum. In the differential diagnosis, one should also consider teratoma, thymic tumor, and lymphoma.

Radioiodine scanning plays a crucial role in the diagnosis of an intrathoracic goiter. If the mediastinal mass accumulates the administered radioiodine, then the diagnosis of intrathoracic goiter is virtually assured. However, since an intrathoracic goiter need not contain functioning thyroid tissue, the diagnosis should not be discarded if there is no radioiodine activity. Although earlier reports[5-7] emphasized the poor function often displayed by intrathoracic goiters, a recent study showed accumulation of the tracer by the mass in each of the 24 cases studied.[8] Absence of isotope activity may be due to (1) deficient concentration or organification of iodine, (2) extensive cystic or hemorrhagic degeneration, (3) low iodine uptake (less than 5 percent in 24 hours), and (4) technical factors, relating to the isotope used. The ^{131}I NaI (sodium iodide) isotope should be used as the radiopharmaceutic because the lower energy gamma photons of the other thyroid radionuclides (for example, ^{125}I, ^{123}I, or ^{99m}Tc(technetium)-per technetate) may be absorbed by the sternum before they reach the detector. ^{131}I was not used in the case under discussion, and that may have accounted for the lack of visualization on the scintillation scanning.

Sonographic evaluation of the mediastinum is often hampered by the bony thorax and aerated lungs. The former impediment is circumvented by scanning in the intercostal spaces. Furthermore, a mediastinal mass of sufficient size acts as an acoustic window by displacing the lungs, thereby making itself



accessible to sonographic examination. In the case under discussion, demonstration of continuity of the cervical thyroid with its intrathoracic component was crucial to suggesting the correct diagnosis. This was accomplished by scanning in the sagittal plane along the long axis of the right lobe of the thyroid by a sectoring motion with the transducer placed in the sternal notch.

The case is presented to show the utility of sonography for the diagnosis of intrathoracic goiter when the results of radioiodine studies are inconclusive. The value of scanning in the sagittal plane is emphasized.

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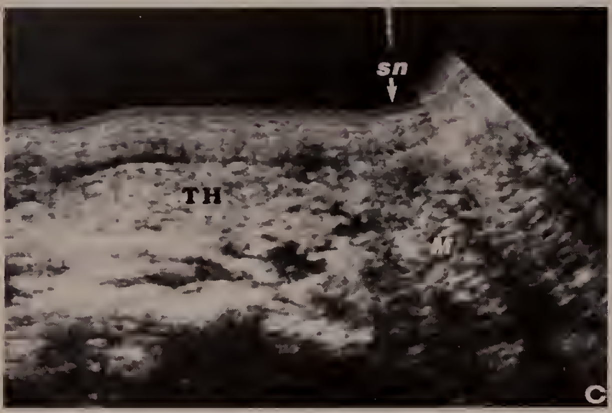

FIGURE 1. (A) Posterior-anterior chest radiograph shows smoothly marginated mass in anterior/superior mediastinum. (B) I^{123} radionuclide scan (anterior view). SN = suprasternal notch. Note slight decrease in isotopic activity in lower pole of right lobe of thyroid and no activity in region of mediastinal mass. (C) Sagittal sonogram of neck 2 cm. to right of midline shows continuity between right lobe of thyroid (TH) and mediastinal mass (M). SN = suprasternal notch. Patient's head is toward viewer's left.

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Reactive Systemic Amyloidosis

Complicating long-standing sarcoidosis

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Sarcoidosis, a multisystem granulomatous disorder of uncertain etiology, is commonly associated with profound immunologic alterations.[1-3] Despite its similarity to amyloidogenic disorders, the lack of association of sarcoidosis with amyloidosis has been emphasized.[4,5] This has been linked to a possible absence of specific immune response in patients with sarcoidosis.[5]

To date, only one case of systemic amyloidosis complicating sarcoidosis has been reported.[6] We report here a second such occurrence in a patient with long-standing sarcoidosis.

Case report

A 40-year-old black man, who had been diagnosed to have sarcoidosis 16 years previously, was admitted to the hospital because of dyspnea, productive cough, and diarrhea of one month's duration.

Following the initial diagnosis, he had been treated intermittently with steroids as well as prophylactic antituberculous therapy with isoniazid and paraaminosalicylate, and was generally asymptomatic. Ten years later, he developed exertional dyspnea with occasional cough and significant weight loss. For the following five years, the dyspnea worsened gradually and there were episodes of pneumonia.

One year prior to his last admission, findings on chest x-ray film revealed extensive pulmonary fibrosis, and electrocardiograms revealed right atrial enlargement, right ventricular hypertrophy, and evidence of myocardial damage. In addition, there was mild proteinuria and persistent hypoalbuminemia ranging from 1.1 to 1.9 Gm. per 100 ml. with total proteins of 6.8 to 8.1, and globulins of 5.4 to 6.3 Gm. per 100 ml. Findings on a liver biopsy disclosed noncaseating granulomata.

The patient's last admission was for respiratory distress. Physical findings were indicative of pulmonary fibrosis and right-heart failure. Urinalysis still disclosed moderate proteinuria and blood chemistries showed hypoalbuminemia with moderate hyperglobulinemia. He was treated supportively, but sustained a sudden cardiorespiratory arrest and expired 16 years after the initial diagnosis of sarcoidosis, at which time a complete autopsy was performed.

Materials and methods

Tissues obtained at autopsy were fixed in 10 percent buffered neutral formalin. Paraffin-embedded sections were cut at 5μ and stained with routine hematoxylin and eosin stain, as well as with periodic acid-Schiff with and without prior diastase treatment, Gomori's methanamine silver, Erlich-Ziehl-Neelsen, congo red, and crystal violet stains. Congo-red stained sections were also examined under polarized light.

For electronmicroscopy, formalin-fixed material from the lungs and spleen was first washed overnight in phosphate buffer (pH 7.4), then fixed in 3 percent glutaraldehyde solution, and postfixed in 1 percent osmiumtetraoxide dehydrated in graded acetone solutions, and embedded in Epon-Araldite. Sections were cut with a Porter-Blum MT-2 ultramicrotome. Semi-thick sections were stained with toluidine blue. Thin sections were stained with uranyl acetate and lead citrate and examined with an RCA EMU 3G electronmicroscope.

Autopsy findings

Gross examination revealed extensive bilateral fibrous pleural adhesions. The lungs, together, weighed 1,260 Gm. and there was extensive fibrosis and honeycombing more prominent in the upper lobes. In the mediastinum, markedly enlarged, nonmatted lymph nodes of fleshy consistency and homogeneously gray-white cut surfaces were present.

The heart weighed 360 Gm. and showed right atrial and ventricular hypertrophy and dilatation. Numerous pinhead-sized ill-defined areas of whitish discoloration, blending with the surrounding myocardium, were noted in the wall of the left ventricle and interventricular septum. The liver weighed 1,400 Gm., was slightly firmer than usual, and revealed marked passive congestion. The spleen weighed 220 Gm. It was firm and the cut surfaces revealed slightly pale areas alternating with darker red-brownish pulp. The kidneys weighed 220 Gm. each; the cortical surfaces were smooth and the cortices appeared prominent, waxy, and pale.

By light microscopy, the upper lobes of each lung revealed extensive fibrosis and dense chronic inflammatory cell infiltrates. There were many nonnecrotizing epithelioid granulomas at various stages of development and regression located in areas of intense scarring and in the interalveolar septa (Fig. 1). Multinucleated giant cells of foreign body and Langhans type were common and some of the former contained birefringent crystalloid material. Acid fast bacilli and fungi were not present. In most areas, the septa were moderately to markedly thickened by deposits of amorphous, glassy eosinophilic material with tinctorial features characteristic for amyloid, such as demonstrated by positive Congo-red staining with strong green birefringence with polarized light (Fig. 2) and metachromasia with crystal violet. Similar deposits were also present in the walls of the arterioles and arteries. The hilar lymph nodes showed similar epithelioid granulomata together with extensive hyalinization and loss of lymphoid elements. The liver disclosed occasional granulomata both in the portal areas and the parenchyma. Also noted were amyloid deposits in blood vessels in some portal areas.

Deposits of amyloid were present around blood vessels in the heart, kidneys, spleen, adrenals, pancreas, gastrointestinal tract, testes, epididymis, pituitary gland, and meninges. In the kidneys, large numbers of glomeruli were completely obliterated by amyloid deposits (Fig. 3). In the heart, there were extensive deposits between myocardial fibers, and in the spleen both red and white pulp were involved. Ultrastructural studies of material from lungs and spleen demonstrated typical amyloid fibrils (Fig. 4).

Comment

This case demonstrates the presence of extensive amyloidosis in a patient with long-standing sarcoidosis. Except for a single reported case of sarcoidosis with amyloidosis,[6] these two disorders have not been associated,[4] this, despite the morphologic and immunologic similarities of sarcoidosis to other amyloidogenic disorders. Recently, Glenner and Page[5] emphasized the lack of association of the two conditions which they linked to a possible absence of specific immune response in patients afflicted with sarcoidosis.

Sarcoidosis is accompanied by profound immunologic changes which are reflected as a depression of cell mediated immunity (T-cell depression). Concommittently there is considerable augmentation of B-cell activity consisting of elevated serum immunoglobulins, autoantibodies, and circulating immune complexes.[2,3,7] The elevation of serum immunoglobulins and the depression of delayed hypersensitivity appear to reflect an intense B-cell activity due to the removal of the normal T-cell regulatory function.

The relationship of inflammatory disorders to

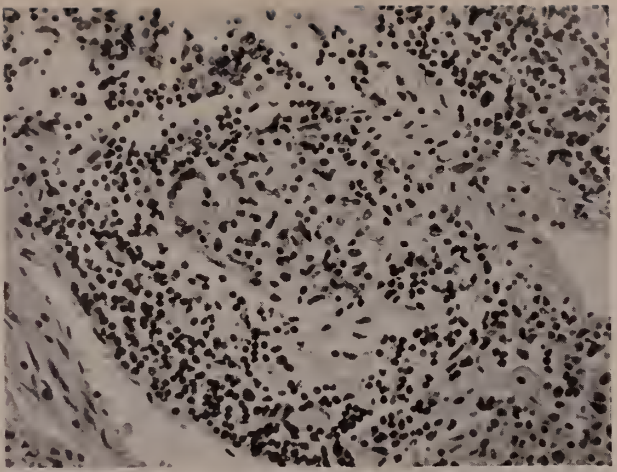

FIGURE 1. Photomicrograph of lung showing non-necrotizing epithelioid (sarcoid) granuloma in fibrotic area, (hematoxylin and eosin stain, original magnification X 375).

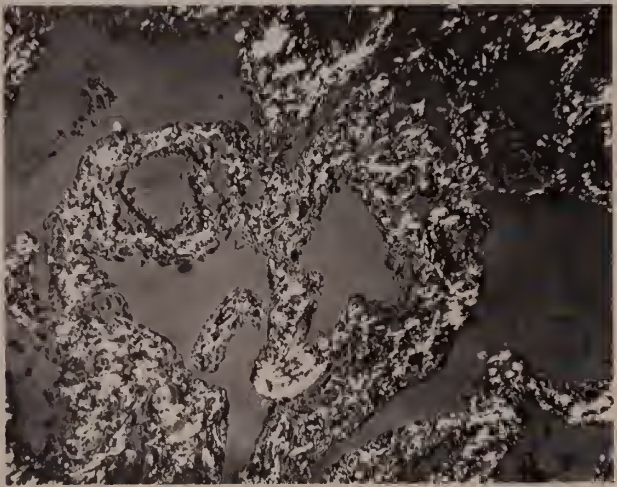

FIGURE 2. Photomicrograph of lung showing thickened alveolar septa and extensive amyloid deposits, (Congo-red stain and polarized light, original magnification X 95).

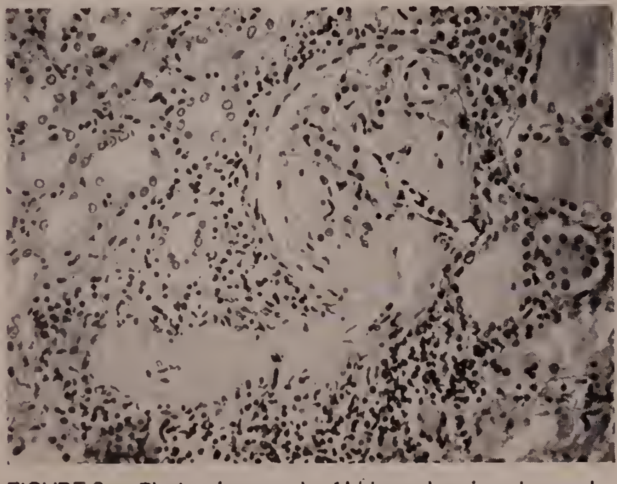

FIGURE 3. Photomicrograph of kidney showing glomerulus and adjacent arteriole with prominent amyloid deposits, (hematoxylin and eosin stain, original magnification X 280).

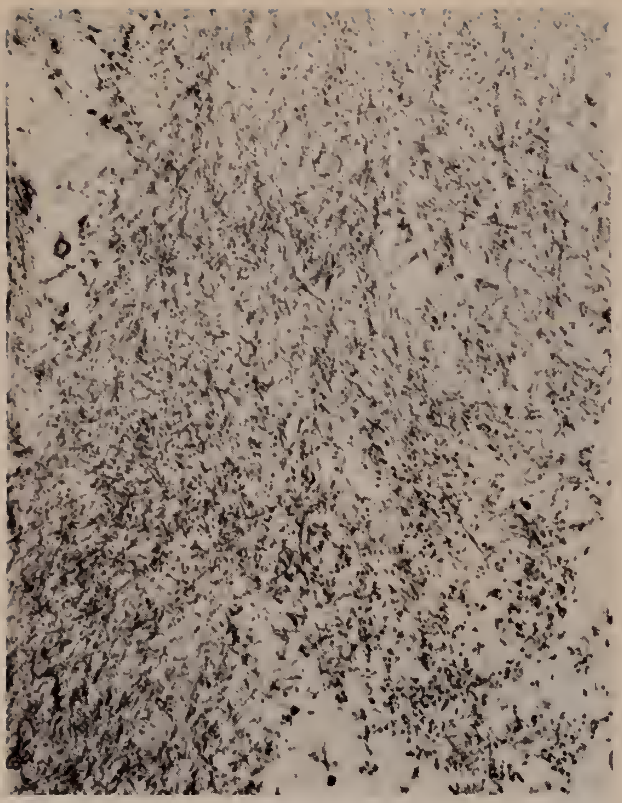

FIGURE 4. Electronmicrograph of pulmonary tissue showing typical amyloid fibrils, (hematoxylin and eosin stain, original magnification X36,000).

systemic secondary (reactive) amyloidosis has been known for a long time. In these situations, the formation of amyloid is dependent on the underlying disorder, as shown by the reversal of the process by the removal of the initiating factor.[5] In most cases, the protein component of the amyloid fibrils is closely related to the light chains of immunoglobulins.[5] This indicates that amyloid develops from products of an immunocyte-derived cell, which is either deposited locally or disseminated in the blood stream.[8,9]

In our case, the most extensive sarcoid lesions were in the lungs, which were also heavily laden with amyloid deposits whose distribution was that of diffuse vascular and alveolar septal types, which occur alone or in association with dysproteinemias.[10] It should be noted that the lungs are usually resistant to amyloid deposition,[11] and are almost never involved by secondary (reactive) amyloidosis.[12] The massive amyloid deposits in this patient may, in some way, be related to the extent of involvement by sarcoidosis. The predominance of pulmonary involvement by sarcoidosis suggests that the lungs are the major focus of inflammation and perhaps of immunologic activity.[1] However, the systemic distribution of amyloidosis favors a systemic reaction rather than a local response and may be related to the patients constant hyperglobulinemia.

In the present case, as in the previously reported one,[6] sarcoidosis of long duration appears to be the causative factor for the development of systemic secondary (reactive) amyloidosis. We cannot account for the fact that in most instances amyloid does not appear in patients with sarcoidosis.

Summary

A case of long-standing sarcoidosis complicated by systemic secondary (reactive) amyloidosis is presented. Although sarcoidosis has many morphologic and immunologic similarities to amyloid-inducing disorders, there is only one previous reported case of the simultaneous occurrence of sarcoidosis and amyloidosis. The lack of association of these two conditions remains unexplained. However, both in the present and the previously reported cases, no other amyloidogenic disease was present. Therefore, in these instances, sarcoidosis appears to be the causative factor in the development of systemic secondary (reactive) amyloidosis.

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Presidential Address*

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Medical Society of the
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I would like you to join me for a few minutes in a bit of a fantasy and do not be confused by my use of the past tense.

On November 9, 1982, that is next year, 1982, a news story appeared in newspapers around the State with a headline that read:

MEDICAL SOCIETY OF STATE OF NEW YORK DISSOLVED; DOCTORS CHARGE FAILURE TO SOLVE EVERY PROBLEM

What follows is the genesis of that newspaper account.

In the 1982 House of Delegates, four almost identical resolutions were introduced by Districts 1, 2, 8, and 9. The thrust of the resolutions was that the Medical Society of the State of New York cease to function as a State organization, and that its affairs be terminated within sixty days of the passage of the resolutions. This would be accomplished by making the Society insolvent, the only legal basis for dissolution, through mass resignations by the physicians in the districts involved, an action they had previously affirmed in their local forums.

The "whereases" of the resolutions were replete with the reasons for the action to be taken. Among others, it was charged, the Society was not aggressive enough, it did not communicate enough, litigate enough, demonstrate enough, educate enough, plus a few additional "enoughs." Its lobbying efforts were a dismal failure, and its creation of a captive insurance company, they said in hindsight, was a gross error.

Testimony before the Reference Committee played to a packed house. The debate was strident and bitter, the House debate even more acrimonious. But in the end a resolution was adopted. It called for the cessation of operation by the Medical Society of the State of New York within 60 days; and for the appointment of a caretaker group consisting of the last duly elected officers and the Council to oversee the distribution of the Society's assets.

In short order mass resignations, as was anticipated, were submitted by the physicians in the districts that had proposed the resolutions. This made it clear that the Society faced insolvency, and steps were taken in the Supreme Court of the State to dissolve the Society.

Within a week the caretaker group met to comply with the resolution. Preparations were made to dispose of the headquarters at Lake Success through auction. The building and property, which had recently been appraised at somewhat over $7,000,000, was disposed of at a distress sale to an agent representing an unknown buyer for half the price. It was later learned that the buyer was the New York State Association of Chiropractors. In an interview with the press, the president of that association was quoted as saying, "We finally manipulated the physicians; however, adjustments will have to be made in the building's structure."

For several months calm and serenity prevailed. But then things began to happen. On January 10, 1983, the Chairman of the Workers' Compensation Board, with the blessings of the Governor, sponsored a bill in the Legislature that would mandate its fee schedule as the maximum fee schedule. (A year before, a similar bill had been bottled up in committee through the efforts of the State Medical Society.) Now, with no organized opposition, the bill was passed. Shortly thereafter the Chairman of the Workers' Compensation Board announced a new schedule pegged at 90 percent of the fee schedule in place as of January, 1980. A hastily formed ad hoc physician's group asked for a meeting with him, but he respectfully declined on the ground that he was legally required to deal only with the President of the Medical Society of the State of New York, and that no longer existed.

Over the next eighteen months other things began to happen.

> The "No-Fault" suit was dropped for lack of funds and lack of a sponsor.
>
> The Department of Social Services reintroduced its plans for "deferrable surgery" and for mandated second opinions and preadmission certification. It was also giving an attentive ear to those seeking the names of physicians who performed abortions under the Medicaid Title XIX program.
>
> Many other things happened, but I won't bore you with the details.

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* Dr. Rosenberg addressed the House of Delegates of the Medical Society of the State of New York at their 175th Annual meeting held from October 11, 1981, to October 14, 1981, in New York City.

The physicians of the State, however, were far from bored. All of the actions described, plus others, they soon recalled, had been fought — and defeated — by the now dead Medical Society of the State of New York. So they grumbled, they complained bitterly, and agreed that something had to be done. They formed "crisis" committees. One was a Coalition Crisis Committee of Concerned Physicians, another the Coalition of Physicians Concerned with Crisis, and one with a long title, the Coalition of Physicians and Concerned Citizens to Combat the Collapse of Quality Medical Care in the State of New York.

I think my point is clear. Instead of stopping in the middle of my fable, I owe it to you to let you know what happened as these groups tried to meet (never with more than 100 physicians in attendance), to collect campaign funds (with little success), to decide on a course of action (with the same results as at the Tower of Babel), and to create a coalition of the various coalitions for a joint effort in their common interest. That never left the ground.

As with most fairy tales, however, my story has a happy ending. In May, 1985, a group of physicians in the areas previously designated as Districts 1, 2, 8, and 9 met. They had just one item on their agenda. What they accomplished was reported in small type in one news account:

PHYSICIANS UNDERTAKE REESTABLISHMENT OF STATE MEDICAL SOCIETY; CALL IT "INDISPENSABLE" TO HEALTH CARE AND PRACTICE OF MEDICINE

It would be nice to be able to add the line that ends most fairy tales, "And they lived happily ever after." But that didn't happen, because it seldom happens, and I think there are real benefits when it doesn't happen too easily.

While all this may sound like a chapter from Fantasy Island or the musing of a newly-elected President, something similar to what I have just unfolded actually took place almost a hundred years ago, in February of 1884, when a schism of such magnitude occurred among the physicians of this State that there actually existed side by side, two State societies! One was the Medical Society of the State of New York, and the other called itself the New York State Medical Association.

The reason for that break pales into insignificance when compared to the problems besetting us today. Yet it was not until 1905 — more than 20 years later — that physicians with both vision and frustration understood from bitter experience the destructive influence of factionalism, and they once again joined as a single voice in the embodiment of the Medical Society of the State of New York.

As I look ahead and around, something disturbs me. I would be less than candid if I did not bring it forward. I do so not so much in criticism, for I do not exclude myself from this self-criticism, but in the hope and belief that it will help to bring us all together to work constructively and effectively for our common good. For what is at stake is our common good, and that of the public we serve.

We are now in the midst of a very serious problem, what the McGill Commission said could lead to the "imminent breakdown" of our medical liability system. We have had problems before, and we will have them in the future. I see symptoms of reactions which, if unchecked, could lead to debilitation rather than strength, divisiveness rather than unity, disenchantment and factionalism rather than the joint and vigorous action that only a strong, collective voice can produce.

Make no mistake. No "splinter group" or "single issue" group, however well intentioned, has ever survived in the long history of medicine in this State; and "quick fixes" or "instant solutions" generally wind up as instant sellouts that are usually costly and nonproductive.

We can criticize and we can argue and disagree, but I think we must all recognize the simple truth, that no single group of physicians in the State with narrow parochial interests can possibly have the financial wherewithal, the organizational backup, the broad-based program, the specialized personnel, the varied resources, the continuity — in short, the clout — available to the State Society and with the positive impact on medical affairs and the health care system of New York that the Society has exerted.

If these words have a touch of pessimism, which is usually not part of my nature, I prefer to look upon them as an expression of optimism as I weigh our present positive attributes, and as I look even at our weaknesses and frustrations and, on occasion, failures. I know that by joining ranks we can with determination, collaboration, and reasoned debate and consensus, attain the objectives we all seek for our profession, for ourselves, and the people of this State.

There is much for us to do together. We must communicate better, educate better, broaden our involvement in the community around us, be more responsive to our membership, listen more. And that relationship must be a two-way street. We have a marvellous potential that exists in this Society and in our ranks.

Those ranks must be expanded and strengthened. Attrition can be as deadening as divisiveness. In the last decade there has been a decrease of 3,000 active members in our Society, at a time when the State Department of Education estimates that 3 to 4,000 new physicians are certified every year. The State Society, through its membership development and computer divisions, has been able to identify 34,000 nonmember physicians.

If there has ever been a time when we need all of the physicians of the State in our ranks, and when they need us, it is now. If there is any single organization or common denominator that can speak and act for all of the physicians in this State, regardless of their special or individual interests and whether or not they belong to organized medicine, it is the Medical Society of the State of New York. This is the message we must bring to our unaffiliated colleagues, and this is a task we must undertake with particular vigor this year. It is the task for all of us as individuals, attainable through our county and State societies.

Each one of us has a vested interest, and the State Society can help us; we need not apologize for that. Each one of us also has a professional, ethical interest, and through our Society we have been able, and shall continue, to translate that into the best medical and health care system in the world for the benefit of the people of this State. Of that we can be proud.

My time of office is short. I will not indulge in pious platitudes or assume a mantle of false modesty. I was elected, I assume, for a purpose. That purpose is to expend whatever energy I possess to fulfill the responsibility of the presidency on behalf of all our members and the continuation of quality medicine in this State. It is also to do all I can to make certain that when I leave this office one year hence, the State Society will be stronger than ever; that its active membership rolls will be enhanced; that its objectives and undertakings, as enunciated by this House, representing your constituencies, will be articulated and achieved; that its deficiencies will be ameliorated; so that the House of Delegates in 1982 or any time thereafter will never have to grapple with the resolutions I have fantasized.

Roberts Bartholow

In search of anatomic localization

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Entering the nineteenth century the prevailing concept of brain function was that the cerebral hemispheres were a sensorium commune without specific functional localization. S. T. Soemmerring, an early nineteenth-century physician and neuroanatomist, impressed by the findings that the cranial nerves all terminated in the walls of the ventricles where they were bathed with fluid, claimed that this fluid was the organ of the mind.[1] This view had persisted since Aristotle despite the observation by some observers, such as William of Saliceto in the thirteenth century, that injury to one side of the brain caused paralysis of the contralateral limb.[2] Saucerotte in 1768 also demonstrated that a lesion made through an anteriorly placed trephine caused paralysis of the contralateral hindlimb.[3]

Early brain function studies

Unfortunately, these observations were obscured by the work of other investigators such as Theodorico Borgognoni, also in the thirteenth century, who observed that large parts of the brain could be removed in animals with few subsequent deficits.[2] In 1673, Duverney[4] removed the cerebral hemispheres and cerebellum from a pigeon, filled the cranium with falx, and noted that the animal lived and had full use of his senses.

Gall and Spurzheim,[5] early nineteenth century physicians, were the first to postulate that the cerebral hemispheres were not equipotential. Gall and his pupil Spurzheim argued that the brain was composed of a great number of organs with each organ serving as a moral or intellectual faculty. Each organ produced a corresponding bump on the skull, which could be measured. Although Gall and Spurzheim,[5] gained large numbers of followers, their ideas of craniology were looked on with contempt by many of their contemporaries. As noted by Walker,[6] it is ironic that one of the earliest concepts of cerebral localization was derived from a pseudoscience that came to be ridiculed by the scientific world.

The modern era of cerebral localization began in the early nineteenth century with more invasive, although crudely performed, experimentation. Early nineteenth-century studies consisted of mechanical stimulation of the brain of animals by cutting, pricking, compressing, punching, or by the use of chemical stimulation with various acids, alkaline, alcohol, and toxic substances. After galvanic current was introduced as an experimental tool by Galvani[7] and Caldani,[8] increasingly sophisticated studies were possible. Both Aldini[2] in 1804 and Rolando in 1809[9] observed muscular contractions when electrical currents were applied to the brain.

Fluorens in 1824[10] exposed a dog's hindbrain and pinched various areas of the brain stem and hemispheres. He found that stimulation of the cerebral hemispheres did not result in muscular contractions. However, stimulation of the quadrigeminal plate and caudal brainstem resulted in muscular contractions. He stated "My experiments established that the hemispheres of the brain do not produce any movement." Fluorens[10] explained Rolando's[9] observations that electrical currents applied to the cerebral hemispheres caused muscular contractions by stating that the contractions were caused by direct spread of the current to the limbs. Partly as a repudiation of Gall and Spurzheim's[5] phrenologic theories, considered to be unscientific by many investigators, Fluorens' view that the cerebral hemispheres did not have localized motor function was widely accepted.[11] Longet[12] supported Flourens and summarized his experiments: "On dogs, rabbits and some kids we have irritated with a knife the white substance of the cerebral lobes, we have cauterized them with potash, nitric acid, etc.; we have run galvanic currents through them in all directions without succeeding in evoking involuntary muscular contractions. The same negative results were found in directing these agents to either grey or white matter."

As noted by Walker,[2] the weight of Flourens' [10] and Longet's[12] authority was so great that contrary findings were considered insignificant or explained away as artefactual.

Localization of brain functions

The first outright opponent of the principle of homogeneity was Broca.[13] Broca was a pupil of Bouilland, professor of clinical medicine at La-Charite, who interestingly was one of the few academic champions of phrenology. In 1861 Broca[13] found at the autopsy of a man, whom he had recently examined and discovered to have no defect other than the inability to speak, a lesion at the base of the third frontal convolution of the left hemisphere. In his 1861 report he stated, "At all events, one need only compare the present case with those previously reported in order to dismiss the notion that the faculty of articulate speech resides at a fixed point or is located under some bump on the skull .... This discrepancy cannot be reconciled by any system of bumps; it can, on the other hand, be explained within the context of localization by convolution."

Further localization of specific functions was made by Wernicke in 1874 when he announced that the superior temporal gyrus was the area of the human brain used specifically for the reception of sound.[14]

One year prior to Broca's[13] famous pronouncement, Hughlings Jackson had shown that a diseased hemisphere may give rise to involuntary contralateral movements.[15] The fact that Jackson's wife had focal seizures may have been a stimulus for his life-long interest in this disorder.[16] Jackson studied patients with focal seizures so assiduously that he built up a picture of how the body must be represented on the motor cortex.[15]

Electrical brain stimulation

The birth of modern cortical stimulation occurred in the home of Hitzig where Hitzig and Fritsch[17] did the first detailed studies of electrical stimulation of the cortex of experimental animals. At the time these studies were performed, no laboratories were available at the Physiological Institute in Berlin for work on warm-blooded animals and, as a consequence, Frau Hitzig's dressing table was employed. Using bipolar platinum electrodes, various areas of the cortex were stimulated; the anterior region caused motor responses but the posterior parts were inexcitable. Stimulation of the frontal "motor" area caused muscular contractions of the limbs opposite to the side stimulated. With a low-voltage stimuli it was possible to elicit specific movements of an extremity; with high voltage stimuli, generalized convulsions developed. After localizing the motor center they then ablated the area; the animals were left with a contralateral hemiparesis. The doctrine of cerebral localization was thus established.

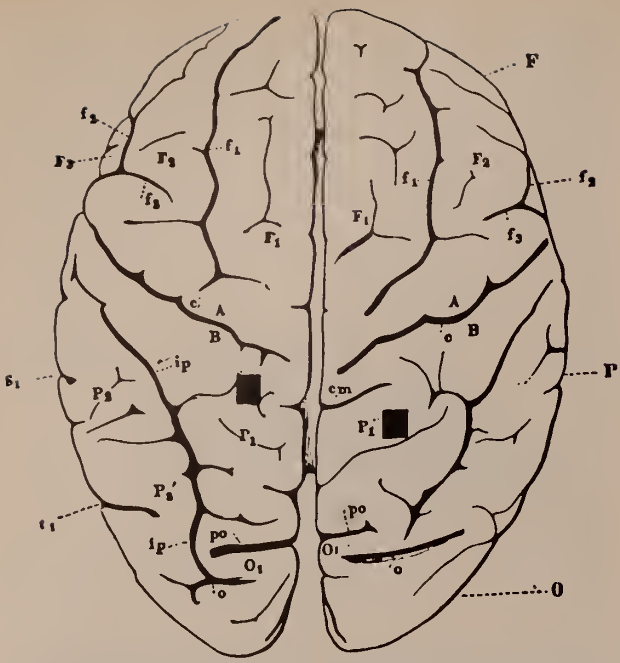
Although these results were confirmed shortly afterward by Ferrier,[18] the general principles of Fritsch's and Hitzig's[17] research was not widely accepted. Burden-Sandersen[19] maintained that the results of Fritsch and Hitzig[17] were due to spread of the current to the basal ganglia, then considered to be a motor ganglion. Carville and Duret[20] also maintained that the basal ganglion was the source of motor responses.

FIGURE 1. Roberts Bartholow, M.D., 1831 to 1904. (Reprinted by permission.[6])

It was in this atmosphere that Roberts Bartholow, M.D., (Fig. 1), a prominent Cincinnati practitioner, performed studies similar to Hitzig and Fritsch[17] on a human being.

Bartholow

Dr. Bartholow, a native of Maryland, graduated in medicine from the University of Maryland, and from 1837 to 1864 served as the officer of the medical staff of the United States Army.[21] He went with the army to maintain order against the Mormons and Indians in the west during Brigham Young's time. During the Civil War he served in Washington, Nashville, Chattanooga, and Baltimore and wrote extensively of his experiences in fevers and gunshot wounds. In 1864 he was named professor of chemistry at the Medical College of Ohio. At the time of his appointment, a considerable controversy arose since his predecessors were professional chemists and an appointment of a practicing physician was not welcomed. Once appointed he continued to be controversial with his strange, disturbing views on sewage, which were eventually proved right during the cholera epidemic of 1866. In 1869 he became professor of materia medica. In 1874 Bartholow[22] published one of the most controversial articles of his day in the *American Journal of the Medical Sci-*



VIEW OF THE BRAIN FROM ABOVE. F. Frontal Lobe. P. Parietal Lobe. O. Occipital Lobe. S_1 End of the horizontal ramus of the Fissure of Sylvius. c. Central Fissure. A. Anterior, B. Posterior Central Convolution. F_1 Superior, F_2 Middle, F_3 Inferior Frontal Convolution. f_1 Superior, f_2 Inferior Frontal Sulcus. f_3 Sulcus Praecentralis. P_1 Superior Parietal Lobule. P_2 Inferior Parietal Lobule, viz., P_2 Gyrus Supramarginalis, P_2' Gyrus Angularis. ip. Interparietal Fissure, cm. Calloso-marginal Fissure. po. Parieto-occipital Fissure. t_1 Superior Temporo-sphenoidal Fissure. O_1 First Occipital Convolution. o. Sulcus Occipitalis transversus.

FIGURE 2. Areas of brain (black squares) stimulated by Bartholow. (Reprinted by permission.[2])

ences, entitled "Experimental Investigations into the Functions of the Human Brain." A 30-year-old servant with a rapidly expanding epithelioma came under his care. The tumor eroded the skull, and a 2-inch-diameter area of the brain was exposed. With the consent of the patient, Dr. Bartholow inserted electrodes into the substance of the brain and applied faradic current. When the needles were inserted into the left postcentral convolution, and the faradic current was applied, muscular contractions occurred in the right arm and leg and the head turned to the left. Similar effects on the opposite side were seen when the right parietal region was stimulated (Fig. 2). During the course of the studies, the patient developed spontaneous focal seizures and a hemiparesis on the right side. She then developed generalized tonic clonic seizures, followed by coma and death. Autopsy revealed thrombosis of the superior longitudinal sinus. Based on the pathologic evidence, Bartholow maintained that death was not subsequent to his studies. However, he got little credit for his daring in invading the sacred organ or his candor in reporting his results, and was censored by medical journals at home and abroad.[23] To his critics he replied that he had no reason to expect that faradic current would prove electrolytic and that the tissues would not escape damage. Based on his case proving the contrary, Bartholow stated that it would be criminal to repeat such experiments.[24] The editor of the *British Medical Journal* expressed the opinion that the apology of Dr. Bartholow disarmed further criticism.

Although it took him years to recover from the criticism of his colleagues, he eventually went on to a distinguished career. He was the author of numerous articles and two highly acclaimed textbooks: *A Practical Treatise on Materia Medica*, published in 1876, and *A Treatise on the Practice of Medicine* in 1881.

Although Bartholow's study would never be approved by today's human investigative committees, it was a major advance in the support of cerebral localization.

Summary

Anatomic localization is the key to clinical neurology. The history of localization of brain function is one of the more fascinating aspects in the history of medicine. This article has reviewed the early history of anatomic localization with special emphasis on Roberts Bartholow, a colorful, controversial nineteenth-century physician who was the first to apply electrical current to the human brain.

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Corks prove effective in sensory testing

Avoiding expensive medical equipment, Louis R. Caplan, M.D., was able to keep his neurological research afloat with four small corks.

Dr. Caplan, of the Department of Neurology, Michael Reese Hospital, Chicago, has designed "the small corks test," a rapid screening process used to measure motor and sensory deficits and mental state abnormalities, says an article in the September 18 Journal of the American Medical Association. Dr. Caplan used his corks, the kind easily purchased in hardware stores, to test 100 patients between the ages of 10 and 88, for these deficiencies.

Patients were asked to examine the corks with only one hand while keeping their eyes shut. They were then asked to identify the objects, count them, and return them to the researcher in descending order of size. The estimation of number and size were successfully completed by 59 percent of those tested, said Dr. Caplan.

"The most sensitive aspect of the test proved to be the ability to pass the objects consecutively," said Dr. Caplan. "Only the patients with sensory abnormality (eight) or an abnormality of mental state (five) failed to correctly perform this part of the test."

These same 13 patients also failed to correctly identify the number of corks, he continued.

But it was naming the objects that proved difficult for many. Even members of the "normal" group identified the corks as everything from "popcorn" to "paperclips."

"Such a test should be simply and quickly performed, have materials that are easy to obtain, carry and replace, and rarely measure false-negative findings," explained Dr. Caplan. "The small corks test (is) a procedure that fulfills the requirements."

Serendipity in our files

ANNUAL ADDRESS, *delivered before the Medical Society of the State of New York, February 8, 1837, by* **JAMES M'NAUGHTON, M.D.,** *President of the Society.*

Gentlemen,

The rotation of another year has again brought us together, and the duty devolves upon me, however incompetent, of addressing you on some subject, connected with the object of our association.

This Society was instituted for the purpose of better regulating the Practice of Physic and Surgery, and of advancing Medical Science and Education, throughout the State. How far it has accomplished the objects contemplated in its incorporation, can best be determined, by ascertaining what was the condition of the medical profession, before it was instituted, and comparing that with its present state. Many think that more might have been accomplished, since its organization; but few have taken the trouble of investigating the nature of the obstacles to be surmounted, or the means possessed by the societies, to bring about a sudden revolution in the character and education of a profession like ours.

At the period when the first settlers came into this State, Medical Science was at a very low ebb in Europe. Medicine had not yet emerged from the superstition and empiricism of the middle ages. The clergy in many instances, united the care of the body with the cure of souls. Surgery was a rude art in the hands of barbers, and midwifery in the exclusive possession of ignorant females. The celebrated Medical Schools of Leyden, of Paris, of Edinburgh and of London, were either not in existence, or such as existed, had not acquired much fame.

When Medical Science had made so little progress in the most civilized and enlightened nations of the old world, it could scarcely be expected, that it would flourish among the hardy adventurers, who resorted to the wilds of the new world. But after Harvey discovered the circulation of the blood, the Asellius, and Pecquet, the lymphatic system of vessels, a new era began. Medicine soon underwent a change. It began to be cultivated agreeably to the principles of induction laid down by Bacon, and to merit the name of a science.

The Medical School of Leyden became the most celebrated in Europe; and, as most of the original settlers of this State, came from Holland, it is fair to presume, that some of its pupils found their way to America. But the records of Medicine, so far as known to me, are silent respecting them. The probability is, that such as came, were of that humble, but useful class, whose names are lost with the generation to which they belonged. After New-York had fallen into the possession of Great Britain, most of the educated Physicians of the Province, received their medical instruction at the University of Edinburgh, or at the private schools of London. No school of Medicine was instituted, in the province itself, until a very late period. It is a remarkable fact, that, although Colleges for instruction in Theology, Literature and the Arts, were established in New-England, and in Virginia, very soon after the first settlement, no Medical School was organized, until more than 150 years afterwards.

Little had been done for the diffusion of Medical Science, in any part of the colonies, before the revolution; and it was long after the connection between the mother country and the provinces was dissolved, before a Physician's education was thought complete, without a visit to the European schools. Those whose means would not admit of their crossing the Atlantic, had to be contented with the limited opportunities they could obtain of seeing practice with their preceptors, and what they could glean from the few books to which they had access.

No general law regulating the practice of Physic and Surgery was enacted during our colonial state — the only law relating to our profession, passed before the revolution, was in 1760, and was limited in its operation to the city of New York. The preamble to the act sets forth the reasons which led to its passage. It is in these words:

> *"Whereas many ignorant and unskilful persons in Physic and Surgery, in order to gain a subsistence, do take upon themselves to administer physic, and to practice surgery, in the city of New York, to the endangering of the lives and limbs of their patients, and many poor and ignorant people inhabiting the said city, who have been persuaded to become their patients, have been great sufferers thereby; — for preventing such abuses in future, be it enacted," &c.*

This act provided, that every student should undergo an examination, and receive a diploma or licence. It was further provided, that a fine of five pounds should be recovered from any one who practised without complying with the provisions of the act. This act seems to have been continued in force in the city of New York, until the separation from the mother country. The lives of the people living beyond the bounds of the city do not appear to have received any protection against empirics. Whether this arose from the fact of their being thought of less value, or whether they were deemed less in need of protection, than those of 'the poor and ignorant people' of New-York, I know not.

On the 27th of March, 1792, another act was passed, limited to the city and county of New-York. The reasons set forth in the preamble for the passage of this, are very similar to those relative to the law of 1760.

"Whereas, many ignorant and unskilful persons, presume to administer physic, and practice surgery within the city and county of New-York, to the detriment and hazard of the lives and limbs of the citizens, for the prevention of such abuses in future," &c. This act required that the student should study Medicine with some authorized practitioner for two years, if a graduate of some college, and three years, if not a graduate — that he should be examined by three practitioners, (other than those with whom he studied) in presence of the Governor and certain other public officers — and if approved, that he should receive a licence to practice. In this act it was provided, that every person practising without a licence, should be fined seven pounds, and be incapable of maintaining a suit in any court for services rendered. Doctors in medicine were allowed to practice without a licence.

The first general law regulating the Practice of Physic and Surgery, was passed in 1797. By the act of 23d March of that year, every student was required to study four years, if not a graduate, and three, if a graduate. It was also enacted, that any person practising without a licence, should pay a fine of twenty-five dollars. It was further provided, that in case of some sudden emergency, any person might administer medicine, or even perform surgical operations; but no demand for compensation, for the services rendered, could be lawfully made.* This act continued, without material alteration, until April 4th, 1806, when the law incorporating the State and County Medical Societies was passed.†

By that law, every county in the State was authorized to form a County Medical Society, which, when organized as prescribed in said act, were declared to be 'bodies corporate and politic, in fact and in name,' each bearing the name of the county in which it was instituted. The several County Societies were empowered to examine students, and if found qualified, to grant a diploma, or license to practice.

The State Medical Society was instituted by the same act.

It consists of a limited number of members called Permanent, and of a Delegate or representative from each of the County Societies, chosen for a limited time. By its charter, it is authorized to examine students, who present themselves for examination, either by original application, or by appeal from the decision of the Censors of the County Societies. It is also empowered to regulate the County Societies, provided its ordinances do not conflict with the laws of this State, or of the United States.

By the act of April, 1806, it was declared that no person should practise physic or surgery in this State, without having first received a licence as directed; and that in the event of his practising, without a licence, he should not be able to recover, in any court, for services rendered.

Although prior to the passage of the above act, there existed some Medical Societies in New-York, and other places, their influence was limited as well as their privileges. It was not until the organization of the State and County Societies took place, that the profession acquired a regular form. A gentleman who took an active part in promoting the passage of the act, speaking of the state of the profession at the time, says:

"Those who witnessed the original and progressive settlement of the northern and western sections of this State since 1790, will recognize the mania that infatuated the emigrants from the east, and the ambitious projects formed by those who assumed the title of Doctors. Many who had never read a volume in medicine were suddenly introduced to an extensive practice, and to a reputation of such imposing authority as to control the opinions of their superiors in science and to prescribe rules of practice for their government. Consultations were generally distinguished for gross controversies at the bed side of the patient, whose health and life were often immolated to the ignorance, prejudices, or discordant theories of the contending physicians." *

If this be any thing like a true picture of the general state of the profession, at that time, some Legislative action was loudly called for; and the profession is under lasting obligations, to those, who were most instrumental in originating and carrying through, the measures of reform. There has been some diversity of opinion, relative to the originators of the measures, which led to the enactment of the law of 1806. It has been attributed to, and claimed by, the Medical Society of the city and county of New-York; but, apparently, without justice. We are assured, on the authority of Dr. Stearns, a former President of this Society, that no "Physician then resident in the city of New-York, had any knowledge of the preliminary measures, which led to the formation of this law, or the most remote agency in procuring its passage through the Legislature."

According to this authority, than which better could not be quoted on the subject, the first movement took place in the county of Saratoga. A circular was issued by a meeting of practitioners of that county, convened at Ballston in November, 1805, addressed to the physicians of the adjoining counties of Montgomery and Washington, calling on them to meet at Ballston on the 16th of January, 1806, for the purpose of adopting measures to obtain an act of incorporation for a Medical Society for "the suppression of empiricism and the encouragement of regular practitioners." The circular is signed by W. Patrick, John Stearns, and Grant Powell. The convention met on the day appointed. A memorial was agreed upon to be presented to the Legislature; and a committee, consisting of Dr. Asa Fitch, of Washington county, Dr. Stearns, of Saratoga, and Dr. Alexander Sheldon, of Montgomery, were appointed to aid in promoting the success of the application. It was not at first contemplated to make the act a general one; but the committee took the responsibility of making it so.

It fortunately happened, that Dr. Sheldon, one of the committee, was that year chosen speaker of the House of Assembly. Through his influence, aided by other medical members of the House, and in a most material degree, by the powerful eloquence of the late Judge, W. W. Van Ness, then a member, the bill, after a formidable opposition, was finally passed. Such was the origin of the act, organizing the State and County Medical Societies.

We are informed that in three months after the passage of the law, no fewer than twenty county Medical Societies were formed, pursuant to its provisions, and that in two years, there was scarcely a county in the State of any considerable population, without its Medical Society.*

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* Graduates and Licentiates of Colleges of Medicine were permitted to practice without further examination, upon filing a copy of their diploma in the Secretary of State's office, or in the County Clerk's office.

† I am indebted for the above references to a Report made to the Assembly, in 1835, by the Hon. Edward Livingston.

* Dr. Stearns, New-York Medical and Physical Journal, 1826.

From this time the medical profession began to acquire character and respectability. The irregular proceedings, by which certain members of the faculty had hitherto succeeded, in acquiring notoriety and credit among the people, received a check. To become fit associates for men of character and standing in the commuity, required the cultivation of urbanity and good breeding on the part of those who wished to become members of the Societies, so that, by degrees, the great body of the profession became subject to one code of medical ethics, the obligations of which were generally acknowledged. There have always, however, been individuals, and not a few such are still to be found, who form exceptions to the general character of the profession; but, it is acknowledged on all hands, that, both in town and country, there is much more harmony, much more courtesy, and much more liberality of feeling subsisting among medical men, then formerly. And what is more important to the public there has been a proportionate advancement in education, general and medical, among them. Their frequent meetings in the Societies, have made them better and more extensively acquainted with each other, while it has produced more ardor and emulation for professional distinction.

The first meeting of the State Medical Society took place on the third day of February, 1807. Dr. W. M'Clelland, of this city, was chosen President, and Dr. Sheldon, of Montgomery, Vice-President. The Society adopted sundry resolutions for the promotion of Medical Science. Each member of the Society was directed to furnish a Geological and Topographical Survey of the County of his residence, and to read before the Society an account of any remarkable case of disease that might have occurred in his practice.

At the session of the Society in 1808, Dr. Nicholas Romayne, of New-York, was elected President. During this session two subjects for prize dissertations were proposed.

A gold medal of the value of $50 was offered for the best dissertation on the topography, geology and mineralogy of any county in this state, together with an account of the prevalent diseases in such county. A medal of the value of $25 was offered for the next best discourse on the same subject. Another medal of the value of $25 was offered for the best essay on typhus mitior.

In pursuance of the bye-laws, adopted at the session of 1807, medicotopographical reports were made by the delegates from the counties of Montgomery, Orange, Dutchess, Saratoga, Jefferson, Westchester, and Clinton. These facts show, with what activity and zeal, the Society proceeded, at its very institution, to improve medical science by all the means in its power. From that time to this, it has never intermitted its exertions; and whatever progress has since been made in medical education, has been, directly or indirectly, the results of its efforts.

The act of 1806, remained in full force, without any important alteration, until the general revision of the laws in 1813. In all the acts relative to the practice of medicine up to this period, some penalty was inflicted upon such as should be found, practising as physicians and surgeons, without a licence; and in most of the acts, in order the more effectually to protect the ignorant and unwary against the arts of empirics, impostors, and pretenders to medical skill, it was provided that none but the regularly licensed should be able to claim remuneration for services rendered, or maintain a suit for such purpose in any court in the state.

Pretenders to medical skill have abounded in all ages and countries, who, by various arts, acting on the prejudices, ignorance or credulity, of the multitude, have for a time acquired credit, until their incapacity became exposed, by the suffering, or even death, of their patients. Nothing short of severe penal enactments has been sufficient to repress their unprincipled tampering with human life; and even these (so strong is the propensity to believe in the marvelous and mysterious) are insufficient to protect society against the devices of quack practitioners of the healing art.

It remained, however, for the state of New-York to legalize quackery, by positive enactments. The general provisions of the law of 1806 were retained in the revision of 1813 with this most extraordinary proviso:–"That nothing in this act contained shall be construed to extend to debar any person from using, or applying, for the benefit of any sick person, any roots, barks, or herbs, the growth and produce of the United States." *

Any advantages which the regular profession might be supposed to derive from the preceding sections, regulating the term of study, and the qualifications for licence, were effectually nullified by this singular provision. It was, as if a farmer should take unusual pains to secure his fields against trespassers, by constructing substantial walls or fences around them, and then should neglect to make gates, or intentionally leave them open. Under cover of this provision, any person might practise medicine; for among the roots, barks, and herbs of the United States, almost any article in the whole range of the materia medica might be exhibited with little risk of detection. For even if the proof could be made clear, a troublesome process of law was necessary to secure the conviction of the offender. The witnesses for the prosecution generally must be physicians, whose evidence is, on such occasions, received with suspicion and disfavor by juries; so that in fact, all the pains and penalties declared against irregular practitioners of medicine, have, for years, been almost a dead letter. A few prosecutions have taken place, and convictions been obtained; but, I believe, on almost all occasions, the sympathy of the public has been on the side of the offending party, while nothing but odium has fallen to the share of the medical profession, for aiding the prosecution. The provision of the law permitting the use of the roots, barks, and herbs of the United States, has been repealed, re-enacted and again repealed since 1813. It is now in full force since 1835, so that all can use these favorite articles for themselves or others, without fear of the law, whatever other causes of fear there may exist in connexion with their administration. I sincerely hope that this provision will never again be disturbed by the members of our profession. The public is more interested in the matter than we are. If the legislature see fit to permit it, and the sovereign people deem it a privilege to have their health tampered with, or their lives destroyed, by the roots and barks of the United States, be it so. *Quem Deus vult perdere, prius dementat.*

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* New-York Medical and Physical Journal, 1828.

* In the law 1797, the use of domestic remedies, "without fee or reward was allowed, and in that of 1807, the roots, barks, &c. of the United States, were excepted from penalty.

Thus far no attendance on medical lectures is demanded, or even mentioned, in connexion with the requirements for licence. So silent are the several laws on the subject, that one would almost suppose there was no medical college or school accessible to students, where they could attend lectures. Such, however, was not the case; and the fact that attendance on lectures was not required before the licence could be obtained, must be ascribed to the opinion, still prevalent out of the profession — that physic can be studied in a private office to as much advantage as law. No opinion can be more erroneous. To practise the difference branches of medicine, with skill, requires an accurate knowledge of several collateral sciences, which cannot be acquired in a private office, unless such office possess all the advantages usually offered at a medical college. Some one branch may be as well taught in a private office, as in a regular school; but the whole circle of the medical sciences cannot be adequately taught except at a medical school. With law, it is different. It is well known that no formal course of study is required, to qualify individuals for becoming law makers, it is therefore evident that no very extensive course of study is necessary for expounding laws, when made.

It is true, that every kind of knowledge is, at times, useful to the practitioner of law, and that those whose information is most extensive, possess much advantage, in many causes, over their less gifted brethren; but still, nothing beyond a respectable education, such as is expected of every intelligent citizen, is absolutely necessary for the study of law. A thorough knowledge of the structure and functions of the human body, of the properties and uses of the articles employed in medicine — of chemistry — of the history and character of the numerous diseases that man is heir to — must be acquired, by the practitioner of medicine, before he can properly discharge his responsible duties. The peculiar connexion between skill in the different branches of medicine, and an accurate acquaintance with certain collateral sciences, is but little understood, out of the profession — hence much erroneous legislation on the subject of medicine.

Although a medical college has been in existence in this state since 1792, and a considerable number of students have resorted to it, attendance on lectures has never been imperative; indeed, until 1818, no inducement was held out for such attendance. In a law passed that year, by the legislature, it was enacted, that the regular term of study should be four years, from which one year might be deducted, if the student had attended one full course of lectures at some incorporated medical institution in this state or elsewhere. This last provision, although not positively requiring attendance on lectures, has had a more important influence on the spread of medical education, in this state, than any other provision in the statutes regulating the practice of physic and surgery. At first, most of the students attended lectures, rather with a view to shorten the term of study, than from any expectation of special benefit from the lectures — so little were the great body of practitioners aware of the advantages the public schools possessed over private offices, for the instruction of students.

The first attempt to establish a medical school in the colonies, now the United States of North America, was made in Philadelphia in 1763, by Dr. Wm. Shippen, a pupil of the celebrated Dr. Hunter of London.

His first course of lectures on Anatomy was delivered before ten pupils. In 1765, he was joined by Dr. Morgan, on his return from Europe. These two gentlemen laid before the trustees of the college of Philadelphia, a plan for the organization of a medical faculty, under its auspices. The trustees, over whom the illustrious Franklin presided, acceded to their proposal, and thus had the honor of laying the foundation of the first medical school in North America. It had, however, at first, many difficulties to encounter, and it was long before it attained the success for which it has since become distinguished.

It was not long before the example set by Philadelphia, was followed by New-York. In 1767, a medical faculty was organized, under the charter of King's (now Columbia) College. The year following, the school was opened for public instruction, under six able professors. In 1769, in consequence of an eloquent address delivered by the late Dr. Bard, at the first graduation, steps were taken to found an hospital, to render the course of medical instruction more complete. A subscription was commenced by Sir Henry Moore, the governor of the province, and the sum of £800 sterling collected for the purpose. The corporation of the city added £3000 to the other subscription. A building was commenced; but, unfortunately, when almost completed, it took fire and was destroyed. In consequence of this accident, the edifice was not re-built, and ready for the admission of patients, until 1791.* At the commencement, everything augured favorably to the success of the New York Medical College; but soon, the troubles which ended in the revolution, marred its prospects in common with those of all other literary institutions. During the war, the lectures were discontinued, and were not again resumed, until some time after the return of peace.

In 1792, the trustees of Columbia College reorganized the medical faculty, consisting of six professors, and the school was re-opened. It began with the fairest prospects of success — being situated in the largest and most commercial city in the Union — possessing an able faculty, and having in its vicinity, an extensive hospital, to which its pupils could resort, for practical instruction. Nor were the expectations of its friends disappointed. It continued to rise in character and to increase in the number of its pupils until 1807, when, in an evil hour, another medical school was established in the same city.

On the 3d of March 1807, a memorial was presented to the Regents of the University by the Medical Society of New York, praying for the incorporation of a College of Physicians and Surgeons — which prayer was granted. By the charter, all the authorized practitioners of medicine in the county, at the time more than one hundred in number, were declared trustees or members of the College. The Regents, wisely, as the evident proved, reserved to themselves the right to appoint professors, and to modify, or entirely annul, the charter. At a subsequent session of the legislature, the sum of $20,000 was granted as an endowment.

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* Hosack's Medical Essays, Vol. 1. p. 73.

The school then went into operation, and entered the field of competition with its elder sister, the school of Columbia College. "As soon as the new college was established," says a candid historian, "there commenced a spirit of rivalry and competition between the two schools, which led to the most disastrous consequences. After a long and bitter contest the two parties, the friends of medical science interfered, and arrested the progress of difficulties, which had nearly proved fatal to both institutions." *

In the mean time, the College of Physicians and Surgeons with "its multitude of counsellors," enjoyed neither external prosperity nor internal harmony. Matters came to a crisis in 1811. On the 1st and 25th of March of that year, five several communications were made to the Regents, by different parties in the college, stating their respective views and grievances. These were submitted to a committee of the board of Regents, and in consequence of their suggestions, a new charter was granted in June 1812, differing in many respects from the former one. The number of trustees was reduced to twenty-five; but power to remove them was not reserved as in the original charter, hence many of the subsequent troubles of the institution.

A union between the Faculty of Medicine of Columbia College and the College of Physicians and Surgeons took place in 1814. From this time a new era for the College of Physicians and Surgeons began. It rapidly acquired fame, and a corresponding accession of students, from every part of the United States, from the West Indies, and from the British Provinces. Nothing but a vicious organization could prevent its rivalling the school at Philadelphia; but, unfortunately, it contained within itself, the elements of discord and decay. The Board of Trustees were mostly medical men, between whom and the professors, harmony could not be maintained. Their differences ran so high, that in the spring of 1825, a committee of investigation was appointed, by the Regents, before whom the professors and trustees appeared. A very full and able report of the affairs of the College, was made to the Regents, by Lt. Gov. Tallmadge the chairman of the committee. From this report, it appears, that the College had received from the State, as endowment, in all, $66,457 27 cts., besides a botanical garden, for which the state paid $75,000, to the late Dr. Hosack.

The difficulties between the trustees and professors could not be adjusted; in consequence of which, and a reluctance to submit to certain regulations made by the Regents, the professors, in a body, resigned their commissions.

The condition of the college at this time was most deplorable. It appears, that since 1811, the money granted by the state as an endowment, had been entirely expended; and that the trustees were indebted to the ex-professors, to the amount of upwards of $21,000 — about equal to the whole value of the public property belonging to the College.*

The sum of $7000 had from time to time been given for the increase and preservation of the anatomical museum; but the entire collection, which of right ought to belong to the College, was sold as private property, for the benefit of the heirs of the late professor of Anatomy. The botanical garden, having been found an annual source of expense, was given up to the Regents of the University, and subsequently granted, by the legislature, to Columbia College. It is now occupied on a long lease, as a common nursery, unconnected with any scientific object.

It is only necessary to mention these facts, to show that there was, somewhere, gross mismanagement of the public property. While the professors received all the fees, derived from pupils, the state paid all the contingent expenses of the College. Had the professors been made to defray, out of their fees, the current expenses, in consideration of the gratuitous use of the buildings, and the exclusive privilege of teaching enjoyed by them — had the public funds been economically and judiciously managed — the medical school of New York, at this moment, might have been in a situation, not only to rival, but to excel, every similar institution in the United States, in the richness of its endowment, and in the extent and value of its means of instruction. When, however, to relieve the embarrassment of the College, the professors were called upon to surrender ten per cent, on their receipts they tendered their resignation.

The Regents forthwith appointed a new faculty, who commenced their labors the ensuing session, under many disadvantages. The ex-professors not relishing private life immediately organized another medical school, in opposition to the state institution. Having been unsuccessful in their efforts to connect themselves with any of the literary institutions of this state, they attached themselves to Rutgers' College, in the state of New Jersey. The legislature of the state of New-York, resented this interference with its sovereign powers, by declaring all degrees conferred by any college out of this state, on students studying at an institution within the state, null and void, as licenses to practice medicine.

Thwarted in this manner by an authority whose mandate could not be disregarded, they attempted to connect themselves with one of the Colleges of Arts of this state. Their application was at first unsuccessful; but they succeeded, at last, in establishing a connexion, with Geneva College, an institution recently chartered in the western part of the state — Geneva College consented, for a pecuniary consideration, to confer the degree of M.D. upon such as Rutgers' medical faculty should recommend. This was all the connexion between the parent school and its branch in New-York. With a distance of 300 miles intervening, the trustees of Geneva College, could not very well exercise much government over their medical faculty. But their connexion was of short duration, and even while it lasted, was illegal; for by the revised law of 1827, it was declared, that no diploma or degree conferred by any college in this state should be a license to practice medicine, and that no college should "have or institute a medical faculty to teach the science of medicine in any other place than where the charter locates the college." Notwithstanding this law, the connexion was continued until a process issued from the Supreme Court, enquiring by what authority Geneva College continued to retain a branch in the city of New York. The connexion was speedily dissolved, and Rutgers' Faculty of Geneva College, ceased to be numbered among the Medical Schools of this state. But, unfortunately, its discontinuance, did not heal the divisions existing in the profession in New-York. It was divided into two parties — one friendly to the state school, the other opposed to it.

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* Lecture at the opening of the Medical Department of the Columbian College, by Thomas Sewall, M.D., &c.

This unhappy state of things still remains; and I am sorry to say, that it is not confined to the city of New-York. The same feeling has been exhibited in the halls of legislation. We have more than once heard members from the city, in their places, speak disparagingly of the medical school and its present professors. We have heard similar language in the senate chamber, from one of the Regents of the University. Add to all this, that the municipal authorities of New-York, have never, like those of Philadelphia, favored the schools, either with funds, or with other facilities no less necessary to the success of a medical institution. How then, under all these circumstances, could it be expected that any school should flourish, whatever might be the talents of its teachers? The number of students attending the lectures at the College of Physicians and Surgeons, never exceeded 220, during its most palmy days; and now, in consequence of the difficulties already mentioned, and others which it is unnecessary to particularize, the number scarcely exceeds one hundred. I very much fear, that the college will never flourish, until the state again extend its liberality to it, and a radical change is effected in its organization.

The College of Physicians and Surgeons of the Western District, was the next medical school instituted by the state. It was incorporated in 1812. It is located at Fairfield, in Herkimer county — a small country village. The Legislature granted $15,000, to be raised by lottery, as an endowment. The greater part of this fund was expended in the erection of buildings, and in paying small salaries to the earlier professors. As might have been expected, from the remoteness of the location, and the small number of students, who under the medical law then existing, attended lectures, the school was at first, not very successful. It spun out a feeble existence until 1818, when its funds became exhausted — the trustees became discouraged, and the professors were on the point of throwing up their commissions. As a last resort, application was made to the legislature for relief. An annuity of $1000, for five years, was granted for its support. The act relative to the practice of Physic and Surgery, was also amended, so as to shorten the term of study one year, to such as should have attended a full course of lectures. From these two causes, aided, in all probability, by others, the school began to flourish. Its pupils each year became more and more numerous, until the class rooms could not accommodate them. Further aid having been refused by the legislature, the professors, at their private expense, re-modelled the whole interior of the college — extended the class-rooms, and fitted up apartments for the museums of anatomy and natural history. They also erected a large stone edifice, four stories high, to accommodate, at a low rate, the students, with lodging rooms.

Everything promised a prosperous course for the school, and the professors flattered themselves, that they were about to be rewarded for their exertions, and remunerated for their expenditures. In the session of 1834, there were 217 students in attendance — a larger class than ever attended at a county medical institution. But it was now discovered, apparently for the first time, that the western part of the state was sadly destitute of the means of medical education, that a whole million of people, west of Utica, were without a medical school for their children.* The wish for such a school was therefore natural; and the only thin to be regretted, is, that it was not thought of sooner, before individuals had gone to the expense of providing accommodations, for students from the west.

In the autumn of 1834, Geneva College, formed a medical faculty in connexion with its other departments, but under a different government, leaving its management chiefly to the faculty itself, and a board of gentlemen, unknown to the charter, called curators.† It was necessary to obtain the sanction of the legislature to this measure, otherwise the degree conferred by Geneva College, would not be a licence to practise — degree at that time conferred in the state being a licence, except that granted by the Regents of the University. Application was first made to the board of Regents in behalf of Geneva College, praying that honorable body, to confer the degree of M.D. upon such as the medical faculty should recommend.‡ The petition was referred to a committee, for their examination, to determine whether the Regents possessed authority to grant the prayer of the petitioners, and if they possessed the power, to consider whether it was expedient to exercise it.

But that no time be lost, in a case of such urgency, as that of an entire million of people, suffering for want of an adequate supply of medical advisers, an application was, at the same time, made to the legislature, for a law, declaring the degree of M.D. conferred by Geneva College, a licence to practise medicine. Both applications were strenuously opposed, by parties who deemed themselves interested, both on private and public considerations. It was contended that the number of students in the state, could not support more than two schools — one in the city and one in the country — that all could be well taught in these two, as in three or four — that it would promote neither the interests of the profession, nor of the public, to multiply schools beyond what could be adequately sustained — and that it would lower, instead of elevating, the standard of medical education. It was further contended, that, even if another medical school were wanted, it should be put under the same regulations as the other colleges.

But these arguments were scarcely listened to. The bill was reported by a committee of one branch of the legislature, and made the special order of the day, for the second or third day following — was discussed from noon until night, and then passed, almost by acclamation, most even of those who spoke against it, voting for it. The bill, after a very animated and protracted discussion, passed the other branch of the legislature also, and received the signature of the Governor. Whether this school is destined to do all the good, its friends expected from it, or all the evil apprehended by those opposed to it, time alone can determine.

It has completed its third session. The number of students in attendance last session, was between 50 and 60, and at the institution at Fairfield, 164 — being an aggregate not exceeding the class in attendance at Fairfield alone in 1834. Even if the two schools were to divide equally the number of students between them, neither of them could be said to be in a flourishing state. There is not support enough for two respectable schools in the country; and it is more than probable, that at no distant period, one or both of the existing ones must be discontinued.

Such is a brief, and, of course, rather imperfect, sketch of the course of medical legislation, and of the history of the medical institutions of this state, up to the last session of the legislature. By an amendment to the act regulating the practice of physic and surgery, passed last session, no person admitted to practise in any other state, or country, is authorized to practise in this state, until he shall have received a licence from the censors of the State Medical Society. This amendment was found necessary, on account of the difficulty of determining the genuineness of the credentials, presented for foreigners. In several instances, the papers were ascertained to be forged, and in some others, there were well founded suspicions, that the bearers of the diplomas, were not the persons to whom they originally belonged. Examination alone, in such cases, can protect the public against imposition. In other instances, persons going out of this state, or coming in from other states, were known to have received diplomas, without complying with the requirements of the laws of this state. The legislature were also, in all probability, influenced by the consideration, that in several of the contiguous states, and in the Canadas, the licentiates, and medical graduates, of our colleges, could not practise without an examination.

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* Vide Appendix A. † Appendix B. ‡ Appendix C.

Hurried as has been the sketch given, it will be perceived, that there is yet, much room for improvement in medical education. Having for many years been a public teacher, I trust, it will not be deemed presumptuous or impertinent, in me, to point out a few of the defects, and to suggest some amendments.

In my opinion, the greatest defect, is in the preliminary education of students of medicine. Much the greater number of them, are destitute of classical attainments; and even their English education is often very imperfect. Not a few of the graduates in medicine are unable to translate a line of their diploma.

It is a reproach to the profession that this should have so long existed. A certain degree of knowledge of the Latin language, at least, is necessary, to enable a medical student to profit to the utmost advantage, by the books he reads, or the lectures he hears. Most of the terms in anatomy, materia medica, botany, and chemistry, are derived from that language; those, therefore, who have to commit to memory these numberless names, as arbitrary terms, have a most irksome labor to perform, which would be avoided, had they understood the language. The British Colleges of Surgeons have, for a number of years, required from candidates for licence, a competent knowledge of the Latin language, and of the elements of mathematics and natural philosophy. Even the society of Apothecaries, demand higher attainments, than are at present required for the degree of Doctor of Medicine, in most of the colleges in the United States.

In this state, at present, an acquaintance with the above branches of a liberal education, is not indispensable; and in too many instances, those who receive degrees are entirely ignorant of them.

Not long since, it was stated by one of the Regents, on the floor of the Senate chamber, that a letter had been received, from a graduate at Fairfield, in which there was not a word correctly spelt, except the word 'and'. The charge was spitefully, as well as falsely, made. Upon enquiry, it was ascertained, that the letter referred to, had been received by another Regent, and that it was remarkable for violations for orthography; but there was no evidence that the writer was a graduate of the institution at Fairfield. It was merely understood, that the person had attended lectures there. Now, as any one who chooses can attend lectures at any of our medical schools, the faculty ought not to be held responsible for the literary attainments of any, except such as they recommend for the honors of the doctorate. A person ignorant of the alphabet, may attend medical lectures, if he conduct himself, in other respects, with propriety.

The candidates for the degree of Doctor of Medicine, are only required to be able to write an English dissertation, on some medical subject, with grammatical accuracy, and freedom from gross violations of orthography, in addition to the requisite knowledge of the several branches of medicine. Beyond this, the professors are not permitted to demand evidence of higher, or more general, attainments. It may be supposed, that this defect, so far as the conferring of degrees is concerned, might be remedied by the Regents of the University. It certainly could; but without any benefit to the profession, and to the certain injury of our own medical schools.

There exists on our eastern border, a cordon of medical schools, some of which are so accommodating as to give two courses of lectures in a year, to which the students of this state could resort, even in greater numbers than they do now, if the requirements for degrees were much higher with us, than in other states. By the printed regulations of some of the medical schools of the adjoining states, it would seem, that the requisitions for degrees are higher than in this state; for, a competent knowledge of Latin, and natural philosophy, is required. But, notwithstanding, it is found, in practice, that the want of such acquirements, is no insuperable objection to the success of a candidate for the degree.

It is well known to the generality of students in this state, that a medical degree can be as easily obtained in the New-England colleges, as in those of this state. In one of these schools, the facility of obtaining degrees is become notorious. We know of several instances in which degrees were conferred on persons rejected, not only once but twice, in this state — persons noted for natural dullness, as well as ignorance of their profession.

Last spring, an instance occurred, in which a degree was conferred on an individual, rejected by one of our colleges, within a few months of his rejection, and without any attendance on lectures at the college conferring the degree, although, by their printed regulations, the candidate is required to have attended one full course, at least, at the institution. It is manifest, that, while this state of-things is tolerated, if the requirements for degrees, in this state were higher than elsewhere, our own schools would be deserted, and the professors left to discourse to "a beggarly account of empty" benches. The requisitions for licence must be raised, before we can demand higher qualifications from candidates for degrees.

It is for this Society to determine, whether or not, it be expedient, at present, to require more extensive general knowledge, before bestowing a licence. It would be unjust to insist, all at once, on higher attainments, from candidates; but it certainly appears proper, and necessary, that some steps should be taken to bring about such a measure of reform, as to affect all who may, from this time, enter upon the study of medicine. I believe this society possesses the power to determine the qualifications necessary for receiving their licence, without further action of the legislature.

These are defects in medical education itself no less striking. It is not indispensably necessary to attend lectures, either at a public or private institution. One may study in a private office, and at the end of four years, present himself before the Censors of the State, or County Medical Societies, for examination, and may obtain a licence, to practice physic, surgery, and midwifery, although he may never have heard a lecture on anatomy, or witnessed human dissection — never have seen any important surgical operation performed — or even have attended a woman in child-bed. I am aware that this is stating an extreme case; but instances of the kind have occurred, and that not long since. It may be said, that, in such cases, the fault must rest with the Censors who admit such persons. That is undoubtedly true; but where the law admits of such occurrences, and when there are some fifty or sixty boards of Censors in the State, from some cause of other, individuals will escape the rejection they merit. It certainly would not be asking too much, if we ask anything, to require attendance on one full course of lectures as a prerequisite to receiving licence.

Two full courses of lectures are required of candidates for the degree of Doctor of Medicine; but these courses are not sufficiently practical. Medicine in the extended sense of the term is not only a science, but an art. Lectures alone will never qualify a person to make a watch, construct a steam-engine, or build a ship. One must not only understand the principles, but he must put his hand to the work, and even then, it is only by slow degrees he at last succeeds in making a well finished piece of workmanship. It is just so in medicine. A disease must be seen, sometimes felt, before one is qualified even to determine, what malady it is he is to prescribe for. In surgery and obstetrics, the practitioner must not only know the structure and functions of the part on which he is to operate, but must be capable of using, with dexterity, the instruments he has to employ. The present mode of instruction, in almost all the colleges of the United States, is more or less defective. No attendance on the practice of an hospital is indispensable — neither is skill in practical anatomy or dissection. In the larger cities, it is true, most students, for a short time, attend the hospitals, and practise dissection; but even in these, unless it be absolutely necessary, few will avail themselves of the advantages afforded, to the full extent.

It appears to me nothing more than reasonable, to require of every one, before he aspires to the degree of M.D., that he should have attended the practice of some respectable hospital, for six months, and have gone through, at least one course of dissections, to familiarize himself with the structure of the body whose diseases he intends to relieve or to cure.

Of the two courses of lectures now required on surgery and practice of physic, one might be theoretical and the other clinical. In New-York, where there is an extensive hospital, this arrangement might take place at once. At the other two schools, there is no hospital — so far, therefore, they are defective, and their course of instruction imperfect.

In regard to dissections, all our schools labor under disadvantages. There is no legal mode of obtaining subjects. It is by law declared felony to be concerned in the exhumation or dissection of a human body. The only subjects legally obtained, are the bodies of convicts who die at the state prisons, not claimed for burial by relatives. If all who die at the state prisons were given up, the supply would be inadequate. The bodies of those only who die in winter can be of any use, and these seldom exceed two or three during the season. Few as these are, those from the prison at Auburn, are divided between the schools at Fairfield and Geneva. The result of this narrow policy is, that the schools, particularly the country ones, are scantily supplied — and that in all, the supply is precarious and expensive; for it cannot be supposed, that those who procure subjects, at the hazard of liberty and life, will expose themselves, without compensation, corresponding with the risk they run.

Great Britain, after a course of illiberal measures on this subject, has at last legalized the pursuit of anatomy; and the example has been, very much to her credit, followed by the state of Massachusetts. New York has the unenviable distinction of having on her statute books, a law, on this subject, such as has never been known in the legislation of any civilized community, since the darker ages. It would be difficult to say, whether we could hope for success in an attempt to get this law repealed. When, a few years ago, such as attempt was made, at the general revision of the laws, instead of relaxing the severity of the existing law, it was proposed by the revisors, to withhold even the bodies of those who died at the state prisons.

They contended, that so long as the bodies of criminals were given up, the practice of human dissection, would remain unpopular. When asked, how the public schools were to get subjects, it was answered, that they could get them from other states. Now, if it be wrong to procure subjects for dissection, at home, it cannot be right, in our humble opinion, to get them from abroad. The idea of rendering dissection popular, by not associating it with crime on the part of those dissected, is a most preposterous one. There is a feeling in the human breast, that revolts at the thought of seeing the remains of friends and relatives mutilated; that their dissection can never be tolerated, except under very peculiar circumstances, or to subserve the ends of public justice. Then, as the public safety demands it, and as no medical man can discharge his duty properly, who is not skilled in anatomy, is it not absurd to be establishing medical schools, while it is declared felony to procure the means by which alone they can flourish, or accomplish the ends for which they are instituted? Is it not moral cowardice, or something worse, on the part of representatives, to shrink from the performance of a solemn public duty, for fear of wounding the prejudices of some few of the most ignorant of their constituents? Is it creditable for intelligent, liberally educated men, when such questions are discussed, to appeal to the passions of the multitude, about the injustice of giving up the bodies of the poor — the unfortunate — friendless poor, to the scalpel of the anatomist? Such a course might be expected of a demagogue; but better things might be looked for from men of enlightened minds. If anatomy must be studied — if the public safety require it, (and who denies it?) ought not the legislature to make suitable provision, for doing it legally? In some way or other it will be done. Is it not better then that the remains of the inmates of our jails — penitentiaries and alms-houses — persons that have been long supported at the public expense, and who have no relatives or friends, whose feelings can be wounded — should be given up for dissection, under proper restrictions, than that the graves should be robbed — the feelings of friends lacerated — and whole communities thrown into confusion and disturbance.

In France, where the government provides subjects, such a thing as the violation of a private burying ground is unknown. Such would be the effect of liberal measures here: and the credit of the state requires, that something should be done.

There are several other topics to which I would like to draw your attention did my time permit; but I have already trespassed on your patience. I cannot however draw these remarks to a close without advertising to the inadequate endowment of all our colleges. Our medical schools are now supported, almost entirely, at the expense of their respective professors. Is this creditable to the great and prosperous state of New-York? What is the reason that such a distinction has been made between the medical colleges and the colleges of arts? Do not medical schools require libraries, chemical and philosophical apparatus, and museums of anatomy and natural history? Can it be expected that professors, from their scanty receipts, will furnish all these and pay contingent expenses to boot? And if they do, can it be reasonably hoped, that we shall ever possess institutions, that can equal the liberally endowed establishments of other countries? Is not the community as much interested in having well endowed medical colleges as literary ones? If so, why has the state made such a distinction between them, in the bestowment of her bounties?

I do not mean to intimate, by these remarks, that the literary institutions have shared too liberally the bounty of the state. On the contrary, all of them are inadequately provided for.* There is scarcely a petty principality in Germany, that cannot boast of an University, possessing a library, containing more books than all our colleges, theological, medical and literary, put together. Some of them have also splendid collections in natural history and other departments of science. I need hardly mention here that in all these our colleges are sadly deficient; and there is not a single botanical garden in the state.

Since the amendment of the constitution in 1822, not a dollar has been appropriated by the legislature to elevate our literary or medical colleges. In the mean time millions have been expended on other objects. Canals and railroads have been made, and others are in progress in all directions.

Everything, in short, has been done for meliorating the physical condition of the citizen; but what has been done for his moral and intellectual improvement, by our constituted authorities? Nothing — literally nothing.

Are we never to possess but common schools, and academies, or institutions whose limited means permit them to rank no higher? Must our children encounter the storms of the Atlantic to seek, under other governments, advantages denied them under our own? We hope, that a more liberal spirit will prevail, and that the legislature will set apart, some of the wealth of the state, for the purpose of placing our higher seminaries of learning, on such an eminence, as will enable their professors, to look around on kindred institutions in other countries, without feelings of humiliation, or consciousnes of inferiority.

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* Union College may be considered an exception; but that institution, although it has a liberal endowment, thus far possesses neither library, museum, nor collection of philosophical apparatus in any respect superior to those of the other colleges.

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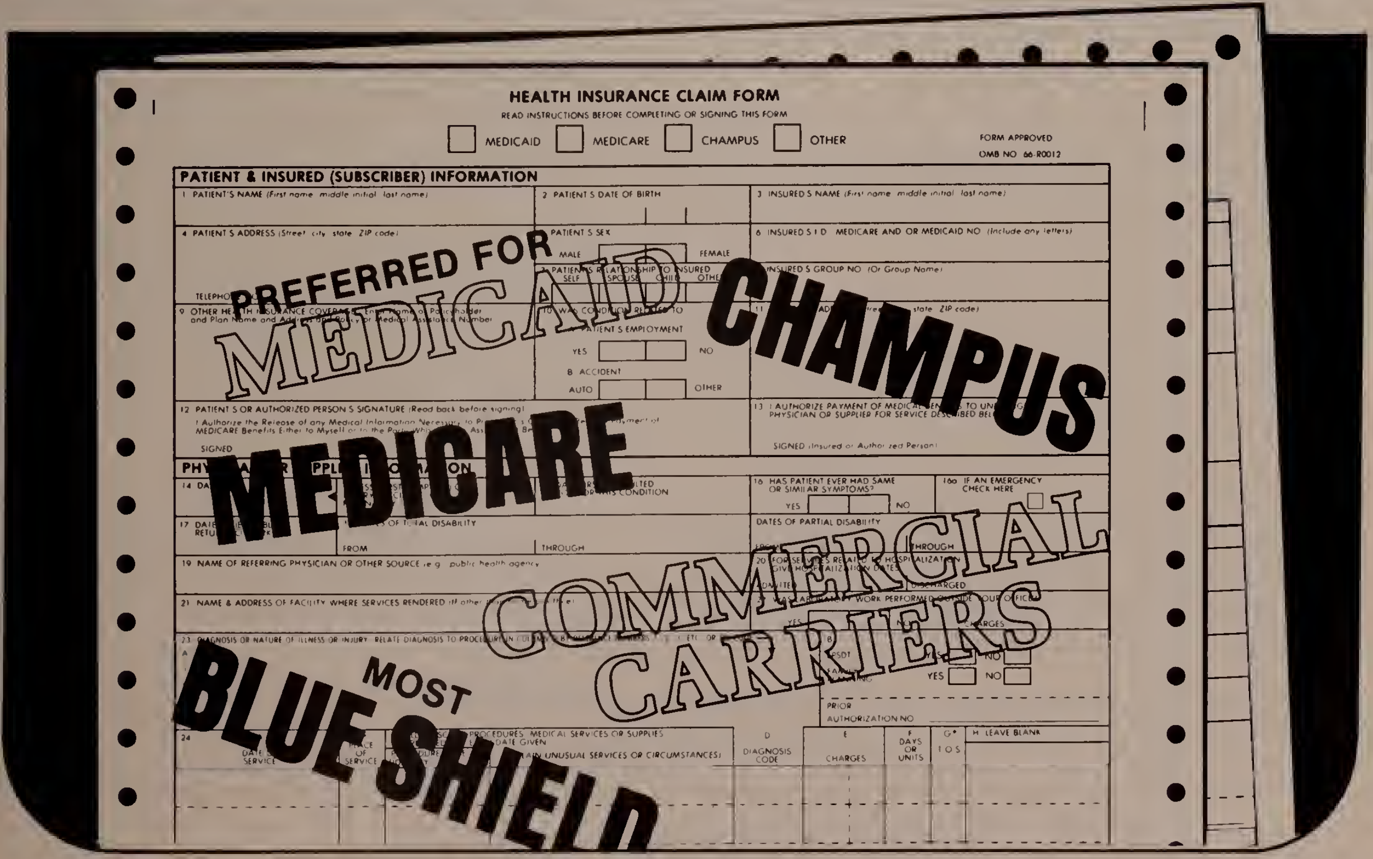
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PATIENT & INSURED (SUBSCRIBER) INFORMATION
1 PATIENT'S NAME (First name, middle initial, last name)
2 PATIENT'S DATE OF BIRTH
3 INSURED'S NAME (First name, middle initial, last name)
4 PATIENT'S ADDRESS (Street, city, state, ZIP code)
PATIENT'S SEX
MALE
FEMALE
6 INSURED'S I.D., MEDICARE AND/OR MEDICAID NO. (Include any letters)
19 NAME OF REFERRING PHYSICIAN OR OTHER SOURCE (e.g. public health agency)
21 NAME & ADDRESS OF FACILITY WHERE SERVICES RENDERED
16 HAS PATIENT EVER HAD SAME OR SIMILAR SYMPTOMS?
16a IF AN EMERGENCY CHECK HERE
DATES OF PARTIAL DISABILITY
FROM
THROUGH
PRIOR AUTHORIZATION NO.
D DIAGNOSIS CODE
E CHARGES
F DAYS OR UNITS
H LEAVE BLANK

Obituaries

Milton Lionel Berliner, M.D., of New York City, died on November 6 at the age of 86. Dr. Berliner graduated in 1918 from Long Island College Hospital. He was an advisory director of surgery at New York Eye and Ear Infirmary and a consulting ophthalmologist at Beth Israel Medical Center. Dr. Berliner was a Diplomate of the American Board of Ophthalmology, a Fellow of the American College of Surgeons, a Fellow of the International College of Surgeons, and a member of the New York Academy of Medicine, the New York Society for Clinical Ophthalmology, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Paul Biel, M.D., of Babylon, died on October 25 at the age of 75. Dr. Biel received his medical degree from the University of Vienna in 1932. He was an assistant in family medicine at Southside Hospital and an associate in family medicine at Good Samaritan Hospital. Dr. Biel was a member of the Suffolk Academy of Medicine, the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Salvatore Caliva, M.D., of Syracuse, died on September 28 at the age of 89. Dr. Caliva graduated in 1914 from New York Homeopathic Medical College and Flower Hospital. He was a member of the American Academy of Family Physicians, the Syracuse Academy of Medicine, the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry Cymerman, M.D., of Ozone Park, died on October 10 at the age of 80. Dr. Cymerman received his medical degree from the University of Geneva in 1935. He was a member of the Medical Society of the County of Queens, the Medical Society of the State of New York, and the American Medical Association.

Arthur F. Donofrio, M.D., of New York City, died on November 14 at the age of 81. Dr. Donofrio graduated in 1926 from Georgetown University School of Medicine. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John A. Esposito, M.D., of Saratoga Springs, died on October 25 at the age of 70. Dr. Esposito graduated in 1937 from New York Homeopathic Medical College and Flower Hospital. He was an associate surgeon at Saratoga Hospital. Dr. Esposito was a member of the Saratoga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George B. Jerzy Glass, M.D., of New York City, died on November 22 at the age of 78. Dr. Glass received his medical degree from the University of Warsaw in 1927. He was an attending physician at Flower and Fifth Avenue and Metropolitan Hospitals and a consulting gastroenterologist at Memorial Center for Cancer and Allied Diseases. Dr. Glass was a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, and a member of the American Gastro-Enterological Association, the American Physiological Society, the Society for Experimental Biology and Medicine, the International Society of Hematology, the International Society of Internal Medicine, the New York Gastroenterological Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George H. Gottesman, M.D., of New York City, died on November 11 at the age of 45. Dr. Gottesman graduated in 1962 from Albert Einstein College of Medicine. He was an assistant psychiatrist at Bronx Municipal Hospital Center. Dr. Gottesman was a Diplomate of the American Board of Psychiatry and Neurology (Psychiatry) and a member of the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Paul Waldemar Lapidus, M.D., of New York City, died on November 23 at the age of 87. Dr. Lapidus graduated in 1926 from Long Island College Hospital. He was a consulting orthopedic surgeon at the Hospital for Joint Diseases and Medical Center and the Metropolitan Hospital. Dr. Lapidus was a Diplomate of the American Board of Orthopedic Surgery, a Fellow of the American College of Surgeons, and a member of the American Academy of Orthopaedic Surgeons, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Aaron Lee Lichtman, M.D., of New York City, died on November 5 at the age of 67. Dr. Lichtman graduated in 1938 from Cornell University Medical College. He was a Diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons, and a member of the American Geriatrics Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Anthony Meloro, M.D., of Binghamton, died on November 14 at the age of 70. Dr. Meloro graduated in 1940 from Temple University School of Medicine. He was an associate member of the medical staff in emergency medicine at Binghamton General Hospital. Dr. Meloro was a member of the American Academy of Family Physicians, the Binghamton Academy of Medicine, the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ernst William Nathan, M.D., of New York City, died on November 21 at the age of 92. Dr. Nathan received his medical degree from the University of Giessen in 1912. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Richard Nauen, M.D., of Rochester, died on October 11 at the age of 73. Dr. Nauen graduated in 1931 from Columbia University College of Physicians and Surgeons. He was a Diplomate of the American Board of Preventive Medicine (Public Health), a Fellow of the American College of Preventive Medicine, and a member of the American Public Health Association, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Rosen, M.D., of New York City, died on November 5 at the age of 84. Dr. Rosen graduated in 1921 from Syracuse University College of Medicine. He was a consulting otolaryngologist at The Mount Sinai Hospital. Dr. Rosen was a Diplomate of the American Board of Otolaryngology, a Fellow of the International College of Surgeons, and a member of the American Academy of Ophthalmology and Otolaryngology, the American Laryngological, Rhinological and Otological Society, the American Otological Society, Inc., the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

E. George Stache, M.D., of Wantagh, died on November 7 at the age of 66. Dr. Stache graduated in 1943 from Georgetown University School of Medicine. He was a family practitioner at Mid-Island Hospital. Dr. Stache was a member of the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Bernhardt Ingemann Wulff, M.D., of Binghamton, died on July 27 at the age of 80. Dr. Wulff graduated in 1927 from Johns Hopkins University School of Medicine. He was a Diplomate of the American Board of Radiology (Diagnostic Radiology), a Fellow of the American College of Radiologists, and a member of the Radiological Society of North America, Inc., the Binghamton Academy of Medicine, the Radiological Society of New York State, the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Correction

In the June, 1978, Journal, in the article "Rehabilitation of Physical Disability in Cancer," by Catherine Hinterbuchner, M.D., on page 1068, column 2, top line, should read "begins *pre*operatively when the patient is first" and the second line should read "taught relaxation, breathing-*re*training exercises,."

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USE OF EXPERIMENTAL ANIMALS IN HUMAN NUTRITION RESEARCH – SOME JUSTIFICATIONS AND PRECAUTIONS

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The quantity and quality of nutrients in food and the assessment of factors that may alter these values form an important component of nutrition information. Information on the quantity, and sometimes the quality, has been incorporated into nutritional labels and tables of food composition. However, it has been argued elsewhere[1] that knowledge of the chemical composition of a food or diet is inadequate unless the biological availability of the nutrients to humans is quantified. There can be no disagreement, therefore, with the statement of Sir Kenneth Blaxter, "...the conclusion seems to be inevitable that the proper species to use in the study of the nutrition of man is man himself."[2]

Justifications

Ethical and economic considerations, in addition to limitations of time and sampling procedures, prevent or limit nutrition experiments on humans. A thought-provoking article[3] comments on some of the problems caused by sampling and time factors that prevent definitive answers to some problems in nutrition. To illustrate the point that there are many problems in nutrition for which we do not have reliable answers, the following was quoted from a letter to *Nature* in 1972 from Prof. J. C. Waterlow, London School of Hygiene and Tropical Medicine, and his colleagues which was entitled "How Much Food Does Man Require?" The opening sentence stated, "We believe that the energy requirements of man and his balance of intake and expenditure are not known." Changes in body energy content are difficult to assess properly in man because the deposition of adipose tissue is associated with increases in protein, water and fat, and indirect procedure only can be used to determine body composition, *in vivo*, in the human. In contrast, changes in carcass energy can be measured accurately in experimental animals by direct chemical analysis.[4] A major justification therefore for the use of experimental animals is the fact that we can measure the composition of entire carcasses or tissues in attempts to determine problems or understand underlying biochemical mechanisms of fundamental importance in human nutrition, such as energy requirements. A second important factor in the use of experimental animals is that we can control the influence of genetics on nutrient requirements. For example, different strains of rats deposit different amounts of carcass fat when fed the same diet.[5] Also, different strains of rats vary in the production of hypertension due to sodium chloride intake. This type of animal model is useful in view of the fact that the desirable upper limit of salt intake by humans is controversial and high-sodium intakes increase blood pressure in some people, but not in others.[6]

Finally, a perusal of any good textbook of human nutrition will indicate the important role of experimental animals in the discovery of various nutrients; for example, the rat for vitamins A and E, zinc, manganese, and the chick for vitamin K, pantothenic acid. Experimental animals have been used to assess the toxicity of individual nutrients and, in some cases, corroborate data obtained inadvertently in man. Further progress in human nutrition will come from the use of experimental animals, but various precautions in the interpretation of the data must be observed.

Precautions

The following account is not intended to be all inclusive, but to illustrate some precautions to be observed in the extrapolation of nutrition information from the experimental animal to the human.

Choice of Experimental Animal

There are 4,500 known mammalian species and over 9,000 species of birds; it is presumptive to argue from the particular to the general when so few species of these classes have been subjected to nutritional experimentation.[2] The choice of species is frequently dictated by convenience and economic factors, rather than sound biological principles, hence the extensive use of the rat. Rodents are poor animal models for the study of nutrition during pregnancy and lactation for the following reasons: the resorption of the fetus in various stresses;[7] the metabolic strain of pregnancy and lactation is less in humans than in any other mammal;[2] production of multiple offspring at birth. The influence of the number of pups in a litter is considerable with respect to body weight and total body fat.[8] The variation in the nutrient composition of milk from different species is a reflection of the extent of biological maturity, i.e., body composition at birth.[2,8] For example, rat milk has a higher concentration of fat when compared to human milk.[8] Thus, the newborn human body contains about 160 g lipid/kg body weight, while most mammalian species, other than aquatic ones, are born with 30 g/kg or less of fat, an exception being the guinea pig.[2] We must remember also that young animals are not small replicas of older animals with respect to body composition and certain biochemical and physiological parameters. Therefore, data must be interchanged with caution between different age groups within a species.

It is unlikely that any species could actually serve as a suitable model for the developing human brain.[9] It is difficult to produce in animals the classical signs of protein-energy malnutrition as observed in children. An interesting account is given of the limited success obtained by using the baboon in protein-energy malnutrition studies.[10] The evidence from studies with lower animals indicated that high phosphorous intakes or low calcium to phosphorous ratios are detrimental because they cause bone demineralization. Experiments on monkeys and on humans given high phosphate intakes showed no effect on calcium absorption.[11]

Not only are there differences in

response to various nutritional stresses between humans and experimental animals but there are some important differences between various species. Examples of specific differences from a review[1] include the growth response to anti-nutritional factors in raw soybeans; vitamin E deficiency which produces muscle changes in lambs but primarily reproductive problems in rats; the method of fat deposition in different laboratory animals; the resistance of the rat to development of a classical pellagra under most conditions; and the ability of the rat to synthesize ascorbic acid. Differences within species include altered metabolism of copper, manganese and riboflavin in different strains of mice.[7]

Choice of Diets

The reliability of some commercial diets, especially in relation to minerals and vitamins, has been questioned in a critical review of laboratory animal diets.[12] There are many interrelationships between nutrients so it is important that research papers list the concentration of all nutrients in the diet. Furthermore, the composition of stock diets for laboratory animals are not formulated with any consideration of the experimental model needed by toxicologists.[13] It is suggested that low-fiber experimental diet formulations would probably be more suitable for toxicological investigations that are relevant to man. Many experiments have demonstrated that the extent of a toxic effect depends on whether the animals have been fed a stock diet or a semi-synthetic diet. Many human diets are low in dietary fiber, while the levels in laboratory animals' diets are high and variable.[13] Some considerations in the formulation of diets for protein quality studies with rats include a consideration of the consistency of the diet[1] and the influence of starches from different sources.[14] These authors indicate that diets used in protein quality studies should be cooked so as to better represent the human diet. A final consideration is that taste perceptions by various animals are different from those of humans. Extrapolation of data from taste sensitivity in animal studies to possible responses in the human must be viewed with extreme caution.[15]

Duration of Experiment

Interpretation of data from nutritional experiments have been shown to vary markedly, depending on duration of the experiment.[16] Briefly, the growth response and mortality statistics of young rats fed various individual foods for a 13-week feeding period were examined. Conclusions made on the nutritive value of some foods when based on growth rates and mortality varied widely depending on whether the data were compared after 4 weeks or after 13 weeks. These kinds of results suggest that many nutrition experiments are terminated prematurely before the animal can adapt to the dietary manipulation.[3] For example, it is known that the rat adapts to a diet deficient in calcium by increasing the amount of calcium absorbed. In addition, humans have also been shown to have an enormous ability to adapt to various nutritional stresses.[17] The classical type of experiment where only one nutrient was restricted in the diet has provided useful information. However, there is a need to explore combinations of nutrient deficiencies to determine an animal's ability to adapt to these changes. In this respect, it is of equal concern to investigate both short- and long-term adaption to such nutrient deficiencies.

Animal Models in Complex Nutritional Stresses

The contribution of animal models to understanding alterations in biochemical and physiological processes in complex nutritional stresses has been invaluable. However, these models are not valid in certain areas of study and caution is advised as indicated in the following examples: (1) rats usually refuse to consume a sufficient amount of alcohol to develop liver injury,[18] (2) the disturbed calcium homeostasis in experimental diabetes in rats cannot be extrapolated as an explanation for the development of osteopenia in diabetic man,[19] (3) studies suggest that the rodent model is appropriate in applying the effects of various ratios of calcium to phosphorus in human diets,[11] and (4) the ability of rats to regulate energy balance disappears when they are confronted by a diet familiar to Western man.[4] Furthermore, even within strains, individual rats respond in different ways to palatable diets and therefore are no different from individual human beings who respond differently to overfeeding. Metabolic changes leading to deposition or loss of body energy depend on the type of diet and the manner in which it is consumed and may involve changes in energy intake, energy expenditure or both.[4] The inadequacy of animal models in the study of certain aspects of coronary heart disease has been documented extensively. The summary of an expert panel on the appraisal of dietary fat as a causative factor in atherogenesis contained the following statement: "The variability among animal species in susceptibility to dietary cholesterol and to quality of dietary fat does not permit any conclusive assessment of their separate roles in human atherosclerotic disease."[20]

In assessing the relevance of these models for man,[4] little attention has been paid to factors such as exercise or stress. It is probably a good assumption that in experiments with laboratory and farm animals there are deliberate attempts to avoid stress; whereas, many and varied stresses in the human may exacerbate existing nutritional problems.

Conclusions

The precautions mentioned above are not to deny the importance of experiments on animals to elucidate problems in human nutrition. However, researchers must continue to question the appropriateness of the species, age and sex of animal, strain, diet composition, method of administration of the diet, adaptation to the diet, duration of the experiment, methods of tissue sampling, the role of nondietary factors, such as exercise and stress, and other factors appropriate to the questions being asked.

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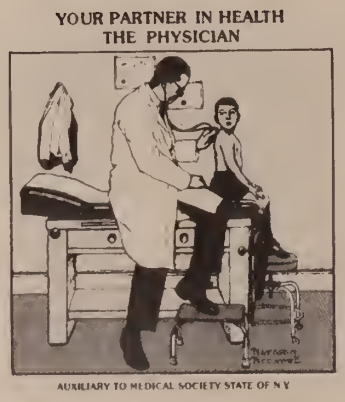

The stamp has been created by the Auxiliary to MSSNY as one way of promoting a positive image of physicians. The 4-color stamp, shown here in full size, was made from a Norman Rockwell drawing. Physicians are urged to use it in their correspondence. Stamps are .03¢ each. Check is payable to Auxiliary to MSSNY. Mail to: Mrs. Ezra A. Wolff, 70 East Gate, Manhasset, N.Y. 11030.

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in business that it takes in sufficient funds in premiums to pay for overhead, for awards required by jury decisions to successful plaintiffs, and to earn a reasonable profit. In the case of the Medical Liability of New York, which is a mutual company, there is no attempt to earn a profit, only to pay its low overhead and to have sufficient funds to pay the malpractice awards.

There are several conclusions that may be drawn from these figures. First, many young surgeons who have spent four years in college, four years in medical school, with a cost of approximately $80,000 out-of-pocket or in loans, then five to six years in residency, will be financially unable to enter into the practice of surgery. Further, elderly surgeons whose income is declining may not be able to continue to practice. Although the effects may not be felt for a few years, ultimately many patients will have a difficult time obtaining vital health care. Second, the need to raise fees for consultations, office and hospital visits, and, most of all, for major operative procedures will cause a rapid and progressive rise in the cost of insurance premiums paid for by the public.

Most of the discussion above has been about medical malpractice, but this is only the tip of the iceberg. Litigation for all sorts of casualty problems, such as automobile accidents, slipping on a floor in a store, athletic injuries occurring under the auspices of a school, and hundreds of other kinds, all point to the fact that we, the public, who are called on to serve on juries involved in cases of personal injury, must reflect seriously on the dollar value we place on the injury. Each and every one of us will have to pay rapidly escalating premiums for all insurance policies.

JERE W. LORD, JR., M.D.
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Announcement of Awards

Awarded: From the Alumni Association of the Chicago Medical School, Matthew N. Harris, M.D., professor of surgery and director, Division of Oncology, Department of Surgery, New York University School of Medicine; and Mortimer J. Lacher, M.D., associate professor of medicine, Cornell University Medical School, and an associate attending physician, Hematology-Lymphoma Service, Department of Medicine, Memorial Hospital for Cancer and Allied Diseases, and clinician, Sloan-Kettering Institute for Cancer Research, Distinguished Alumnus Award; Jack Weinberg, M.D., director, Illinois State Psychiatric Institutes, Chicago, awarded the Harlem Valley Psychiatric Center's first Distinguished Scholar Award.

Sports symposiums

1. Sports and Ski Medicine Symposium—Steamboat Springs, Colorado, March 20–27, 1982. Sponsored by Virginia Sportsmedicine and Rehabilitation Institute and Northern Virginia Consortium for Medical Education. Category I CME credit. Contact course chairman: Robert P. Nirschl, M.S., M.D., 3801 N. Fairfax Drive Suite 60, Arlington, Va. 22203. Telephone #703-525-2200.
2. Sports and Tennis Medicine Symposium—November 7–12, 1982. Newk Tennis Ranch, New Braunfels, Texas. John Newcombe and Clarence Mabry Instructional Clinics. Sponsored by Virginia Sportsmedicine and Rehabilitation Institute and Northern Virginia Consortium for Continuing Medical Education. Contact course chairman: Robert P. Nirschl, M.S., M.D., 3801 N. Fairfax Drive, Suite 60, Arlington, Va. Telephone #703-525-2200.
3. Sports and Tennis Medicine Symposium—Hilton Head, South Carolina. May 17–24, 1982. Stan Smith Instructional Clinics. Sponsored by Virginia Sportsmedicine and Rehabilitation Institute and Northern Virginia Consortium for Continuing Medical Education. Contact course chairman: Robert P. Nirschl, M.S., M.D., 3801 N. Fairfax Drive, Suite 60, Arlington, Va. Telephone #703-525-2200.

1982 Postgraduate course

The North American society for Cardiac Radiology will hold its 1982 Postgraduate Course, "Cardiac Interventional Techniques and Diagnostic Imaging," April 5–8, 1982, at the Barbizon Plaza Hotel, New York City.

Attendance at the course will merit 23 hours in Category I of the AMA Physicians's Recognition Award.

For additional information: Dr. Thomas A. Sos, Program Chairman, c/o Educational Resources Associates, Inc., 209 Harvard St., Suite 500, Brookline, Massachusetts, U.S.A., 02146 Telephone: (617) 738-8859, 8861.

Grand tour to China

Continuing Medical Education credits in Categories I and II are available to physicians participating in the 1982 "Grand Tour To China" being sponsored by the Pennsylvania Medical Society.

The 19-day, all-inclusive tour features medical programs arranged by local branches of the Chinese Medical Association and the Peoples' Republic Ministry of Health.

Limited to 40 passengers, the tour leaves from both New York and Los Angeles, April 8.

The medical elements of the program meet the criteria for nine hours of Category I CME Credit with the remaining hours accreditable as Category II, as determined by the accrediting Council for Continuing Medical Education.

For more information and to make bookings, contact Inflight Tours at 501 Fifth Avenue, Suite 2204, New York, NY 10017 or telephone (212) 986-2870.

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Are the results of
$100 million worth of
government-funded research
on hypertension
worth reading about?

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American Federation for Aging Research (AFAR)

AFAR (the American Federation for Aging Research) will hold its Annual Meeting on 17 April, 1982, at the Bellevue Stratford Hotel, in Philadelphia, prior to the annual sessions of the American College of Physicians. In accordance with the objectives of AFAR, to encourage and support research in aging, the theme of the program will be, "A Look Into The Future: The Updating Of Research in Key Areas of the Problems Related to Aging and Future Directions for New and Innovative Investigators in This Field."

This is an open meeting. The scientific program will begin at 9:00 a.m.; the Annual Business Meeting will begin at 2:00 p.m. All interested persons are invited to attend.

Inquiries regarding AFAR should be addressed to Irving S. Wright, M.D., President, American Federation for Aging Research, 450 E. 69th Street, New York, New York 10021.

Immunization called medicine's most powerful tool for preventing disease

The *pneumonia vaccine* licensed four years ago has not proved useful, says a report in the September 25 Journal of the American Medical Association.

In the same issue of the Journal is an editorial pointing out that the *influenza vaccine* has indeed been proved helpful and should be administered to many Americans.

And still a third report assesses the risk of giving the *German measles vaccine* to pregnant women, concluding that the risk is small, but still is not zero and thus the vaccine should not be administered to expectant mothers.

The roundup of articles reporting on several of the available vaccines comes in the fall, as the nation is once again approaching the season of colds, influenza, and other winter respiratory infections.

Immunization is medicine's most powerful tool for preventing disease, points out Journal Editor William R. Barclay, M.D.

Immunization is simple, safe, and cost effective, Dr. Barclay declares.

"Physicians should promote vaccination against infectious diseases at every opportunity and should promote vaccination against influenza for most of their patients," the editor urges.

Regarding the *pneumonia vaccine*, J. V. Hirschmann, M.D., reports from the University of Washington School of Medicine, Seattle, and the Veterans Administration Medical Center in that city.

"There is currently no information to support widespread pneumococcal vaccination in this country, and further investigations are needed to determine in what situations this vaccine is worthwhile," Dr. Hirschmann concludes.

The Food and Drug Administration licensed the pneumonia vaccine in November, 1977, for use in the general population before its benefits and risks were clearly delineated, he charges. It was advocated for the chronically ill and the elderly. But two large scale trials in this country failed to show that the vaccine is appropriate for general use in the institutionalized or ambulatory elderly patients, he says. The *influenza vaccine* is recommended for the chronically ill and for adults older than 65 years, Dr. Barclay points out. These groups are at high risk of serious complications and even death from the flu, he says.

The potency of the 1981–82 flu vaccine has been doubled compared to that of last season, but no adverse side effects are expected from the use of this more concentrated product, the Journal editor says. After the flu shots, mild side effects such as local redness at the injection site, slight fever, and malaise are common, but serious side effects are rare. The vaccine has not been shown to damage the fetus, but it is probably wiser to defer vaccination of women during their first three months of pregnancy, he recommends.

The study of the impact of the *German measles vaccine* on expectant mothers is by Stephen R. Preblud, M.D., of the Centers for Disease Control, Atlanta.

In a study of more than 600 women, there were no cases at all of birth defects in individuals given the German measles vaccine during pregnancy.

"Concern about the potential adverse effects of rubella (German measles) vaccine on the fetus should not interfere with vaccination of women of childbearing age. However, since the actual risk may not be zero, women known to be pregnant should not be vaccinated, and conception should be avoided for three months after vaccination," Dr. Preblud recommends.

The AMA pamphlet points out that foreign travelers no longer are required to be vaccinated against smallpox to enter the United States. Immunization against typhoid fever, polio, influenza, and tetanus in some cases may be advised but not required for foreign travelers. For specific areas of the world there are vaccines available to protect against yellow fever, plague, cholera, and typhus. Your physician or the local health department will have current information.

"Some people put off being immunized because they fear unfavorable reactions," the AMA points out.

"Although such reactions sometimes occur, even a severe reaction is almost always less hazardous than having the disease itself." But there are some situations in which it is not advisable to immunize certain people against certain diseases, and the physician's advice must prevail.

Month in Washington

American Medical Association Executive Vice President James H. Sammons, M.D., has testified before the Health and Environment Subcommittee of the House Energy and Commerce Committee that the AMA and America's physicians have been successful in doing their part to keep health care delivery expenses under control. It is nationwide inflation, Dr. Sammons explained, that is the real culprit in unnecessarily spiraling costs.

"As inflation moderates, we fully expect the medical care sector to be able to achieve reductions in the rate of growth of health care costs," Dr. Sammons added.

Appearing before the Subcommittee with Dr. Sammons were Alex McMahon, American Hospital Association President; Michael D. Bromberg, Executive Director of Federation of American Hospitals, and Paul W. Earle, Executive Director of VE (Voluntary Effort).

Dr. Sammons emphasized that the AMA and the country's physicians are very concerned with growing health care delivery costs and the increased percentage these costs take of the GNP (Gross National Product), but emphasized that improvements in the field have necessarily generated some increase.

"Medical care cannot be delivered without cost," stated Dr. Sammons, saying that as care, quality, and accessibility to care improve and the elderly utilize more services, increases in the medical care costs are inevitable. "Such occurrence does not merit blanket condemnation," he said.

"In 1976 the AMA established the National Commission on the Cost of Medical Care, a group of 27 national leaders from health, government, insurance, labor, and industry who spent 18 months drafting 48 cost-effective recommendations," the AMA spokesman testified.

"One year later, the AMA joined with the American Hospital Association and the Federation of American Hospitals to initiate the VE, a program designed to lower hospital cost increases without comprising care quality. VE has since expanded to include Blue Cross/Blue Shield, the Health Industry Manufacturers' Association, the Health Insurance Association of America, and the National Association of Counties."

Dr. Sammons noted that by reducing the number of diagnostic tests and streamlining office practices, individual physicians have reduced their share of the total health care costs, accounting for only 18.9 percent of the $247 billion

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Prepared by the Washington, D.C., office of the American Medical Association.

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, **which regimen was proven most effective?**[1]

1981 Albion O. Bernstein, M.D. Award

The Medical Society of the State of New York is accepting nominations for the 1981 ALBION O. BERNSTEIN, M.D. AWARD until March 1, 1982.

This national award is given to a physician, surgeon, or scientist who has recently made a widely beneficial scientific discovery in medicine, surgery or the prevention of disease. Recent winners include Rosalyn S. Yalow, Ph.D., Solomon A. Berson, M.D., Baruch S. Blumberg, M.D., Ph.D., Manfred M. Mayer, Ph.D., and Georges Köhler, Ph.D.

The $2,000 award and appropriate scroll, will be presented at the CME Assembly of the Medical Society of the State of New York, June 25–27, 1982. The award was endowed by the late Morris J. Bernstein in memory of his son, a physician who died in an accident while answering a hospital call in November 1940.

Nominators must complete and submit an official nomination form with additional support information which must include the nominee's curriculum vitae, a brief synopsis of the significance of the achievement and a a list of publications, if any. Please submit by March 1, 1982 to:

BERNSTEIN AWARDS COMMITTEE
MEDICAL SOCIETY OF THE STATE OF NEW YORK
420 Lakeville Road, P.O. Box 5404, Lake Success, N.Y. 11042

Albion O. Bernstein, M.D. Award

1981 Nomination Form

(*Please print/ type*)

Name(s) of Nominee____________________

Professional Address____________________

____

Telephone (   )____________________

Title of Achievement____________________

The above is nominated for the 1981 Albion O. Bernstein, M.D. Award for a recent widely beneficial scientific discovery in medicine, surgery or the prevention of disease.

Nominator____________________

Title____________________

Organization____________________

Address____________________

Telephone (   )____________________

Signed____________________Date__________

continued from page 259

spent on health care in 1980 as compared with 19.1 percent of the $74.4 billion spent in 1970. He added that this is significant in light of a 36 percent increase in the number of physicians and a CPI (Consumer Price Index) jump of over 100 percent for the same period.

"In March, 1981, physicians failed, for the first time, to meet their VE goal of staying below the CPI's All Items Index. Part of the reason is the rising cost of maintaining a medical practice," Dr. Sammons said, mentioning that the cost of the average practice is now $54,500 annually, amounting to 40.3 percent of gross income, as compared with a 1970 figure of $24,300 representing 36.8 percent of gross income.

"It is our belief that physicians have acted responsibly in their fee setting practices during a period of unprecedented inflation," Dr. Sammons testified.

AMA efforts to meet rising costs have been substantial, Dr. Sammons explained, including the Cost-Effectiveness Evaluation Network, which involves hospital medical staffs in developing cost effective methodologies in an actual hospital setting. Sammons also pointed out that the AMA has successfully urged more than 90 U.S. medical schools to add cost consciousness to their curriculum.

Furthermore, the Accreditation Council for Graduate Medical Education requires resident physicians to apply cost-effective measures to their practices.

"The most recent AMA effort has been the development of the Coalitions for Health Care, in which local delivery systems are being analyzed by doctors, insurors, business and labor leaders, and other concerned groups for effective-cost containment practices." Sammons also noted that such coalitions create a strong base for implementation of existing cost-reduction efforts.

"The AMA has and will continue to take an active role to assure the delivery of high quality medical care," Dr. Sammons concluded. "We are also pledged to seek means to see that this care is delivered in the most cost effective manner."

* * *

The Social Security Administration has launched a sweeping review of the 4 million people receiving disability benefits. As many as 150,000 people may be dropped from the program this fiscal year. Social Security has alerted physicians to expect "a substantial increase in requests for medical reports."

The increase in requests for special consultative examinations "will be even more substantial because the majority of the beneficiaries will not have seen their own physician recently," Social Security said.

Additional physician consultants will be recruited by the State Disability Determination Services to handle the increased periodic review workload. More physicians to handle the consultative exams will be needed.

The crackdown results from a 1980 Congressional law requiring Social Security starting this January to review nearly every disabled case at least once every three years. The basic purpose is to determine whether the beneficiary is currently unable to work.

Noting that beneficiaries may express concern to their physicians about the reviews, Social Security urged physicians to point out to their patients that they, the physicians, do not give an opinion or participate in the decision

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In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study),
which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]

Fat, not protein, loss may have caused IRA starvation deaths

Loss of body fat, not protein, may have led to the recent deaths of Irish Repulican Army hunger strikers, says a study from the University of Toronto Faculty of Medicine.

These findings, reported in the Medical News section of the Journal of the American Medical Association (October 23), upset traditional theories that survival during a fast depends on preserving body protein stores while burning fat.

Researcher Errol B. Marliss, M.D., combined details from media reports on the hunger strikers with information from studies on the metabolic aspects of starvation and concluded that the men could not have lost more than 30 percent of their body protein during their fasts, which averaged 61 days in length. A 50 percent protein loss is considered incompatible with survival, he noted.

Instead, according to Marliss, the hunger strikers "appeared to be losing their lives the moment at which they lost every last gram of their body fat."

One lesson to be learned from the plight of the hunger strikers, Marliss points out, is that medical authorities may be overemphasizing the importance of protein conservation to survival and may be "underemphasizing the importance of having fat stored for the long haul."

Tomcat prowls, owner growls

A house cat allowed to prowl in the wild can bring an unwelcome gift of disease.

In a case reported in the September 18 Journal of the American Medical Association, a young pregnant woman developed headache, fever, enlarged lymph nodes, and a skin ulcer after having been bitten by her pet tomcat. Her physicians suspected tularemia when they learned that the cat had been stalking and killing small animals in a nearby wooded lot.

Tularemia is a disease of rodents, resembling plague. Humans usually acquire the disease out-of-doors by handling infected animals—when hunting, for example—by receiving bites from insects that have bitten infected animals.

As this case illustrates, however, domestic pets allowed to roam outside can bring tularemia to a stay-at-home owner.

The young woman was not ill long enough for her physicians to confirm the disease through blood tests. So, reasoning that her cat possibly had been infected a longer time, they brought the animal to the hospital and obtained a positive diagnosis through tests on its blood.

Both cat and mistress were treated with antibiotics and recovered easily. Interestingly, the cat received the most effective drug, streptomycin. Gentamycin, the drug given to the young woman, was chosen as an alternate because it was considered to present less danger to her unborn child.

The woman later delivered a healthy daughter. Her physicians speculate that the fetus may have been uninfected, or it may have been adequately treated with the gentamycin, an antibiotic known to cross the placenta.

Noxious fumes affect hospital workers

Hydrogen sulfide is a colorless, odiferous gas often found in the petroleum, tanning, or refuse industries. In high enough doses, it can kill.

A new source of the gas has been identified, reports John W. Peters, M.D, in the October 2 Journal of the American Medical Association. Oddly enough, this source is the drain of a cast room sink at an Eastern hospital.

A 45-year-old worker attempted to clean the plaster of paris sludge out of the drain with a strong industrial cleaner containing a 90 percent sulfuric acid solution. When the acid was introduced into the sludge it released a noxious hydrogen sulfide gas 30 times the recommended maximum dosage for human exposure. Fast action on the part of the hospital staff saved his life, reported Dr. Peters.

The worker exhibited classic signs of poisoning, the study said, including respiratory depression, tremors, and coma, and required three weeks hospitalization and medications to neutralize the effects of the gas. The physician and co-workers who rushed to the man's aid were also affected by the gas and required some hospitalization.

"The occurrence of this event in a community hospital and its easy reproducibility in the laboratory indicate the potential for repeated episodes," explained Dr. Peters. "Industrial drain cleaners should not be employed wherever casting material is used."

Dr. Peters is affiliated with the Department of Internal Medicine, M. S. Hershey Medical Center, Pennsylvania State School of Medicine, Heshey.

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on whether the patients are disabled. These decisions are made only by the State Disability offices.

"Over the past few years, Social Security disability benefits came to be regarded by some beneficiaries as a permanent, lifetime entitlement—that benefits would continue until they retired, died, or chose to go back to work," said Social Security. "So there is going to be a lot of unhappiness and confusion for the next two to three years as disability benefits are terminated for thousands of Americans."

Emphasized the federal agency: "Social Security disability benefits, in most cases, are intended as a temporary help until people can overcome their impairment and return to work." The benefits in the future will be used "only for those who are really unable to work because of a medically determinable disability—as the law intends."

The review of more than 500,000 claims this fiscal year has important implications for physicians, Social Security said, listing them as:

* The beneficiary's treating physician will be asked to furnish an updated report showing the patient's current condition.

* Where information from the treating sources is insufficient to make a new determination of disability, a consultative examination will be arranged to get the needed data.

* Some patients are going to be upset about having to, in effect, reestablish their entitlement to disability benefits.

* In addition to state offices, Social Security's regional offices and headquarters will be looking for additional medical consultants. The agency estimates it will be spending almost $240 million next fiscal year on payments for medical evidence of record and consultant examinations, compared with $138 million last fiscal year and $190 million in the current fiscal year. More than 800,000 cases are slated for review in the fiscal year that starts next October.

Social Security issued some tips for physicians with disabled patients:

* Patients may call soon after receiving notice their claims are to be reviewed. If the physicians have been seeing the patients regularly and have complete information about the impairments, they should advise the patients they will send in the medical reports promptly. The patients should be reminded that the physicians do not make the disability determination.

* If patients have not been seen recently, physicians may suggest a prompt, thorough examination.

* Patients may call physicians after notification they are not disabled within the meaning of the law. If physicians have already submitted a recent medical report, they should note that they had no part in the finding. But if a medical report for the review was not submitted, and the patient wishes a report, the physicians may want to conduct a special examination, since such beneficiaries have 10 days to submit information for the government to reconsider its decisions.

* * *

continued on page 264

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

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Congress has approved an extra four percent cut in most health programs as part of the stop-gap government spending bill meeting President Reagan's request for an additional $4 billion reduction in funding levels.

Passage of the measure by House and Senate shortly before adjournment was a victory for the Administration. President Reagan last September had called for new spending slashes. Last month he vetoed a continuing spending resolution that fell short of the President's budget goals.

The $413 billion continuing resolution adopted by Congress runs through the end of March, but the lawmakers are likely next year to extend the resolution through the end of the current fiscal year, October 1.

The budget situation for health programs at the moment is confused, but the measure basically calls for spending at a rate which is the lower of the House-passed HHS (Health and Human Services) Department appropriations bill or the Senate Appropriations Committee bill, along with an overall four percent reduction.

Medicare and Medicaid were not subject to the cut.

Congress added some funds for health programs, including $16.5 million for the maternal and child health block grant and $24 million for community health centers.

* * *

The White House Conference on Aging's 2,000 delegates approved some 600 recommendations including a "continuation of the search for a National Health Care Security plan."

Adopting on a single vote the reports of 14 separate committees, the Conference went on record against many of the budget-cutting goals of the Reagan Administration. The main subject of debate throughout the three-day session was Social Security. One committee suggested using general revenues to bolster the Social Security fund; another opposed it. But all of the proposals argued against any decrease in benefits.

The Health section of the Conference called for a program that would cover long-term home health care for older people who aren't entirely self-sufficient but don't require hospitalization.

A prospective payment system should be set up for Medicare and Medicaid under which hospitals and physicians receive advance payment and reimbursement would be limited, a report recommended.

Medicare and Medicaid should cover home health care and services, according to one recommendation.

Federal subsidies for tobacco, alcohol, pesticides, and harmful food additives should be dropped, the report said.

Medicare expansions that were proposed included outpatient drugs, dental care, eye examinations, and hearing aids. Expanded mental health benefits was also endorsed.

* * *

President Reagan named a 44-member task force to stimulate private sector leadership to address community needs. The President told the task force that while the government can provide incentives for voluntarism to flourish, the task force must find and identify opportunities for action. Heading the group is C. William Verity, Chairman of Armco, Inc.

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And don't the results of more than
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involving thousands of patients
who were followed for several years,
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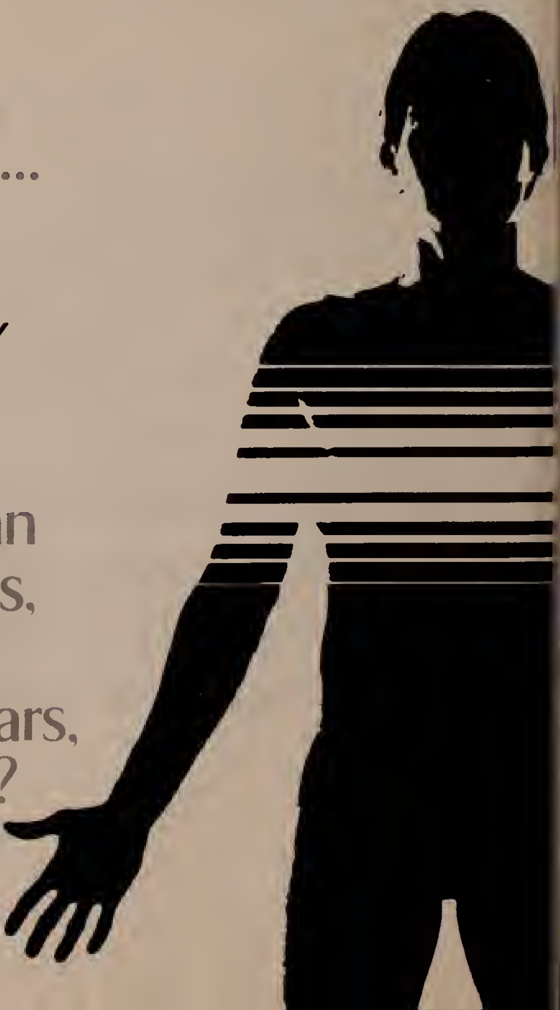

Annotations of Books Received*

ETHICS, MEDICAL

Ethics and Regulation of Clinical Research. By Robert J. Levine. Baltimore, Urban & Schwarzenberg, 1981. Cloth, 299 pages. Price, $35.

A survey of the ethical and legal duties of clinical researchers.

ATHLETIC INJURIES

Sports Medicine: Fitness, Training, Injuries. Edited by Otto Appenzeller and Ruth Atkinson. Baltimore, Urban & Schwarzenberg, 1981. Illustrated, 395 pages. Hardcover, $39.50.

A textbook on the effects of sports on the human body.

GASTROINTESTINAL DISEASES

Nutrition and Diet Therapy in Gastrointestinal Disease. By Martin H. Floch, M.S., M.D. New York, Plenum Medical Book Co., 1981. Cloth, 480 pages. Price, $39.50 (Series: Topics in Gastroenterology).

A review of the field of nutrition, as it relates to the gastrointestinal tract.

INFANT NUTRITION

The Immunology of Infant Feeding. Edited by A. W. Wilkinson. New York, Plenum Press, 1981. Illustrated, 151 pages. Cloth, $29.50 (Ettore Majorana International Science Series).

Immunological implications of the widespread use of formulas for infant feeding, which lack the natural antiviral and antibacterial properties of human milk.

continued on page 266

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* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

Please see references and brief summary of prescribing information on last pages of this advertisement.

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☐ Journal article reprints of the clinical studies mentioned in this ad

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SM-2348 11/81

continued from page 265

NOSTRUMS

Vitamins and "Health" Foods: The Great American Hustle. By Victor Herbert, M.D., J.D., and Stephen Barrett, M.D. Philadelphia, Pa., George F. Stickley Company, 1981. Hardcover, 189 pages. Price, $11.95.

An investigative report on the false prophets in the field of nutrition.

AGED

Caring for Aging Parents. By Harold A. Rashkis, M.D. Philadelphia, Pa., George F. Stickley Co., 1981. Hardcover, 181 pages. Price, $10.95.

Pain, anxiety, and concern adult experience as they face the aging of their parents.

DEATH

Defining Death: Medical, Legal and Ethical Issues in the Determination of Death. Washington, D.C., 1981. 166 pages. Price, $5.50 (for sale by the Supt of Docs. Stock No. 040-000-00451-3)

A Report of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research.

CELLS

Cancer: The Misguided Cell. By David M. Prescott and Abraham S. Flexer. Sunderland, Ma., Sinauer Associates, Inc., Publishers, 1982. Illustrated, 314 pages. Paperback, $12.95.

An overview of the biology of cancer—for the undergraduate and for the interested layperson.

PHYSIOLOGY—EXAMINATION QUESTIONS

Physiology. Sixth edition. Edited by Kalman Greenspan, Ph.D., F.A.C.C. Garden City, N.Y., Medical Examination Publishing Co., Inc., 1981. Paperback, 346 pages. Price, $9.75.

1,000 multiple choice questions with referenced explanatory answers.

EDUCATION, MEDICAL

"So You Want to Be a Doctor?" The Realities of Pursuing Medicine as a Career. By Naomi Bluestone, M.D. New York, Lothrope, Lee & Shepard Books, 1981. Hardcover, 241 pages. Price, $12.95.

The total personal commitment and dedication and the strenuous, tedious, and expensive education required to become a physician—for guidance counselors and would-be-doctors.

NEUROMUSCULAR DISEASES

Segmental Neurology: A Guide to the Examination and Interpretation of Sensory and Motor Function. By John K. Worl, M.D. Baltimore, Md., University Park

continued on page 267

Salutensin® Salutensin-Demi™

(Hydroflumethiazide, Reserpine Antihypertensive Formulation)

Brief Summary of Prescribing Information (12) 10/27/78

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

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Press, 1981. Illustrated, 160 pages. Paperback, $19.95.

A reference aide for the clinician to the evaluation of segmental disease.

RESUSCITATION

How to Save a Life Using CPR (Cardiopulmonary Resuscitation). By Lindsay R. Curtis, M.D. Illustrated by Paul Farber. Tucson, Az., HP Books, 1981. Illustrated, 64 pages. Paperback, $3.95.

A detailed manual with step-by-step illustrations.

EDUCATION

Review of Allied Health Education: 4. General Editor: Joseph Hamburg. Lexington, Ky., The University of Kentucky Press, 1981. Cloth, 148 pages. Price, $13.

Appraisal of the developments and research in current allied health education—fourth volume in the series.

Cancer control and the primary physician; a March symposiun

A one-day symposium, sponsored by Overlook Hospital, Columbia University Comprehensive Cancer Center, and the American Cancer Society, N.J. Division, will be held at Overlook Hospital, Summit, New Jersey, on March 3, and is open to physicians, nurses, and other health care professionals.

Topics to be covered will include: cancer statistics in New Jersey and what they mean, screening, pain control, the role of nutrition, comprehensive care of the cancer patient, psychosocial support, hospice/home care, and rehabilitation.

The course has been approved for 6 CME credits by the Medical Society of New Jersey, American Academy of Family Practice, Academy of Medicine of New Jersey, and the New Jersey State Nurses Association (pending).

Guest faculty include Drs. Susan Mellette, Alfred I. Neugut, Steven Stellman, Arthur Taub, and Myron Winick.

Symposium Coordinators are Dr. William F. Minogue and Dr. Robert N. Taub.

For further information contact: Mrs. Cordis L. Griffith, Department of Medical Education, Overlook Hospital, Summit, New Jersey, 07901; telephone: (201-522-2085).

ADVERSE REACTIONS

Hydroflumethiazide

Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

1 tablet b.i.d.

SUPPLIED

Bottles of 100 and 1000 scored 50 mg. tablets.

References:
1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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SCHEDULE OF SCIENTIFIC MEETINGS

1982 ANNUAL CME ASSEMBLY

Medical Society of the State of New York
Rye Town Hilton, Port Chester, New York

FRIDAY, JUNE 25

Morning:
Anesthesiology/Surgery (General Session)
Emergency Medicine/Radiology (General Session)
Medical Legal & Workers' Compensation Matters/Occupational Medicine (General Session)
Obstetrics & Gynecology
Orthopedic Surgery

Afternoon:
Chest Diseases
Dermatology & Syphilology
Emergency Medicine/Radiology (General Session-cont'd)
Gastroenterology, Colon & Rectal Surgery
Hand Surgery (General Session)
Obstetrics & Gynecology (cont'd)

SATURDAY, JUNE 26

Morning:
Cancer (General Session)
Cardiovascular Diseases
Internal Medicine
Neurology & Neurosurgery (General Session)
Ophthalmology
Urology

Afternoon:
Cancer (General Session—cont'd)
Internal Medicine (cont'd)
Ophthalmology (cont'd)
Otolaryngology

SUNDAY, JUNE 27

Morning:
Allergy & Immunology
Family & General Practice/Radiology (General Session)
Physical Medicine & Rehab./
Plastic, Reconstructive & Maxillofacial Surgery (General Session)
Preventive Medicine
Psychiatry/Pediatrics/School Health (General Session)

◆

CME CREDITS: Each program will be eligible for CME Category I Credits on an hour-for-hour basis

◆

SCIENTIFIC & TECHNICAL EXHIBITS

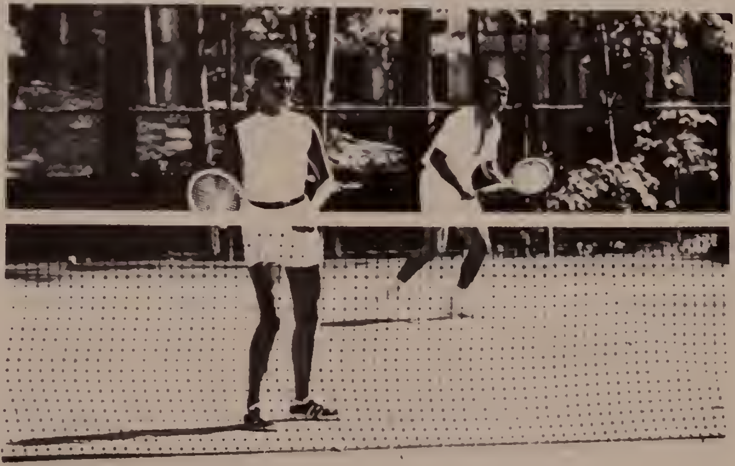
THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

1982 Annual CME Assembly

Friday, June 25—Sunday, June 27

Medical Controversies of the 80s

All physicians are invited to attend our Annual Continuing Medical Education Program to be held at the Rye Town Hilton. You will have the opportunity to obtain Category I CME Credits during 2½ days of outstanding General Sessions, Symposia, and Panel Discussions. Our meetings are designed to inform the physician of the latest developments not only in his specialty, but in other areas of medicine as well.



As in the past, there will be Scientific and Technical Exhibits to help the physician to become acquainted with the latest research techniques, and to learn about new products and services that will help the physician provide better medical care. The opportunity to visit with friends and colleagues in a relaxed setting is an important part of the Annual Assembly. Come join us!

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For more than 2 rooms, contact reservation Mgr.

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SINGLE:	$69	$74	$79	$84	$89
DOUBLE/TWIN:	$79	$84	$89	$94	$99
SUITES:	$175 and up				

MEDICAL SOCIETY OF THE
STATE OF NEW YORK
1982 CME ASSEMBLY
JUNE 25-27, 1982
SUITES ON REQUEST TO HOTEL

☐ CONFIRMATION REQUESTED
If two or more to occupy room, name of joiner(s)
____

If a range of rates is offered and the rate requested is not available, the next available rate will be assigned. Reservation requests must be received no later than June 4, 1982, and will be held until 6:00 p.m. on the date of arrival unless otherwise specified.

If reservations are made by telephone, you must identify the Medical Society meeting for the special rate to apply. Rates subject to applicable sales tax.

RESTAURANTS

Penfield's for gracious dining—an adventure in gourmet food, and Penfield's Patio for informal lunches and cocktails. Also the Tulip Tree for casual meals and buffet surrounded by the greenery of ferns and flowers.

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TRANSPORTATION

Convenient regularly scheduled ground transportation is available from LaGuardia and Kennedy Airports. On arrival, go to the baggage claim area and look for Airport Transportation Services free courtesy phone (it's red). From airports, service is throughout the day and evening with departures every hour (½ hour service during peak travel times). Last departure leaves Kennedy at 11:30 p.m. and LaGuardia at 11:15 p.m. One-way fare: $11.00. Round-trip fare: $21.00. By train from Manhattan (Grand Central Station), take the New Haven line to Rye, New York (about 45 minutes). From the Rye Station, it is a 5 minute taxi ride to the Rye Town Hilton.

HOTEL RESERVATIONS

Physicians must make their own hotel reservations no later than June 4, 1982, direct with the Rye Town Hilton. In order to take advantage of the special rates for sleeping rooms, please mention that you will be attending the Medical Society CME Assembly.

RECEPTION & DINNER DANCE

All physicians and their guests are invited to attend the Medical Society dinner dance on Saturday, June 26th. Ronald Dougherty, M.D., Chairman, MSSNY Committee on Drug Abuse, will be the guest

speaker. A reception sponsored by the Medical Society of the State of New York will begin at 7:00 p.m. Dinner will be served at 8:00 p.m. $39.00 per person.

MEETING & EXHIBIT HOURS

Friday, June 25: 8:30 a.m.–5:00 p.m.
Saturday, June 26: 8:30 a.m.–5:00 p.m.
Sunday, June 27: 8:30 a.m.–12:30 p.m.

INTERMISSIONS

There will be morning and afternoon intermissions for coffee, and to allow time to visit the exhibits.

REGISTRATION

Registration is open to MSSNY members and their guests, nonmember physicians, medical students, and members of the allied professions. There is no registration fee. Registration hours will be: Thursday, June 24 from 4:00 p.m. to 8:00 p.m., Friday & Saturday, June 25 & 26, from 8:00 a.m. to 5:00 p.m., and Sunday, June 27, from 8:00 a.m. to 12:00 Noon. All meetings and exhibits will close at 12:30 p.m. on Sunday.

PRE-REGISTRATION

Please fill out the pre-registration form and mail to the Medical Society address as indicated on the form. Your badge and tickets will be held at the MSSNY Registration Desk located in the Grand Ballroom exhibit area.

PRE-REGISTRATION FORM

1982 Annual CME Assembly, June 25–27
RYE TOWN HILTON

(please print)

Name____
(last) (first) (initial)

Address____

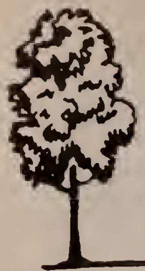
City & State________________________________Zip__________

Member of MSSNY: Yes________No________Specialty____________________

Note: There is no registration fee.

Saturday Reception & Dinner/Dance________tickets @ $39.00. Total__________

Please make checks payable to: Medical Society of the State of New York, clip and mail to Division of Advertising & Meeting Services, Medical Society of the State of New York, 420 Lakeville Rd., P.O. Box 5404, Lake Success, New York 11042.



Directions to the Rye Town Hilton

699 Westchester Avenue Town of Rye Port Chester, New York

from major New York Metropolitan Airports

FROM LAGUARDIA AIRPORT
Take the Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave. following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

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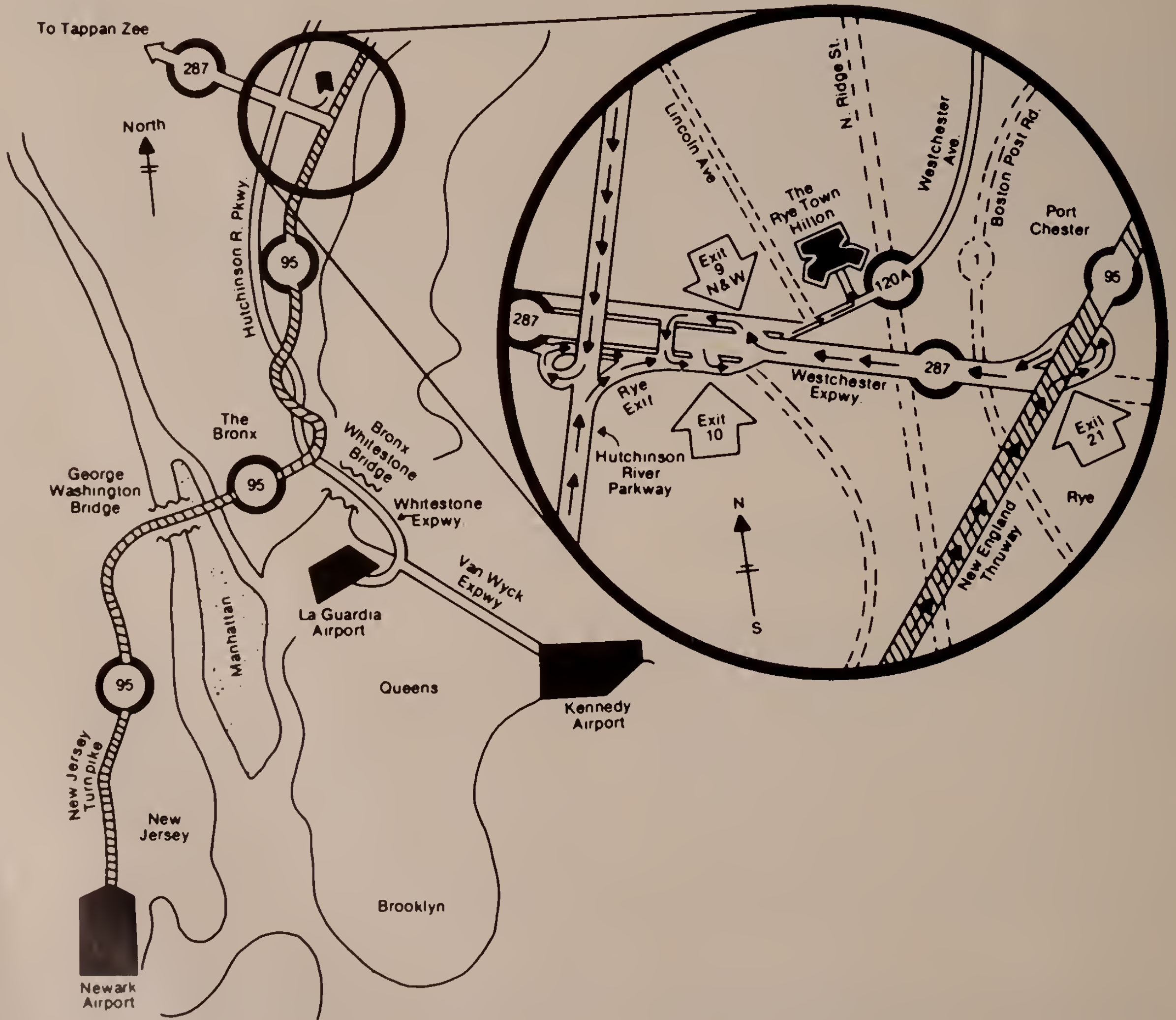
Take Van Wyck Expressway to Whitestone Expressway. Proceed on Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

FROM NEWARK AIRPORT
Take New Jersey Turnpike (95) to the George Washington Bridge. Proceed on U.S. 95 to Cross Westchester Expressway Exit 21. Proceed west on Cross Westchester Expressway (287) to Exit 9NS. Turn left at first traffic light onto Kennilworth Road. Turn left immediately at second traffic light onto Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).



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IBM COMPUTERS FOR PHYSICIANS AND dentists. For improved financial and treatment control, insurance, recalls, all applications. Write Strode Computer Corp., Box 277, Bronxville, N.Y. 10708 or call (914) 965-1313.

TAX ACCOUNTANT-ATTORNEY, formerly with I.R.S., announces his availability to prepare Professional Corporations, individually designed pension pla with I.R.S. approval, and other tax and accounting services. Reasonable professional fees and references from other doctors available. Gerald Goldberg (212 347-4256.

FOR SALE—BACK ISSUES—CLINICAL ORTHOPAEDICS, Volume 1—195 thru Volume 145—1979. Complete except for 9 missing volumes of which 4 ar still available from publishers. Inquire Box 1531, Englewood Cliffs, New Jerse 07632.

APPEAR ON TALK SHOWS—Would you like to be on radio-TV talk shows fo your book, ideas and story? Our marketing services, including publicity, ca make it happen for you. Call or write, Ben Frank Promotion Corp., 60 East 42n St., New York, N. Y. 10017. (212) 687-3383.

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FOR SALE BY OWNER: Treadmill-EKG Heart Stress Test Exerciser System Marquette Electronics CASE Computerized unit with Quinton treadmill Hardly used. Please write MDS, P.O. Box 2746, Hialeah, Fla. 33012 or call (305 558-2370.

PRACTICES WANTED

OPHTHALMOLOGIST, BOARD CERTIFIED desires to purchase practice i the New York City or suburban area. Confidence Maintained. Please contac Dept. 168, c/o NYSJM.

GYNECOLOGIST-OBSTETRICIAN, Well trained (Laparoscopy, infertility colposcopy, etc.) with 12 year established practice in Queens, N.Y., wishes t purchase an OB-GYN practice or establish an association in Suffolk or Westchester County. Reply Dept. 200, c/o NYSJM.

ACTIVE GENERAL OR INTERNAL MEDICAL practice wanted. North Shor of Nassau County or Western Suffolk County. Details first letter. Respon to Dept. 212, c/o NYSJM.

OPHTHALMOLOGIST 31, BOARD CERTIFIED, seeks to purchase retirin practice or association with ophthalmologist in Greater New York City Metr area or suburbs. Will also consider rental space in busy medical building. Al replies confidential—Dept. 220, c/o NYSJM.

WANTED—TO BUY INTERNAL MEDICINE, Cardiology practice. Would als consider buying General Practice. Please reply to Dept. 223, c/o NYSJM.

PULMONARY INTERNIST, 34, ABIM, Pulmonary Board Eligible, experience in all aspects of pulmonary medicine including consultations, Fibroptic Bronchoscopy, ICU and Pulmonary Function Testing, seeks private practice, solo group or hospital based in New York City, willing to do some general medicine Available July, 1982. Reply Dept. 229, c/o NYSJM.

PRACTICES AVAILABLE

DERMATOLOGY PRACTICE FOR SALE. Very large active growing Manhattan—Park Avenue practice. High Gross. Practice owns office—coop. Will stay to introduce for one year. Reply Dept. 227, c/o NYSJM.

FOR SALE DUE TO RETIREMENT, 40 year old practice in Central N.Y. community. Beautiful large house with office available, also position of school physician in large centralized school. Hospitals and Upstate Medical Center nearby. Excellent recreational facilities. Reply Dept. 225, c/o NYSJM.

RETIRING FROM LARGE ACTIVE Internal Practice in historic home which is for sale, will introduce, 70 miles from New York City. Reply to Dept. 230, c/o NYSJM.

FAMILY PRACTICE, WELL ESTABLISHED in Westfield, "City of Lakes and Grapes" N.Y. State. Beaches, good schools and tennis. Six digit income. Attractive furnished air conditioned office in a 3 bedroom, 3 bathroom, 2 car garage home, five minutes from new hospital, labs and X-ray. Call Dr. Leszek (904) 783-6149, or Westfield Agency, Dick Davies (716) 326-4635.

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M.D.-BOARD ELIGIBLE OR CERTIFIED internist-cardiologist to associate with group in rapidly growing area in Ocean County, New Jersey. Salary with eventual partnership. Please send curriculum vitae to: Dept. 193, c/o NYSJM.

ORTHOPEDIST TO ASSOCIATE WITH and rapidly acquire busy practice in Winston-Salem, N.C. Financial arrangements designed to meet specific needs of associating physician. Respond with C.V. to Dept. 216, c/o NYSJM.

PHYSICIANS—NEEDED for 75 summer camps for children, located in Northeastern states, July and/or August. Contact: Association of Independent Camps M, 157 West 57th Street, New York, N.Y. 10019. (212) 582-3540.

PHYSICIAN DURING JULY AND AUGUST, 1982 for children's camp located at Beach Lake, Pa., accommodates 350 campers, age 6–16; complete modern Health Center; 2 R.N.'s in attendance; will accept one M.D. for each month; no children accepted who are of camp age. Camp opens June 27 and closes August 21. Private room and facilities. Write, and include your phone number, to Trail's End Camp, c/o Beach Lake, Inc., 215 Adams Street, Brooklyn, N.Y. 11201.

GROW WITH US IN THE SUNBELT—The INA Healthplan needs physicians in family practice and most specialties in Miami, Tampa, Dallas, Phoenix, Tucson, and Los Angeles. Attractive salaries and comprehensive benefits including professional development, retirement, and profit sharing programs are provided. If team interaction and casual living interest you, send a brief CV to Medical Administration, INA Healthplan, Inc., 7616 LBJ Freeway, Suite 303, Dallas, Texas 75251.

MEDICAL DIRECTOR—Children and Youth Program. The Jewish Hospital & Medical Center of Brooklyn seeks a Medical Director for its multidisciplinary Children and Youth Program, now handling 20,000 medical outpatient visits yearly. This position requires a physician with clinical abilities and organization and teaching skills plus a professional interest in community affairs involvement. Excellent salary and fringes. Please reply to: Hugh Evans, M.D., Director, Department of Pediatrics, The Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn, N.Y. 11238. Telephone: (212) 240-1776.

PARTNERSHIP UNITS FOR SALE BY partner in private Queens hospital. Reply to Dept. 228, c/o NYSJM.

INDUSTRIAL PHYSICIAN: Albany, N.Y. area. Interested in treatment of injuries, preemployment examinations, and evaluation of disabilities. Knowledge of disability evaluation of Workers Compensation claims is essential. Pension plan and excellent fringe benefits. Well established professional corporation with shareholder acquisition or investment potential. Salary negotiable. Reply Dept. 181, c/o NYSJM.

ESTABLISHED UROLOGIST WISHES other established urologists to share overhead, renovate and expand on office capabilities. Have best location. Reply Dept. 231, c/o NYSJM.

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Any doctor who can refer trigeminal neuralgia patients for whom medications and surgery have brought no significant improvement, please contact:

Ling Sun Chu, M.D.
107 East 73rd St., New York, N.Y. 10021
(212) 472-3000

Acupuncture treatments will be free of charge to the patient if patient brings letter from referring physician that: 1) Contains patient's medical records. 2) Stating that: a) Referring physician agrees to participate in project, by evaluating the effects of the treatment on patient. b) Patient will remain under referring physician's care. Call or write for further details.

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POSITIONS WANTED

OPHTHALMOLOGY: EXPERIENCED 44-year old Board Certified seeks position in established practice as General Medical Ophthalmologist with surgery option. All locations considered. C.V. on request. Reply Dept. 217, c/o NYSJM.

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FLUSHING, NEAR BOOTH MEMORIAL AND FLUSHING hospitals. Office space available in a luxurious medical building on Main Street. Rents by the hour or month. Equipped for out-patient diagnostic work-up and ambulatory surgery. Emergency room to open soon. For information call (212) 539-8800.

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MEDICAL/PROFESSIONAL BUILDING WANTED suitable for condominium conversion. Right building enables us to give you the highest price with capital gains advantage. Minimum 10,000 square feet. Contact: Paul Gellert, Gelco Associates, 155 West 68th Street, New York, N.Y. 10023. Phone: (212) 223-1130.

SHARE FULLY EQUIPPED MEDICAL OFFICE—ground floor—New Milford, N.J. Dr. Rhine (201) 836-7722.

SHARE AN OFFICE, ALBANY, New York. Professional office space available for rent by the hour or full time. Excellent location. Week days call (518) 465-6068.

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OFFICE SPACE AVAILABLE, desirable central location in Dobbs Ferry, New York, Westchester County. Physician owned building—possible equity participation. Your space can be designed to suit your needs. Phone number (914) 693-1660, or write to Dept. 226, c/o NYSJM.

OFFICE WANTED: TO RENT OR SHARE. Neurosurgeon, solo practice—Nassau: South Shore, Five Towns preferred. (212) 423-9173.

MANHATTAN'S EAST SIDE—74th and 5th. Newly decorated—fully furnished. Share waiting room. Separate consultation and examining room. 300 milliamp X-ray. Full time or part time. (212) 744-7331.

DOCTOR'S OWN HOME "to settle estate" Village of Floral Park, Nassau County near N.Y. Metropolitan area. Magnificent all brick Center Hall Colonial, 14 rooms, 5 bedrooms, 3 baths plus attached 5 room professional suite, treatment rooms, etc. Quality construction with many many extras. Ideal location, prime area. Call for details—Gaffney Realtors (516) 437-4480.

PLAINVIEW/WOODBURY, L.I.—Ideally situated home/office—luxurious 5 bedroom, 2½ bath, center hall Colonial. Sunken l.r. and den. Huge kitchen, central air, 5 zones heat, finished basement, 2 car garage. Plus attached 4½ room separate entrance professional office. Convenient to all parkways, Mint. Many extras. $165,000. Owner (516) 692-9595.

what goes on IN CONTINUING MEDICAL EDUCATION

NEW YORK STATE MARCH 1982

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Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK CITY

New York University Post Graduate Medical School

550 First Avenue
* Alumni Hall
March–May 26, 8:00–10:00 p.m., Wednesdays
TRAINING PROGRAM IN HUMAN SEXUALITY
Virginia Alcott Sadock, M.D.
FEE: $685. CREDIT: AMA Cat. 1 (40 hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295. (24-hour telephone)
For special inquiries of the Director call 212/427-0885.

New York University Post-Graduate Medical School

550 First Avenue
* Alumni Hall Auditorium
March 8, 8:00 a.m.–5:00 p.m., Monday
INFLAMMATION AND RHEUMATOID ARTHRITIS
G. Weissmann, Chairperson
SYSTEMIC LUPUS ERYTHEMATOSUS
Neil Kramer, Chairperson
March 9, 8:30 a.m.–3:25 p.m., Tuesday
SYSTEMIC MANIFESTATIONS OF RHEUMATOLOGIC DISEASE
I. Gigli, Chairperson
PATHOPHYSIOLOGY
E. C. Franklin, Chairperson
March 10, 8:30 a.m.–5:00 p.m., Wednesday
GENETICS
R. Hirschhorn, Chairperson
DIAGNOSTIC AIDS AND PEDIATRICS
M. Mundheim, Chairperson
March 11, 8:30 a.m.–5:00 p.m., Thursday
OTHER RHEUMATOLOGIC DISEASES
S. Abramson, Chairperson
CONNECTIVE TISSUE DISEASES
H. Mitnick, Chairperson
March 12, 8:30 a.m.–12:30 p.m., Friday
CARTILAGE AND BONE
D. Howell, Chairperson
FEE: PREREGISTRATION REQUIRED $505. CREDIT: AMA Cat. 1 (32 hrs.)
For further information contact Registration Office, NYU Post-Graduate School, 550 First Avenue, New York, 10016. Tel: 212/340-5295 (24-hour telephone)

New York University Medical Center Post-Graduate Medical School

550 First Avenue
* Alumni Hall
March 22–26
ANESTHESIOLOGY COMPREHENSIVE BOARD REVIEW
FEE: $450. CREDIT: AMA Cat. 1 (45 hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295.

New York Society for Clinical Ophthalmology

146 East 71st Street
* The New York Academy of Medicine
2 East 103rd Street
March 1, 8:00 p.m.
OCULAR MALIGNANCY CRYOTHERAPY UPDATE
Frederick T. Frauenfelder, M.D.
Albert Hornblass, M.D., James Della Rocca, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Norman B. Medow, M.D., Secretary, New York Society for Clinical Ophthalmology, 146 East 71st Street, New York 10021.

State University of New York Downstate Medical Center, Kings County Hospital Center in cooperation with District I, NYSSA

450 Clarkson Avenue
Brooklyn
March 1, 4:00–5:00 p.m.
VISITING PROFESSOR PROGRAM
THE PRESENT STATUS OF HEPATOTOXICITY OF HALOGENATED ANESTHETICS
Burnell R. Brown, M.D.
CREDIT: AMA Cat. 1
March 2, 5:00–6:00 p.m.
ANESTHESIA FOR CERTAIN ENDOCRINE DISEASES: PHEOCHROMOCYTOMA AND INSULINOMA
Burnell R. Brown, M.D.
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D., SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn 11203. Tel: 212/735-2133.

Saint Mary's Hospital of Brooklyn

170 Buffalo Avenue
Brooklyn
8:00 a.m.–9:00 a.m., Wednesdays
* Third Floor Board Room
March 3
THE MEDICAL EVALUATION AND THE ROLE OF FIBEROPTIC BRONCHOSCOPY IN THE DIAGNOSIS OF ONCOLOGY OF THE LUNG
John Crocco, M.D.
March 10
THE SURGICAL EVALUATION OF PATIENTS WITH ONCOLOGY OF THE LUNG
Stanley Giannelli, M.D.
March 17
A DISCUSSION OF THE PATHOLOGY OF THE VARIOUS TYPES OF LUNG CANCER
Eugene Fazzini, M.D.
March 24
A COMBINED DISCUSSION OF THE TREATMENT OF LUNG CANCER, INCLUDING CHEMOTHERAPY AND RADIATION THERAPY
Stephen J. Alderman, M.D.
CREDIT: AMA Cat. 1
For further information contact Saint Mary's Hospital of Brooklyn, 170 Buffalo Avenue, Brooklyn 11213. Tel: 212/774-3600. ext. 2044 or 2045.

The Jewish Hospital and Medical Center of Brooklyn in Association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY Downstate Medical Center

555 Prospect Place
Brooklyn
* B-51 Conference
Basement, Leviton Bldg.
ADVANCES IN HEMATOLOGY AND ONCOLOGY
3:30–4:30 p.m.
March 3
BLOOD GROUPS AND DISEASE
Stanley L. Lee, M.D.
March 10
KINETICS OF TUMOR GROWTH: RELATION TO TREATMENT
Bernard Gardner, M.D.
March 17
DEVELOPMENTAL HISTORY OF MEN WITH TESTICULAR CANCER
Gregory Gorzynski, M.D.

March 24
INFECTIONS IN PATIENTS WITH NEOPLASTIC DISEASES
Jonathan Gold, M.D.
March 31
TUMORS OF THE LARYNX
Elliot Strong, M.D.
NO FEE. CREDIT: AMA Cat. 1
For further information contact the Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212/240-1211.

Doctors Hospital

170 East End Avenue
March 4, 4:15 p.m., Thursday
CLINICAL LECTURES
MICROBIAL DIARRHEA
Sherwood L. Gorbach, M.D.
CREDIT: AMA Cat. 1 (1½ hrs.)
March 13, 9:00 a.m.-1:00 p.m., Saturday
CLINICAL SYMPOSIA
SEXUALLY TRANSMITTED INFECTIONS
Hilliard Dubrow, M.D., Lewis M. Drusin, M.D., Myron Gordon, M.D., Donald W. Hoskins, M.D., William M. McCormack, M.D.
CREDIT: AMA Cat. 1 (4 hrs.)
For further information contact The Secretary of CME, Doctors Hospital, 170 East End Avenue, New York 10028. Tel: 212/870-9118.

Metropolitan Hospital Center in affiliation with New York Medical College

1901 First Avenue
* Metropolitan Hospital
March 17, 3:30 p.m.
NEUROPATHOLOGY
Harry M. Zimmerman, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Victor Tchertkoff, M.D., Metropolitan Hospital Center, 1901 First Avenue, New York 10029. Tel: 212/360-6253.

The New York Society of Physical Medicine and Rehabilitation Inc. Co-Sponsored by the Westchester Academy of Medicine

* White Plains Hospital Medical Center
March 12-13
TWO DAY WORKSHOP ON EVOKED POTENTIALS
For further information write to: Gabriel Rinzler, M.D., Course Co-ordinator, 41 East Post Road, White Plains 10601. Tel: 914/949-6049.

Beth Israel Medical Center co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
* Podell Auditorium
March 18, 8:30 a.m.-4:30 p.m.
March 19, 9:00 a.m.-12:00 noon
CLINICAL URODYNAMICS—A PRACTICAL APPROACH
Zafar Khan, M.D.
FEE: TO BE ANNOUNCED CREDIT: AMA Cat. 1 (7½ hrs.)
For further information contact Beverley R. Baptiste, Post-Graduate Education Office. Tel: 212/420-2000.

Beth Israel Medical Center co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

*Little Theatre, Barbizon Plaza Hotel
106 Central Park South
March 27, 8:15 a.m.-5:00 p.m., Saturday
OBJECT RELATIONS IN DEVELOPMENTAL THEORY
Gertrude Blanck, Ph.D., Rubin Blanch, M.S., Anne-Marie Sandler, M.D., Joseph Sandler, M.D.
FEE: $60. CREDIT: AMA Cat. 1 (6 hrs.)

Intensive Clinical Neurology Course

1033 Hamilton Street
Allentown, Pa.
* The Grand Hyatt of New York Hotel
March 26, 27, 28
FIFTH ANNUAL INTENSIVE CLINICAL NEUROLOGY COURSE
NEUROLOGY FOR NON-NEUROLOGISTS
FEE: $240. CREDIT: AMA Cat. 1 (18 hrs.)
For further information contact L. P. Levitt, M.D., 1033 Hamilton St., Allentown, Pa. 18101. Tel: 215/433-6474.

The Presbyterian Hospital in the City of New York at Columbia-Presbyterian Medical Center sponsored by College of Physicians & Surgeons

622 West 168th Street
* Grand Hyatt Hotel
March 30-April 2
RADIOLOGY OF BONES AND JOINTS (RADIOLOGY PM 3)
Frieda Feldman, M.D.
Fee: $390. CREDIT: AMA Cat. 1
For further information contact Frieda Feldman, M.D., Professor of Radiology, Columbia-Presbyterian Medical Center, 622 West 168th Street, New York 10032.

Semmelweis Scientific Society

* New York Academy of Sciences
2 East 63rd Street
New York 10042
March 5, 1982—Friday @ 8:00 p.m.
MANAGEMENT OF RESPIRATORY INSUFFICIENCES
E. E. Rockey, M.D.

PULMONARY DISEASES
M. C. Gluck, M.D.
FEE: $10. CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Dr. Kestler, 515 Madison Avenue, New York 10022

Albert Einstein College of Medicine of Yeshiva University and Montefiore Hospital and Medical Center

* Robbins Auditorium—Forchheimer Building
Albert Einstein College of Medicine
1300 Morris Park Avenue
Bronx, New York 10461
Friday, March 26, 1982—8:00 a.m.-5:00 p.m.
SYMPOSIUM ON EXTERNAL DISEASES OF THE EYE
CREDIT: AMA Cat. 1
For further information please contact Office of Continuing Professional Education, Montefiore Hospital & Medical Center at 212-920-6676

QUEENS COUNTY

Flushing Hospital and Medical Center

Parsons Boulevard and 45th Avenue
Flushing
* 4C Auditorium
March 21, 9:00 a.m.–1:00 p.m.
COMMON PROBLEMS IN THE GERIATRIC PATIENT
FEE: $40.00 Flushing Hospital Staff. CREDIT: AMA Cat. 1 (4 hrs.)
$60.00 Non-Staff Members

For registration information contact Luisa Gonzalez, Tuesday to Friday, 9:00 a.m. to 5:00 p.m., 212/670-5741 or mail check payable to Flushing Hospital Dept. of CME to The Flushing Hospital and Medical Center, Parsons Boulevard and 45th Avenue, Flushing 11355.

The Jamaica Hospital Medical Center

89th Avenue & Van Wyck Expressway
Jamaica

The following PULMONARY DISEASES LECTURES are held on Wednesdays, from 9:00 to 10:30 a.m., in the Trump Pavilion:
MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE
March 31
THE PATHOGENESIS OF EMPHYSEMA—REFLECTIONS ON THE IMPLICATIONS OF THE DISCOVERY OF ALPHA-1 ANTITRYPSIN DEFICIENCY
Harry Steinberg, M.D.
* Community Room
Noon–1:00 p.m., Monday
PRIMARY CARE CONFERENCES
NUTRITION
March 29
NUTRITIONAL DISORDERS
Gerald W. Deas, M.D.
UROLOGY
March 1
RADIOLOGY OF THE G.U. TRACT
Paul J. Cutrofello, M.D.
March 8
PATHOPHYSIOLOGY & TREATMENT OF URINARY CALCULI
Paul J. Cutrofello, M.D.
March 15
HEMATURIA-INVESTIGATION & TREATMENT
Paul J. Cutrofello, M.D.
March 22
CRITERIA FOR G.U. CONSULTATION & STUDIES
Paul J. Cutrofello, M.D.
* Community Room
10:45–11:45 a.m., Tuesday
ENDOCRINOLOGY & METABOLISM
March 9
REVIEW OF THYROID DISEASE—PART I
Lawrence Rosman, M.D.
ENDOCRINOLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room, on Tuesdays, Amar Jit Singh, M.D.
* Community Room
10:45–11:45 a.m., Tuesdays
HEMATOLOGY
March 16
THE MYELOPROLIFERATIVE SYNDROME
S. Sivamurthy, M.D.
The following HEMATOLOGY LECTURES will be held on Wednesdays, from 9:00 to 10:30 in the Trump Pavilion:
MEDICAL GRAND ROUNDS-PROGRESS IN MEDICINE
March 24
BIOCHEMICAL & CLINICAL ASPECTS OF MEGALOBLASTIC ANEMIA
Sheldon Rothenberg, M.D.
HEMATOLOGY CASE PRESENTATION are conducted monthly, from Noon to 1:00, in the Community Room, on Tuesdays, Malcolm E. Levine, M.D. and Staff
HEMATOLOGY GRAND ROUNDS are conducted bi-monthly on Fridays, from 1:00 to 2:30 in the Community Room
* Community Room
10:45–11:45 a.m., Tuesdays
NEPHROLOGY
March 2
PATHOPHYSIOLOGY OF PROTEINURIA—NEPHROTIC SYNDROME
Amarjit Singh, M.D.
March 30
METABOLIC ACIDOSIS
Emmanuel B. Masih, M.D.
NEPHROLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room on Tuesdays—Amarjit Singh, M.D. & Emmanuel B. Masih, M.D. and Staff
* Community Room
10:45–11:45 a.m., Tuesdays
NEUROLOGY
March 23
EPILEPSY
Ricardo L. Rengifo, M.D.
The following *NEUROLOGY LECTURES* are held on Wednesdays, from 9:00 to 10:30 a.m. in the Trump Pavilion: *MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE*
March 10
NEW CONCEPTS IN MANAGEMENT OF PAIN
Gary Abrams, M.D.
NEUROLOGY CASE PRESENTATIONS are conducted monthly, from noon to 1:00 in the Community Room, on Tuesdays—Neurology Staff TUESDAYS: 8:00–9:00, Rheumatology Case Presentations conducted by William A. O'Connell, M.D. 3:30–4:30, Infectious Disease Case Presentations conducted by Robert H. Lapin, M.D.
MEDICAL GRAND ROUNDS & PROGRESS IN MEDICINE
March 3
ACUTE & CHRONIC PANCREATITIS
Howard M. Spiro, M.D.
March 10
NEW CONCEPTS IN MANAGEMENT OF PAIN
Gary Abrams, M.D.
March 17
MALIGNANT MELANOMA
Larry Nathanson, M.D.
March 24
BIOCHEMICAL & CLINICAL ASPECTS OF MEGALOBLASTIC ANEMIA
Sheldon Rothenberg, M.D.
March 31
THE PATHOGENESIS OF EMPHYSEMA—RELECTIONS ON THE IMPLICATIONS OF THE DISCOVERY OF ALPHA-1 ANTITRYPSIN DEFICIENCY
Harry Steinberg, M.D.
WEDNESDAYS, 1:00–2:00 p.m., *TUMOR BOARD-FOURTH Wednesday-CLINICAL PATHOLOGY CONERENCE*, Assembly Room
* Community Room
8:30–9:00 a.m., Thursdays
CARDIOLOGY
March 4
WOLFF-PARKINSON-WHITE SYNDROME
Kul D. Chadda, M.D.
March 18
HEMODYNAMIC EFECT OF ARRHYTHMIA
Ronald Aronson, M.D.
ECG & ARRHYTHMIAS CONFERENCES are held monthly, on Thursdays, from 9:30–10:30, Thomas A. Bizzaro, M.D.
INFECTIOUS DISEASES CASE PRESENTATIONS are conducted monthly, from 3:30 to 4:30 in the Community Room on Tuesdays—Robert H. Lapin, M.D.
* Community Room

9:30–10:30 a.m., Thursdays
ONCOLOGY
March 11
PAIN CONTROL
Kathleen Foley, M.D.

The following *ONCOLOGY LECTURES* are held on Wednesdays, from 9:00 to 10:30 in the Trump Pavilion; *MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE*

March 17
MALIGNANT MELANOMA
Larry Nathanson, M.D.
TUMOR BOARD

1:00–2:00, Wednesdays, Fourth Wednesday—*CLINICAL PATHOLOGY CONFERENCE*, Assembly Room

* Community Room
9:30–10:30 a.m.
RHEUMATOLOGY
March 25
APPROACH TO PATIENT WITH ACUTE ARTHRITIS
Steven Magid, M.D.

RHEUMATOLOGY CASE PRESENTATIONS are conducted monthly, from 8:00–9:00 in the Community Room, on Tuesdays, William A. O'Connell, M.D. and Staff

*Community Room
10:45–11:45 a.m., Fridays
MEDICAL GASTROENTEROLOGY
March 5
COMPLICATIONS OF BILIARY TRACT SURGERY
Vincent F. Marzulli, M.D.
March 19
POST CHOLECYSTECTOMY SYNDROME—FUNCTIONAL OR ORGANIC
Sagar V. Vallabh, M.D.

The following *GASTROENTEROLOGY LECTURES* are held on Wednesdays, from 9:00 to 10:30 in the Trump Pavilion: *MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE*

March 3
ACUTE & CHRONIC PANCREATITIS
Howard M. Spiro, M.D.

MEDICAL GASTROENTEROLOGY CASE PRESENTATIONS are conducted on alternate Fridays, in the Community Room, 10:45–11:45, Robert T. Todaro, M.D. and Staff *FRIDAYS*, Noon to 1:00, Assembly Room *RADIOLOGY CONFERENCES*, Emerick Demeter, M.D. and Staff, alternating with *MEDICAL-PATHOLOGY-MORTALITY CONFERENCE*, Elizabeth Khayat, M.D., & Staff, or *PATHOLOGY GRAND ROUNDS*, Department of Pathology, Cornell Medical Center

*Assembly Room
Noon–1:00 p.m., Friday
PATHOLOGY GRAND ROUNDS
March 26
BONE MARROW & POLY-CYTHEMIA VERA
John T. Ellis, M.D.

FRIDAYS, bimonthly, 1:00 to 2:30 p.m., Community Room, *HEMATOLOGY GRAND ROUNDS*

For further information contact The Jamaica Hospital Medical Center, Department of Medicine, 89th Avenue & Van Wyck Expressway, Jamaica 11418. Tel: 212/657-1800.

NASSAU COUNTY

Nassau County Medical Center sponsored by Department of Medicine, co-sponsored by The Office of Continuing Medical Education, Nassau County Medical Center

2201 Hempstead Turnpike
East Meadow
* Amphitheater Dynamic Care Building
10:00 a.m., Thursdays
March 4
EARLY MANAGEMENT OF ACUTE MYOCARDIAL INFARCTION
Stephan G. Cokinos, M.D.
March 11
IS STRICT CONTROL OF DIABETES IMPORTANT?
A. David Goodman, M.D.
March 18
NECROTIZING VASCULITIS
Nicholas A. Soter, M.D.
March 25
HYBRIDOMA WITH DEVELOPMENT OF ISOCLONAL ANTIBODIES TO SPECIFIC ENTITIES
Savita Pahwa, M.D.

For further information contact Nassau County Medical Center, 2201 Hempstead Tpke., East Meadow, 11554.

Long Island Jewish-Hillside Medical Center—Sponsored by Department of Surgery, LIJ Medical Center, The Post-Graduate Institute for Medical and Dental Education, New Hyde Park, New York and the Health Sciences Center State University of New York at Stony Brook New Hyde Park

March 4
GUEST LECTURER
CONTINENT ILEOSTOMY
Irwin Gelernt, M.D.
March 11
GUEST LECTURER
OPTIONS IN THE MANAGEMENT OF RECTAL CARCINOMA: RESULTS OF LOCAL TREATMENT
Eugene P. Salvati, M.D.
March 18
REPORT OF THE MEETING OF THE CENTRAL SURGICAL ASSOCIATION
(Meeting: 3/10–3/13, Chicago, Illinois)
March 25
TUMORS OF THE HAND
Thomas Palmieri, M.D.

For further information contact Long Island Jewish-Hillside Medical Center, New Hyde Park 11042.

Long Island Jewish-Hillside Medical Center and The Post Graduate Institute for Medical and Dental Education and the Health Sciences Center, State University of New York at Stony Brook

* The Teaching Center Auditorium
Long Island Jewish-Hillside Medical Center
New Hyde Park
8:00–10:00 p.m.
March through June 2, Wednesdays

12TH ANNUAL PEDIATRIC BOARD REVIEW COURSE—1982

I. Ronald Shenker, M.D.
FEE: $200. CREDIT: AMA Cat. 1 (30 hrs.) & AAFP
$100. for Interns and Residents

For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, New Hyde Park 11042. Tel: 212/470-2114.

Nassau Academy of Medicine

1200 Stewart Avenue
Garden City
March 3, 8:30 a.m.–12:30 p.m., Wednesday
GENETICS FOR THE CLINICIAN—UPDATE 1982
Jack Sherman, M.D.
FEE: $20. CREDIT: AMA Cat. 1 (4 hrs.)

For further information contact Mr. William R. Egan, Assistant Executive Director, Nassau Academy of Medicine, 1200 Stewart Avenue, Garden City 11530. Tel: 516/832-2305.

North Shore University Hospital, Division of Ophthalmology

300 Community Drive, Manhasset, N.Y. 11030
* The Ketcham Boardroom—Lectures
* Eye Clinic—Clinical Conference

March 2, 1982 @ 8 a.m.
ORBITAL TUMORS
Ira Snow Jones, M.D.
March 9, 1982 @ 8:00 a.m.
INHERITED DISORDERS IN PEDIATRIC OPHTHALMOLOGY
Edward Raab, M.D.
March 16, 1982 @ 8:00 a.m.
CORNEAL COMPLICATIONS OF ANTERIOR CHAMBER LENSES
Jorge Buxton, M.D.
March 23, 1982
CLINICAL
March 30, 1982
THERAPEUTIC USE OF ULTRASOUND
Stanley Chang, M.D.

SUFFOLK COUNTY

Brookhaven Memorial Hospital Medical Center
101 Hospital Road
Patchogue

* 1st Floor Conference Room
8:30 a.m., Saturday
March 6
MEDICAL GRAND ROUNDS
Arthur Sawitsky, M.D.
CREDIT: AMA Cat. 1 & AAFP
* 2nd Floor Conference Room
8:00-9:00 a.m.
March 16
PEDIATRIC GRAND ROUNDS
NEONATAL JAUNDICE
Kenneth Huml, M.D.
CREDIT: AMA Cat. 1 & AAFP
* 1st Floor Conference Room
8:00-9:00 a.m., Tuesday
March 2

PEDIATRIC CONFERENCES
VIRAL GASTROENTERITIS 1982

John Partin, M.D.
CREDIT: AMA Cat. 1
* 1st Floor Conference Room
8:00-9:00 a.m., Friday
March 5
CLINICAL PROBLEMS IN FAMILY MEDICINE
PLASMAPHRERESIS
Max Hamburger, M.D.
March 12
INFECTIOUS DISEASE
IMMUNODEFICIENCY SYNDROME
Paul Iannini, M.D.
March 26
CNS INFECTIONS
Donald Armstrong, M.D.
CREDIT: AMA Cat. 1 & AAFP

For further information contact Dorothy S. Lane, M.D., Director of Medical Education, Brookhaven Memorial Hospital Medical Center, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.

State University of New York at Stony Brook Health Sciences Center
Stony Brook

March 17-21
8TH ANNUAL FAMILY MEDICINE REVIEW COURSE
FEE: $300. CREDIT: AMA Cat. 1 (43 hrs.)
For further information contact Tamarath K. Yolles, M.D., Associate Dean for Continuing Medical Education, SUNY at Stony Brook, Stony Brook 11794. Tel: 516/246-2094/2135.

BUFFALO

State University of New York at Buffalo
Children's Hospital
219 Bryant Street
Buffalo

* Sarasota Hyatt House
Sarasota, Florida
March 25-27
NATIONAL CONFERENCE ON ADVANCES IN INFANT NUTRITION AND PEDIATRIC GASTROENTEROLOGY
Emanuel Lebenthal, M.D.
FEE: $275. CREDIT: AMA Cat. 1 (16 hrs.)
For further information contact SUNY, Children's Hospital, 219 Bryant Street, Buffalo 14222. Tel: 716/878-7630.

SYRACUSE

SUNY-Upstate Medical Center
750 East Adams St.
Syracuse

* Acapulco Princess
Acapulco, Mexico
March 8-12
UPDATE ON COMPUTED TOMOGRAPHY OF THE CENTRAL NERVOUS SYSTEM
Seungho Howard, Lee, M.D., Professor & Chief
Stephen A. Kieffer, M.D., Professor and Chairman
For further information contact Program Coordinator, Office of Continuing Education, Upstate Medical Center, State University of New York, 750 East Adams Street, Syracuse 13210. Tel: 315/473-4304 or 473-4606.

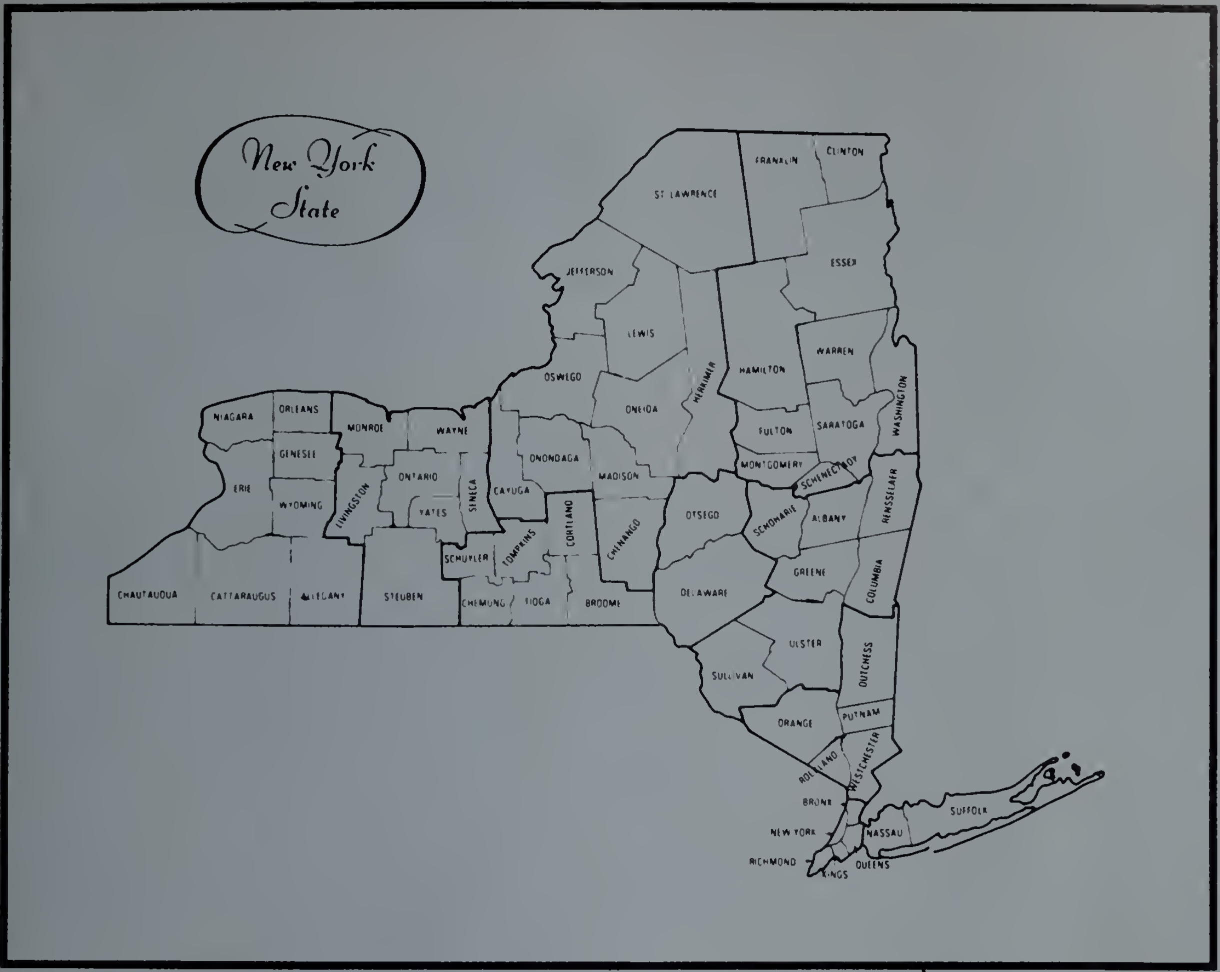
FUTURE EVENT

SUNY Downstate Medical Center
450 Clarkson Avenue
Brooklyn

* New York Sheraton Hotel
New York City
April 16-17-18
SIXTH ANNUAL SPRING WEEKEND SYMPOSIUM
FEE: $300. CREDIT: AMA Cat. 1 (16 hrs.)
$200. Residents & Technologists
For further information contact the Department of Radiology, State University of New York, Downstate Medical Center, Box #1192, 450 Clarkson Avenue, Brooklyn 11203. Tel: 212/735-2043.

Memorial Sloan-Kettering Cancer Center
1275 York Avenue

*Room 107
April 23, 8:30 a.m.-5:30 p.m.
III ANNUAL BRACHYTHERAPY UPDATE—PRESENTED BY THE BRACHYTHERAPY SERVICE OF THE DEPARTMENT OF RADIATION THERAPY
FEE: $150. CREDIT: AMA Cat. 1 (8 hrs.)
For further information contact Ms. Michelle Marzouca at 212/794-6799.



physicians' placement opportunities

Compiled by the
Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100

ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello NY 12701. Tel: 914/794-4900.

ANESTHESIOLOGIST

MONTICELLO, N.Y., contact Carl K. Heins, M.D., Hamilton Avenue Hospital, Monticello 12701. Tel: 914/794-4545.

WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

COMMISSIONER OF HEALTH

POUGHKEEPSIE, N.Y., contact Andree F. Sullivan, New Tower, Vassar Brothers Hospital, Poughkeepsie 12601. Tel: 914/452-2140.

EMERGENCY ROOM

BUFFALO, N.Y., contact Lafayette General Hospital, 113 Lafayette Avenue, Buffalo 14213. Tel: 716/885-8900.

ONEONTA, N.Y., contact Randolph E. Knob, M.D., Director or Mr. F. M. Isbell, Adm., A. O. Fox Memorial Hospital, 1 Norton Avenue, Oneonta 13820. Tel: 607/432-2000.

UTICA, N.Y., contact Irving Cramer, M.D., Medical Director, St. Luke's Memorial Hospital Center, P.O. Box 479, Utica 13503.

ENT

GLENS FALLS, N.Y., contact Orei Friedman, M.D., 591 Glen St., P.O. Box 444, Glens Falls 12801. Tel: 518/792-1404.

LONG BEACH, N.Y., contact Oscar Sreter, M.D., 270 Edward Blvd., Long Beach 11561. Tel: 516/431-7861.

OLEAN, N.Y., contact Dr. Edward R. Mountain, 1909 West State St., Olean, 14760. Tel: 716/372-2788.

FAMILY PHYSICIAN

ADAMS, N.Y., contact South Jefferson Recruiting Comm., c/o Mrs. Fred Spinner, RFD#2, P.O. Box 1114, Adams 13605.

ATHENS, N.Y., contact Village Clerk, 2 First Street, Athens 12015. Tel: 518/945-1551.

AUBURN, N.Y., contact Charles D. Hicks; Director, Physician Procurement Committee, 157 Ross Street, Auburn 13021. Tel: 315/253-3388.

BATH, N.Y., contact W. A. Klepack, Box 831, Bath 14810. Tel: 607/776-6438 call collect.

BINGHAMTON, N.Y., contact Broome County Medical Society. Tel: 607/729-9261.

HICKSVILLE, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.

HUNTINGTON, N.Y., contact Douglas R. Phillips, M.D.,1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.

ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.

MARGARETVILLE, N.Y., contact Joseph Kehoe, Adm., Margaretville Hospital, Margaretville 12455. Tel: 914/586-2631.

ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.

OSWEGO, N.Y., contact J. Sherwood Dunham, Oswego Hospital, 110 West Sixth Street, Oswego 13126. Tel: call collect 315/349-5526.

POUGHKEEPSIE, N.Y., contact B. Lipton, M.D., 79 Hooker Avenue, Poughkeepsie 12601. Tel: 914/454-3232.

STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.

VICTOR, N.Y., contact Victor Medical Associates, 7120 Lane Road Extension, Victor 14564. Tel: 716/924-5120.

GENERAL SURGEON

ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.

INTENSIVE CARE

FREEPORT, N.Y., contact Sheldon Klahr, Administrator, Lydia Hall Hospital, 320 West Merrick Road, Freeport, 11520. Tel: 516/378-8500.

INTERNIST

FREEPORT, N.Y., contact Lydia E. Hall Hospital, 320 West Merrick Road, Freeport 11520.

HANCOCK, N.Y., contact Osias M. Villaflor, M.D., 5 Fairview Avenue, Hancock 13783. Tel: 607/637-4941.

ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.

LITTLE FALLS, N.Y., contact Nicholas A. Prisco, Adm., Little Falls Hospital, 140 Burwell Street, Little Falls 13365. Tel: 315/823-1000, ext. 261 or 262.

ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.

ROCHESTER, N.Y., contact A. D. Crown, M.D., 7 Sandle Drive, Fairport 14450. Tel: 716/586-0443.

SIDNEY, N.Y., contact John W. Sands, Adm., The Hospital, Sidney 13838. Tel: 607/563-3512.

STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.

VICTOR, N.Y., contact John J. Gaidula, M.D. Tel: (Office) 716/924-5120 or (Home) 716/924-5217.

NEUROLOGIST

ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.

OBSTETRICIAN/GYNECOLOGIST

AUBURN, N.Y., contact Charles D. Hicks, Director, Physician Procurement Committee, 157 Ross Street, Auburn 13021. Tel: 315/253-3388.

NORWICH, N.Y., contact Errorl G. Jacobi, M.D., Medical Arts Bldg., Norwich 13815. Tel: 607/334-2756.

PORT JEFFERSTON STATION, N.Y., contact Howard Gelfand, M.D., 9 Medical Drive, Pt. Jefferson Station 11776. Tel: 516/331-1120.

WALTON, N.Y., contact Thomas E. Lavell, M.D., 1 Titus Place, Walton 13856. Tel: 607/865-6526.

OPHTHALMOLOGIST

JERICHO, N.Y., contact Norman Yourish, M.D., 400 N. Broadway, Jericho 11753. Tel: 516/681-2220.

TROY, N.Y., contact Robert M. Webb, M.D., 213 Pawling Avenue, Troy 12180.

ORTHOPEDIST

OSWEGO, N.Y., contact J.Sherwood Dunham, Coordinator, 110 West Sixth St., Oswego, 13126. Tel: call collect 315/349-5526.

ORTHOPEDIC SURGERY

FREEPORT, N.Y., contact Lydia E. Hall Hospital, 320 West Merrick Road, Freeport 11520.

JOHNSON CITY, N.Y., contact Farouq Al-Khalidi, M.D., 370 Main St., Johnson City 13790.

WARWICK, N.Y., contact Bruce A. Smith, Adm., St. Anthony Community Hospital, 15–19 Main Ave., Warwick 10990. Tel: 914/986-2276.

INFORMATION REGARDING OPENING FOR A PHYSICIAN
(General Practice or Specialist Associate)

Date ____________

Name of Town ____________ County ____________ State ____________

Population ________ Population of area served by physician ____________

What type of specialty? ____________ New opening? ____________
If this is a replacement, why did former physician leave? ____________

When will position be available? ____________

Please list special requirements: a) Residency training? ____________
b) Board eligible? ____________ Board certified? ____________ Age? ____________

Please describe type of practice: a) Solo? _____ b) Association? ________ Please describe the reason for associateship ____________
c) Group practice? Please give details, i.e., number in group, number in this specialty, when group was commenced ____________
____

Please show what type of financial agreement is acceptable: a) Straight salary? ____________
b) Percentage basis? ________ c) Will investment be necessary? ____________
d) If partnership basis is acceptable, how soon would it be available? ____________
____________ e) Would written agreement be used? ____________

Office space available? Yes _____ No _____ If yes, describe briefly ____________
____

Living quarters available? Yes _____ NO _____ If yes, describe briefly ____________
____
____

Is there a hospital in the town? Yes _____ No _____ If yes, please describe, i.e., number of beds, type of ownership, how soon can physician obtain hospital privileges ____________
____
____
____

If no, please describe hospitals in nearby areas ____________
____
____
____

List any other features which you consider would make the position attractive to a prospective physician ____________
____
____

List person to be contacted by interested physician giving name, address and telephone number
____
____
____

When completed, kindly return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100.

QUESTIONNAIRE FOR PHYSICIANS SEEKING LOCATIONS
(Please print in black)

Name______________________________Date__________

Address____

____
(Zip code number)   (Telephone Number)

Date of Birth__________Place of Birth______________

Citizenship Status__________________Marital Status__________

Medical School__________________Year Graduated__________

Internship_______________________________________

Hospitals_______________________Dates__________

Residency____

Hospitals_______________________Dates__________

Specialty____

Licensed in what States?__________________________

Applied for______________________________________

American Board Certificates held?__________________

Eligible______________Certified______________

Do you have a New York State License?__________Date of Certificate__________

Military Status___________________________________

Professional Organization Memberships______________

Are you in practice at present?__________What type of practice are you interested in?

Solo________Associate________Industrial________Group________Institutional__________

Other____

Date you will be available for practice__________Former locations in which you have practiced__________________________
(Give dates)

____

When completed, please return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Tel. 516/ 488-6100.

DECISIONS MADE IN THIS BUILDING WILL AFFECT YOUR FUTURE!

WHY PHYSICIAN INVOLVEMENT IN STATE AND LOCAL ELECTIONS IS VITALLY IMPORTANT . . .

HEALTH RELATED LEGISLATION

Of the nearly 9100 Bills introduced in the General Assembly in 1981, approximately 800 of these, or 9%, were related to Health Care in New York State.

CUSTOMARY DUTIES OF STATE OFFICIALS

Our elected officials have long had powers which affect the practice of medicine in New York State, such as appointment of Agency Heads and State Boards. Guidelines for the application and acceptance of Federal Grants are set by the Governor—affecting medical care, health facilities, research, etc.

In July of 1981, Governor Hugh Carey signed into law the "Collateral Sources" Bill, a major piece of Medical Malpractice Reform Legislation. This increased receptivity on the part of the legislature and the Governor, to the genuine needs of the Medical Profession, is attributable in a large degree to the increased involvement of physicians in the entire legislative process.

We have helped create a new climate in Albany and Washington, a climate in which over-regulation can be curtailed!

Our opportunities are great. But EMPAC (Empire Medical Political Action Committee) and NYMPAC (New York Medical Political Action Committee) cannot support this larger agenda with the dedicated minority of support we now have in the New York State Medical Community. Only 1 out of 10 MSSNY members belong to EMPAC and NYMPAC.

ISN'T IT TIME YOU JOINED YOUR DEDICATED COLLEAGUES? IT ONLY COSTS $100 A YEAR TO BE A MEMBER. SEND YOUR CHECK NOW, MADE OUT TO MSSNY FOR "PAC CONTRIBUTION", AND SEND TO: MEDICAL SOCIETY OF THE STATE OF NEW YORK, ATTN: Florence Keating, 420 Lakeville Road, P. O. Box 5404, Lake Success, New York 11042.

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For relief of
☐ impairment of recent memory
☐ confusion
☐ disorientation
and other signs and symptoms of idiopathic decline in mental capacity in patients over 60...
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HYDERGINE® ORAL TABLETS, 1 mg

(ERGOLOID MESYLATES)

Each 1 mg Hydergine tablet contains dihydroergocornine mesylate 0.333 mg, dihydroergocristine mesylate 0.333 mg, and dihydroergocryptine (dihydro-alpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.333 mg, representing a total of 1 mg.

Before prescribing Hydergine therapy, the possibility that the patient's signs and symptoms arise from a potentially reversible and treatable condition should be excluded. In addition, because the presenting clinical picture may evolve to suggest an alternative treatment, the decision to use Hydergine therapy should be continually reviewed. Hydergine (ergoloid mesylates) is not indicated in the treatment of acute or chronic psychosis.

Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, self-care, apparent motivation) in patients over sixty. Before prescribing Hydergine therapy, exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis, regardless of etiology (see **Contraindications**).

Use of Hydergine (ergoloid mesylates) therapy should be continually reviewed, since presenting clinical picture may evolve to allow specific diagnosis and specific alternative treatment, and to determine whether any initial benefit persists. Modest but statistically significant changes observed at the end of twelve weeks of Hydergine therapy include: mental alertness, confusion, recent memory, orientation, emotional lability, self-care, depression, anxiety/fears, cooperation, sociability, appetite, dizziness, fatigue, bothersome(ness), and an overall impression of clinical status.

Contraindications: Hypersensitivity to the drug; psychosis, acute or chronic, regardless of etiology.

Precautions: *Because the target symptoms are of unknown etiology, careful diagnosis should be attempted before prescribing Hydergine therapy.*

Adverse Reactions: Serious side effects have not been found. Some transient nausea and gastric disturbances have been reported, and sublingual irritation with the sublingual tablets.

Dosage and Administration: 1 mg three times daily. Alleviation of symptoms is usually gradual and results may not be observed for 3-4 weeks.

How Supplied: Hydergine (ergoloid mesylates) tablets (for oral use) 1 mg in packages of 100 and 500 and **Hydergine sublingual tablets 1 mg** in packages of 100 and 1000, each tablet containing dihydroergocornine mesylate 0.333 mg, dihydroergocristine mesylate 0.333 mg, and dihydroergocryptine (dihydro-alpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.333 mg, representing a total of 1 mg. **Hydergine sublingual tablets 0.5 mg,** each containing dihydroergocornine mesylate 0.167 mg, dihydroergocristine mesylate 0.167 mg, and dihydroergocryptine (dihydro-alpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.167 mg, representing a total of 0.5 mg; packages of 100 and 1000. **Hydergine liquid 1 mg/ml,** containing per ml dihydroergocornine mesylate 0.333 mg, dihydroergocristine mesylate 0.333 mg, and dihydroergocryptine (dihydro-alpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.333 mg, representing a total of 1 mg, alcohol, USP, 30% by volume; bottles of 100 ml with an accompanying dropper graduated to deliver 1 mg.

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NEW YORK STATE JOURNAL OF MEDICINE

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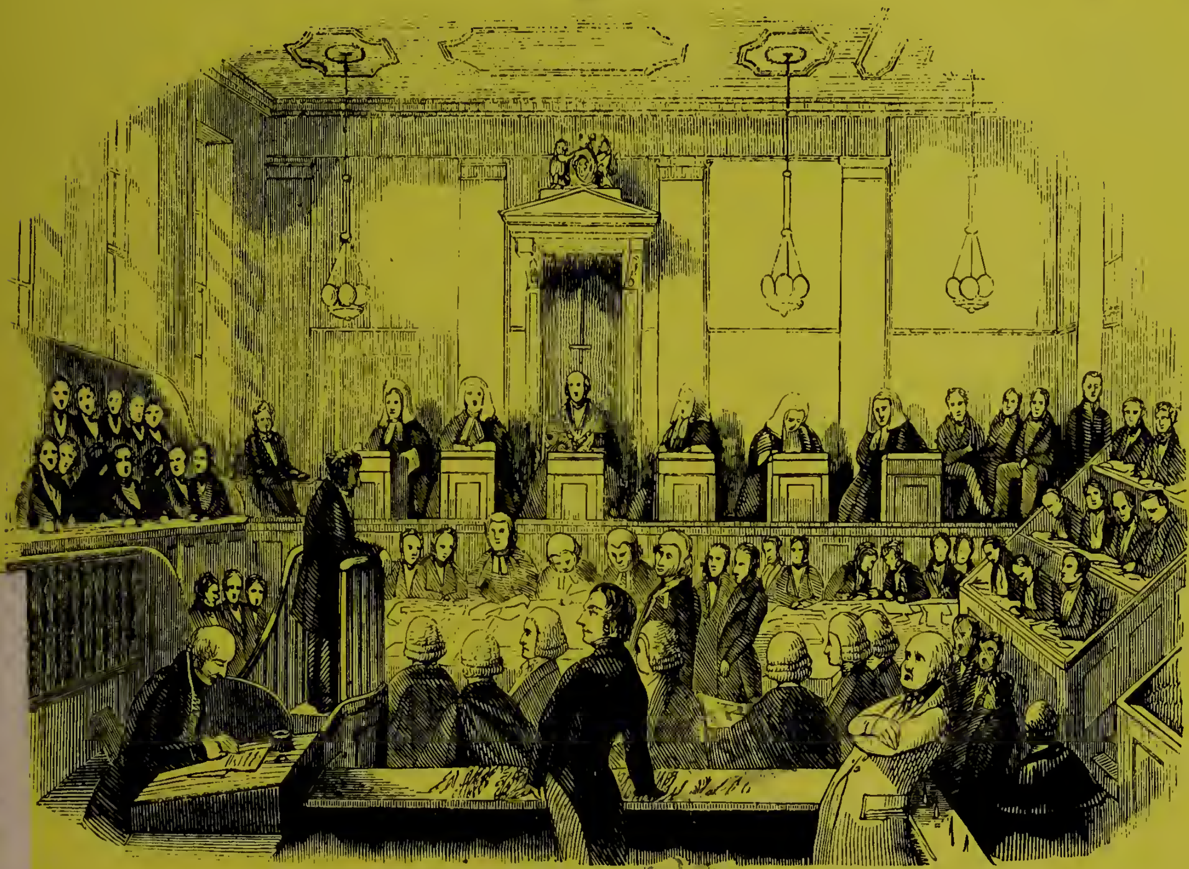
MARCH 1982



Trial of Daniel M'Naughten, the assassin, Central Criminal Court, Old Bailey. From *The Illustrated London News*, March 4, 1843. See page 381.

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Your Angina patients could fly coast to coast on the long-acting effects of one tablet.

Bioavailability findings* of Oral, Sublingual and Chewable Cardilate® dosage forms in volunteers demonstrated that the Oral (swallowed) 10mg Tablet provided a 6-hour duration of pharmacologic effect; more than 3 times longer than when given sublingually, or as the chewable Tablet. Cardilate Oral Tablets are recommended for the prophylaxis and long-term treatment of patients with frequent or recurrent anginal pain and reduced exercise tolerance associated with angina pectoris.

*Hannemann, R. E., Erb, R. J., Stoltman, W. P., Bronson, E. C., Williams, E. J., Long, R. A., Hull, J. H. and Starbuck, R. R.: Digital Plethysmography For Assessing Erythrityl Tetranitrate Bioavailability. Clin Pharmacol and Ther 29:35-39, 1981.

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INDICATIONS: Cardilate (Erythrityl Tetranitrate) is intended for the prophylaxis and long-term treatment of patients with frequent or recurrent anginal pain and reduced exercise tolerance associated with angina pectoris rather than for the treatment of the acute attack of angina pectoris since its onset is somewhat slower than that of nitroglycerin.

CONTRAINDICATIONS: Idiosyncrasy to this drug.

WARNING: Data supporting the use of nitrates during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Intraocular pressure is increased therefore caution is required in administering to patients with glaucoma. Tolerance to this drug, and cross-tolerance to other nitrites and nitrates may occur.

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop. This drug can act as a physiological antagonist to norepinephine, acetylcholine, histamine and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and / or exfoliative dermatitis may occasionally occur.

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Oral / Sublingual Tablets: Cardilate (Erythrityl Tetranitrate) may be administered either sublingually or orally. Therapy may be initiated with 10 mg. prior to each anticipated physical or emotional stress and at bedtime for patients subject to nocturnal attacks. The dose may be increased or decreased as needed.

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New York State Journal of Medicine (ISSN 0028-7628)

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BECAUSE
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INCREASE CONTROL WITHOUT INCREASING POTASSIUM PROBLEMS.

A dependable means to long-term blood pressure control.

Many times, a diuretic alone can't keep hypertension in check. INDERIDE, however, can pick up where thiazide therapy leaves off.

The combination of propranolol HCl, the world's most trusted beta blocker, and hydrochlorothiazide, the standard among diuretics, enables INDERIDE to exert an additive antihypertensive effect.[1,2] In fact, a propranolol/hydrochlorothiazide regimen maintained blood pressure below 90 mm Hg in 81.8% to 86.4% of patients followed for 6 to 18 months of therapy.[1]

Low thiazide dosage means reduced risk of hypokalemia.

When thiazides are prescribed in doses greater than 50 mg/day, the potential for hypokalemia increases substantially. What's more, the greater the fall in serum K+, the greater the risk of hypokalemia-induced PVCs.[3,4]

With INDERIDE, the additive hypotensive effect of propranolol HCl allows the effective dose of hydrochlorothiazide to be kept low (25 mg b.i.d.). And by lowering the daily dose of diuretic, INDERIDE also lowers the potential for diuretic-induced side effects. Potassium problems are less likely to occur—yet blood pressure can be controlled consistently.

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Each tablet contains INDERAL® (propranolol HCl) 40 mg or 80 mg, and hydrochlorothiazide 25 mg

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When you know you need more than a thiazide.

Please see Brief Summary of Prescribing Information on following page.

BRIEF SUMMARY
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INDERIDE®

BRAND OF
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(INDERAL®)
and hydrochlorothiazide

No 474—Each INDERIDE®-40/25 tablet contains	
Propranolol hydrochloride (INDERAL®)	40 mg
Hydrochlorothiazide	25 mg
No 476—Each INDERIDE®-80/25 tablet contains:	
Propranolol hydrochloride (INDERAL®)	80 mg
Hydrochlorothiazide	25 mg

WARNING: This fixed combination drug is not indicated for initial therapy of hypertension Hypertension requires therapy titrated to the individual patient. If the fixed combision Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant

DESCRIPTION: INDERIDE combines two antihypertensive agents: INDERAL (propranolol hydrochloride). a beta-adrenergic blocking agent, and hydrochlorothiazide, a thiazide diuretic-antihypertensive.

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances. this has been observed during propranolol therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g* , CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma

Thiazides may add to or potentiate the action of other antihypertensive drugs Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers Thiazides appear in breast milk If the use of the drug is deemed essential the patient should stop nursing

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of resting sympathetic nervous activity Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis, and hypokalemia Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are. dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (*e.g.*, increased ventricular irritability) Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular:* bradycardia; congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal. nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

Hydrochlorothiazide: *Gastrointestinal:* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System. dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics)

Hypersensitivity purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions

Other. hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION: The dosage must be determined by individual titration (see boxed warning).

Hydrochlorothiazide is usually given at a dose of 50 to 100 mg per day. The initial dose of propranolol is 40 mg twice daily and it may be increased gradually until optimum blood pressure control is achieved The usual effective dose is 160 to 480 mg per day.

One to two INDERIDE tablets twice daily can be used to administer up to 320 mg of propranolol and 100 mg of hydrochlorothiazide. For doses of propranolol greater than 320 mg, the combination products are not appropriate because their use would lead to an excessive dose of the thiazide component.

When necessary, another antihypertensive agent may be added gradually beginning with 50 percent of the usual recommended starting dose to avoid an excessive fall in blood pressure

OVERDOSAGE OR EXAGGERATED RESPONSE: The propranolol hydrochloride (INDERAL) component may cause bradycardia, cardiac failure, hypotension, or bronchospasm

The hydrochlorothiazide component can be expected to cause diuresis. Lethargy of varying degree may appear and may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function, and in the absence of significant serum electrolyte changes or dehydration. The mechanism of central nervous system depression with thiazide overdosage is unknown. Gastrointestinal irritation and hypermotility can occur, temporary elevation of BUN has been reported, and serum electrolyte changes could occur, especially in patients with impairment of renal function.

TREATMENT: The following measures should be employed: GENERAL—If ingestion is, or may have been, recent, evacuate gastric contents taking care to prevent pulmonary aspiration BRADYCARDIA—Administer atropine (0.25 to 1 0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously CARDIAC FAILURE—Digitalization and diuretics HYPOTENSION—Vasopressors, *e.g.*, levarterenol or epinephrine. BRONCHOSPASM—Administer isoproterenol and aminophylline STUPOR OR COMA—Administer supportive therapy as clinically warranted GASTROINTESTINAL EFFECTS—Though usually of short duration, these may require symptomatic treatment ABNORMALITIES IN BUN AND/OR SERUM ELECTROLYTES—Monitor serum electrolyte levels and renal function; institute supportive measures as required individually to maintain hydration, electrolyte balance, respiration, and cardiovascular-renal function

HOW SUPPLIED: *No. 474*—Each INDERIDE®-40/25 tablet contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000. Also in unit dose package of 100

No. 476—Each INDERIDE®-80/25 tablet contains 80 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000. Also in unit dose package of 100

References: 1. Veterans Administration Cooperative Study Group on Antihypertensive Agents. J A M A 237.2303 (May 23) 1977 2 Bravo, E L , Tarazi, R C , and Dustan, H.P N Engl. J Med 292 66 (Jan. 9) 1975 3 Hollifield, J W , and Slaton, PE Acta Med Scand. [Suppl] 647 67, 1981 4 Holland, O B , Nixon, J V , and Kuhnert, L Am. J. Med 70·762 (Apr.) 1981

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Letters to the Editor

Lumpectomy and Chemotherapy

To the Editor: The two case reports by Peter I. Pressman, M.D.* are confusing.

Neither of his patients had had an axillary node dissection or exploration when the lumpectomy had been performed. No ER data or detailed pathological features are provided. Therefore, the five-year survival of the 31-year-old patient cannot be evaluated whatsoever since there are no clues re-risk category other than age. The lack of information in both cases makes it impossible to assess these two anecdotal cases. A three-year recurrence following completion of chemotherapy in a 31-year-old patient, four years after the lumpectomy, may indeed represent a relative prolongation of life since there was no way of assessing the patient or placing her within the statistical or clinical risk category to make a reliable, presumptive, clinical evaluation of the result.

As far as the 77-year-old patient with a small biopsy of her left primary tumor, the fact that the disease recurred after completing one year of CMF (cyclophosphamide, methotrexate, 5-fluorouracil) proves little since the patient was "intolerant" to chemotherapy. She probably received inadequate dosage of CMF as do most older patients. Moreover, CMF is less effective than the Cooper type CMFVP regimens, which represent the preferable chemotherapy for most patients.

Dr. Pressman's case reports illustrate the lack of reliable criteria for evaluating any clinical result when a lumpectomy is not accompanied by an axillary node removal.

Pathological criteria clearly understood now by many pathologists would have helped to classify the risk category of the two patients indeed.

I do not see why chemotherapy should be lumped together as "unproved" with the lumpectomy since it is the latter that is an unproved method of treating breast cancer under these clinical circumstances.

EZRA M. GREENSPAN, M.D.
Clinical Professor of Medicine (Oncology)
Mount Sinai School of Medicine
Director, Chemotherapy Foundation
1045 Fifth Avenue
New York, N.Y. 10028

Dr. Pressman's reply

To the Editor: I welcome the opportunity of responding to Dr. Greenspan's letter for simultaneous printing in the Letters to the Editor column.

I agree with Dr. Greenspan that management of the two cases described is "confusing." These were reported with the intent of provoking the interest of physicians who participate in the treatment of patients with breast cancer. The article specifically emphasizes that where a limited tumorectomy is performed it should be accompanied by axillary nodal dissection preliminary to radiation therapy, if a modified radical mastectomy is not carried out.

It is appropriate that a renowned oncologist should comment on this article because it was chemotherapists who treated these patients in an "anecdotal" manner. Adjunctive chemotherapy, whether it be CMF or CMFVP, is an accepted treatment approach but should not have been "lumped together" with incomplete surgical staging by the responsible physicians, who in so doing, did not follow accepted guidelines for its use.

PETER I. PRESSMAN, M.D.
50 East 79th Street
New York, N.Y. 10021

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* Pressman, P. I.: Lumpectomy and chemotherapy; unproved method of treating breast cancer, New York State J. Med. 81: 1765 (Nov.) 1981

Abstracts

Attah, C. A., and Anikwe, R. M.: Obstructed hernia in Nigeria. A common surgical emergency, **New York State J. Med.** 81: 000 (Dec.) 1981.

A common surgical emergency in the University of Nigeria Teaching Hospital, Enugu, is obstructed hernia. One in every six patients treated for inguinal hernia has the obstructed type. When patients treated by manipulative reduction and discharged are included, the rate of occurrence will be much more. In spite of some shortcomings in facilities for proper management, a mortality rate of only 6 percent was recorded. Farmers appear to be more commonly involved than other groups of workers and this is thought to be the result of strain from manual labor.

Mehta, D. R.: Penetrating injuries of chest: stab and gunshot wounds, **New York State J. Med.** 82: 000 (Mar.) 1982.

Penetrating injuries of the chest play a major role in thoracic trauma. A review of 100 consecutive cases admitted to Cumberland Hospital over the past two years indicates that early surgical intervention, when indicated, lowers mortality. Early and proper placement of a thoracostomy tube and mechanical ventilation utilizing PEEP (positive end expiratory pressure) lowers morbidity in these injuries. Patients were divided into the following groups: (1) Immediate Thoracotomy: 10 patients sustained cardiopulmonary arrest prior to arrival at the hospital and were resuscitated in the emergency room. When cardiac activity was apparent they were immediately taken to the operating room. Three patients survived. (2) Thoracotomy and/or celiotomy: 22 patients were treated in this manner with one death. (3) Observation with (A) chest x-ray or (B) tube thoracostomy: 63 patients were treated in this manner with no deaths. One percent of the patients who reached the emergency room in hemodynamically stable condition died. The overall mortality rate was 8 percent. The rate of complication was 9 percent.

Bakay, L.: Missile injuries of brain, **New York State J. Med.** 82: 000 (Mar.) 1982.

During the past decade the incidence of missile injuries to the brain has shown a gradual increase. Although this category of injury represents one of the severest type of head trauma it is known that a considerable number of patients can be saved by prompt and appropriate action. This article reviews ballistic, pathologic, diagnostic, and therapeutic considerations essential to the medical management of the victims.

Cunha, B. A.: Typhoid fever, typhus-like disease, historical perspective, **New York State J. Med.** 82: 000 (Mar.) 1982.

Typhoid fever (typhus-like) and typhus fever, with their many features in common, caused diagnostic confusion for hundreds of years in patients with enteric fevers. The differential diagnostic features of typhoid fever and typhus have been discussed from an historical and clinical perspective.

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Abstracts in Interlingua

Attah, C. A., e Anikwe, R. M.: Hernia Obstructive in Nigeria; un emergentia chirurgic commun, **New York State J. Med.** 82: 305 (Februario) 1982.

Un emergentia chirurgic commun in le Hospital de Inseniamento del Universitate de Nigeria, Enegu, es le hernia obstructive. Un de cata 6 patientes tractate per hernia inguinale es del typo obstructive. Quando le patientes es tractate mediante reduction manual e es discargate del hospital, le frequentia de re-occurrentia es multe major. Ben que le diverse disadvantages del hospital referente al tractamento appropriate del patientes es evidente, le mortalitate registrate esseva 6 pro cento solmente. Le agricultores pare esser plus communmente implicate que altere gruppos de travaliatores, e is pensate que iste hernia es le resultato del effortios causate per le travalio manual.

Mehta, D. R.: Feritas penetrante del thorax; feritas a pugnal e a balla, **New York State J. Med.** 82: 309 (Martio) 1982.

Le feritas penetrante del thorax ha un rolo principal in le trauma del pecto. Un revision de 100 casos consecutive admittite in le Hospital Cumberland durante le ultime 2 annos indicava que le chirurgia temprane, quando es indicate, reduce le mortalitate. Le location temprane e adequate del tubo thoracostomic e le ventilation mechanic, usante le expiration positive terminal ("positive and expiratory pressure"—"PEEP", in anglese) reduce le morbiditate in iste typo de injurias. Le patientes esseva dividite in le sequente gruppos: (I) Thoracotomia immediate: 10 patientes suffreva arresto cardiopulmonari ante le arrivo al Hospital, e esseva resuscitate in le Salla de Emergentia. Quando le activitate cardiac esseva evidente, le patiente esseva llevate immediatemente al Salla Operatori. Tres (3) patientes superviveva. (II) Thoracotomia e/o Celiotomia: 2 patientes esseva tractate con iste methodo; un patiente moreva. (III) Observation: Un mediante radiographia del thorax e 2 mediante tubos thoracostomic. No mortalitate esseva observate in 63 patientes tractate de iste maniera. Un pro cento del patientes que arrivava al Salla de Emergentia, ben que le hemodynamia esseva stabile, moreva. Le mortalitate global esseva 8 pro cento; complicationes esseva observate in 9 pro cento del casos.

Bakay, L.: Lesiones cerebral causate per projectiles, **New York State J. Med.** 82: 313 (Martio) 1982.

Durante le ultime decada, le frequentia de injurias cerebral causate per projectiles ha augmentate gradualmente. Ben que le typo de iste injurias representa un del plus grave del lesiones cerebral, es cognoscite que un numero considerabile de patientes pote esser salvate mediante un tractamneto prompte e appropriate. In iste articulo commenta se le considerationes essential supra le aspecto ballistic, pathologic, diagnostic e therapeutic del victimas.

Translated by Eduardo I. Juliet, M.D.

Medical Controversies of the 80s

Join these Professors and many other speakers at the Medical Society of the State of New York's 1982 Annual CME Assembly, June 25-27, at the Rye Town Hilton.

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Professor of Dermatology & Pathology, & Director, Department of Dermatopathology, New York University School of Medicine, New York City. *Diseases in Dermatology That Don't Exist.*

Thomas Bigger, M.D.

Professor of Medicine & Pharmacology, Columbia University College of Physicians & Surgeons, New York City. *Prophylaxis & Medical Management of Life-Threatening Ventricular Arrhythmias.*

Robert E. Carroll, M.D.

Professor of Orthopedic Surgery, Columbia University College of Physicians & Surgeons; Director, Hand Surgery, Columbia-Presbyterian Medical Center, New York City. *Primary or Secondary Repair of Flexor Tendon Injuries in the Hand.*

Harold Carron, M.D.

Professor of Anesthesiology; Organizer, Director & Consultant of Pain Clinic, University of Virginia Medical Center, Charlottesville. President, American Society of Regional Anesthesia. *Outpatient Management of Pain: The Anesthesiologist's Holistic Viewpoint.*

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Joseph Ransohoff, M.D.

Professor & Chairman, Department of Neurosurgery, New York University-Bellevue Medical Center, New York City. *Neurosurgical Indications for Surgery in Acute Lumbo-Spine Injuries.*

Guy F. Robbins, M.D.

Consultant to Breast Service, Department of Surgery, & Former Director of Cancer Control, Memorial Sloan-Kettering Cancer Center, New York City. *Rehabilitation in Breast Surgery.*

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Books Received*

EMERGENCIES—In Infancy and Childhood

Emergency Guide to Pediatric Cardiac Arrest. By Suzanne Vokes, R.N., and Paul Hartunian, EMT-Paramedic. Montclair, N.J., Tri-Med, 1981. n.p. Spiral, $5.95.

A pocket sized manual for physicians and nurses.

GYNECOLOGY

Gynecological Therapeutics. Edited by D. F. Hawkins, M.D., B.S. London, England, Bailliere Tindall, 1981. Illustrated, 287 pages. Cloth, $37.50, (Distributor: McMillan Publishing Co.)

Therapeutic procedures in selected major areas in which increasingly larger portions of patients seek treatment.

NEOPLASMS

Methods and Impact of Controlled Therapeutic Trials in Cancer. Parts I and II. Geneva, Switzerland, International Union Against Cancer, 1978 and 1981. UICC Technical Report Series, Volumes 36 and 59. Two volumes, Softcover, $16. and $19 respectively (Available from the above organization at 3 Rue du Conseil General, Geneva, 1205)

An assessment of the methodology and of the problems posed by controlled therapeutic trials conducted for cancers of selected sites.

BLOOD CIRCULATION

Disturbances in Neurogenic Control of the Circulation. Edited by Francois M. Abboud, Harry A. Fozzard, Joseph P. Gilmore, and Donald J. Reis. Bethesda, Md., American Physiological Society, 1981. Illustrated, 274 pages. Cloth, $38.50.

An up-to-date, integrated view of the important aspects of autonomic control of the circulation.

IMMUNOLOGIC DEFICIENCY SYNDROMES

Immunologic Defects in Laboratory Animals. Two volumes. Edited by M. Eric Gershwin and Bruce Merchant. New York, Plenum Press, 1981. Illustrated, Cloth, vol. 1, $37.50; vol. 2, $42.50.

A functionally organized exposition of the major immunologic defects as they occur in mice, horses, minks, dogs, guinea pigs, rats, chickens, pigs, sheep, and quokkas.

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Editorial

Is there a need for the holistic physician?

In this age of superspecialization the patient is losing the "friendly" personal physician; the one who used to listen to his problems. In general, group practice is an assemblyline type of office. There are multiple treatment rooms; each room with a patient safely ensconced by an efficient nurse or secretary; where he awaits his few minutes of attention and a "snap" diagnosis or some "glib" treatment.

Complaints heard *frequently* from patients when I was the executive director of the Medical Society of the County of Queens, are currently being heard more and more from patients in the offices of the few remaining physicians who are still trying to be the patients' ombudsman for his physical and psychological needs. Among these complaints are "... they never listen"; "... you can't get an answer"; "... they brush one off with a 'don't worry, everything will work-out' " and they walk out of the room. David Susskind, on T.V. recently spot-lighted this complaint.

Patients are crying in vain for a sympathetic ear and a word of friendly advice. It does no good to offer them the usual brush-off of "go and see a therapist" because people generally can open themselves only to those with whom they feel close; the family physician is the someone to share their intimacies and not a physician or therapist to whom they are referred!

The concept of "offering a service" to patients was first presented to me when I was a medical student in a midwest medical school. The principle of psyche-support was still taught there. The voice of my professor even now rings loud: "... You, as a physician, are delivering a needed service to the patients who have a right to rely on you for help!" The Oath of Hippocrates emphasized the "art" and not the "science." The art of being kind and understanding was its emphasis. It is now referred to as "TLC" or "tender loving care;" it emphasized the needs of the *person* and not just the *body*. This is what is missing in today's medicine. Many schools today, more than half, no longer administer the Oath of Hippocrates (and when they do, it is at the most, some watered-down version) because the Oath seems to be passé.[1,2] The result is that patients are turning to astute cultists who are quick to fill the gap and capitalize on medicine's deficiencies.

The crying need for this service became dramatically obvious to me when I returned to civilian life from overseas, to start practice, after World War II. There were two large veterans' settlements in the area, established hurriedly in rudimentary Quonset huts because of the rapidly expanding need for housing, as the men were returning from the war. Many of these men had been anxious to extract every moment of happiness before shipping out on a trip of possible no return. They had married in haste, anywhere from one day to a few weeks before going overseas. Those who returned tried to conform to the everyday living, with all its adjustments. This was especially true for those who had had nightmarish and grueling experiences. In their efforts to conform to everyday living they found that they had problems.

To their credit, they tried very hard to seek help and solutions to save their marriages. Somehow, one or two of them had come to my office for physical conditions and opened-up to me because they found a kindred, sympathetic shoulder, the shoulder of another veteran, who was aware of their experiences, so they could unload and seek guidance. Finding some peace, they spread the word among their buddies, and for about three years there was hardly a night, after regular office hours, that a veteran, or his wife, or both, were not in the office until late, exposing their heartaches, their hang-ups, and reaching out for help.

No magic or profound wisdom was needed, just a listening ear, a kind word, a little suggestion for patience, and some understanding of each other's problems. Often, much was accomplished with a joint meeting where each divested themselves of buried or hidden feelings. War created doubts that encroached on a love that still endured, and which had brought them together originally in the prewar maelstrom. The clouds would start to dissipate; a middle road would be reached.

The success of investing so much time in the application of "friendly" techniques did not pay off financially, but the satisfaction received, was the reward for helping to bring these groping couples together, whose relationship(s) war had almost destroyed was immeasurable! With one exception, not a couple was "lost," and that couple with one child

continued on page 302

continued from page 301

and had separated. The wife returned to her original home in the South and he, in embarrassment, had his company transfer him to a midwest office. That was during a summer. At Christmas I received a card from her, alone in the South, with just the child's name added to the card. The next Christmas I received a card from the midwest, with both their names and the names of two children. Apparently during the separation they reflected, contacted each other, and had gotten together in time to have another child by Christmas. Their gratitude was profound. No greater fee could have been as satisfactory and the salvage rate was now 100 percent. No hurried 20-minute consultation could have produced such results. This was the service to humanity that had been drilled into us so often in the past, and which is now largely overlooked.

Since then, other problems have arisen for other patients, but always the listening sympathetic ear has cured as effectively as a pill or knife, and there have been no regrets for the time entailed in playing arbitrator, or just being a "face-saving" listener for troubled minds in need of catharsis. Not infrequently, a patient who calls for a somatic complaint, after unloading a long tale of domestic discord before the examination for the complaint, has arisen to leave, apparently better. They have had to be reminded of the supposed ache or cause for which they called, but when the load was lightened the complaint was forgotten.

An emotional family disturbance, particularly in the area of married intimacies, which most women are hesitant to discuss (especially with a strange consultant) can be as painful and distressing as any somatic pain. Women will seldom discuss intimacies with someone they have just been referred to, and with whom they have never built a rapport, regardless of how well-trained the "expert" may be. Sometimes the excuse of the "family" physician who fails or refuses to listen is, "no time." But more often there has been no teaching to encourage this service, or there is a lack of willingness to invest some time in friendly discourse because "there are other patients waiting." Sometimes there is no time because the size of day's receipts depends on a rapid turnover of patients. Often in schools the concept of teaching to render humanitarian services has been supplanted by direction towards developing cold scientific expertise, a modality not always applicable to all complaints.

There is still the need for the complete physician who will deal with the body, the soul, and the psyche; the need for the physician who is willing to practice the art as well as the science of medicine; one who will give the patient a chance to talk, without the quick brush-off! The "headache" or "backache" may be an alcoholic husband or an unresponsive wife for whom the intimacies are only wifely duty. For this there is no prescription of pills, laboratory, or x-ray that will help; here, only a humane physician will be of help. All of which goes back to Sir William Osler's admonition: "Let them talk!"

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THE FIRST ORAL
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MANAGEMENT OF
ANGINA PECTORIS

NEW
PROCARDIA®
(NIFEDIPINE) *Capsules 10 mg*

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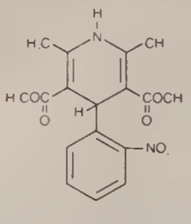
PROCARDIA® CAPSULES For Oral Use
nifedipine

DESCRIPTION: PROCARDIA (nifedipine) is an antianginal drug belonging to a new class of pharmacological agents, the calcium channel blockers. Nifedipine is 3,5-pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, dimethyl ester, $C_{17}H_{18}N_2O_6$, and has the structural formula:



Nifedipine is a yellow crystalline substance, practically insoluble in water but soluble in ethanol. It has a molecular weight of 346.3. PROCARDIA CAPSULES are formulated as soft gelatin capsules for oral administration each containing 10 mg nifedipine.

CLINICAL PHARMACOLOGY: PROCARDIA (nifedipine) is a calcium ion influx inhibitor (slow channel blocker or calcium ion antagonist) and inhibits the transmembrane influx of calcium ions into cardiac muscle and smooth muscle. The contractile processes of cardiac muscle and vascular smooth muscle are dependent upon the movement of extracellular calcium ions into these cells through specific ion channels. PROCARDIA selectively inhibits calcium ion influx across the cell membrane of cardiac muscle and vascular smooth muscle without changing serum calcium concentrations.

Mechanism of Action: The precise means by which this inhibition relieves angina has not been fully determined, but includes at least the following two mechanisms:

1) Relaxation and prevention of coronary artery spasm: PROCARDIA dilates the main coronary arteries and coronary arterioles, both in normal and ischemic regions, and is a potent inhibitor of coronary artery spasm, whether spontaneous or ergonovine-induced. This property increases myocardial oxygen delivery in patients with coronary artery spasm, and is responsible for the effectiveness of PROCARDIA in vasospastic (Prinzmetal's or variant) angina. Whether this effect plays any role in classical angina is not clear, but studies of exercise tolerance have not shown an increase in the maximum exercise rate-pressure product, a widely accepted measure of oxygen utilization. This suggests that, in general, relief of spasm or dilation of coronary arteries is not an important factor in classical angina.

2) Reduction of oxygen utilization: PROCARDIA regularly reduces arterial pressure at rest and at a given level of exercise by dilating peripheral arterioles and reducing the total peripheral resistance (afterload) against which the heart works. This unloading of the heart reduces myocardial energy consumption and oxygen requirements and probably accounts for the effectiveness of PROCARDIA in chronic stable angina.

Pharmacokinetics and Metabolism: PROCARDIA is rapidly and fully absorbed after oral administration. The drug is detectable in serum 10 minutes after oral administration, and peak blood levels occur in approximately 30 minutes. It is highly bound by serum proteins. PROCARDIA is extensively converted to inactive metabolites and approximately 80% of PROCARDIA and metabolites are eliminated via the kidneys. The half-life of nifedipine in plasma is approximately two hours. There is no information on the effects of renal or hepatic impairment on excretion or metabolism of PROCARDIA.

Hemodynamics: Like other slow channel blockers, PROCARDIA exerts a negative inotropic effect on isolated myocardial tissue. This is rarely, if ever, seen in intact animals or man, probably because of reflex responses to its vasodilating effects. In man, PROCARDIA causes decreased peripheral vascular resistance and a fall in systolic and diastolic pressure, usually modest (5–10 mm Hg systolic), but sometimes larger. There is usually a small increase in heart rate, a reflex response to vasodilation. Measurements of cardiac function in patients with normal ventricular function have generally found a small increase in cardiac index without major effects on ejection fraction, left ventricular end diastolic pressure (LVEDP) or volume (LVEDV). In patients with impaired ventricular function, most acute studies have shown some increase in ejection fraction and reduction in left ventricular filling pressure.

Electrophysiologic Effects: Although, like other members of its class, PROCARDIA decreases sinoatrial node function and atrioventricular conduction in isolated myocardial preparations, such effects have not been seen in studies in intact animals or in man. In formal electrophysiologic studies, predominantly in patients with normal conduction systems, PROCARDIA has had no tendency to prolong atrioventricular conduction, prolong sinus node recovery time, or slow sinus rate.

INDICATIONS AND USAGE: I. Vasospastic Angina: PROCARDIA (nifedipine) is indicated for the management of vasospastic angina confirmed by any of the following criteria 1) classical pattern of angina at rest accompanied by ST segment elevation, 2) angina or coronary artery spasm provoked by ergonovine, or 3) angiographically demonstrated coronary artery spasm. In those patients who have had angiography, the presence of significant fixed obstructive disease is not incompatible with the diagnosis of vasospastic angina, provided that the above criteria are satisfied. PROCARDIA may also be used where the clinical presentation suggests a possible vasospastic component but where vasospasm has not been confirmed, e.g., where pain has a variable threshold on exertion or in unstable angina where electrocardiographic findings are compatible with intermittent vasospasm, or when angina is refractory to nitrates and/or adequate doses of beta blockers.

II. Chronic Stable Angina (Classical Effort-Associated Angina): PROCARDIA is indicated for the management of chronic stable angina (effort-associated angina) without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or organic nitrates or who cannot tolerate those agents.

In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.

Controlled studies in small numbers of patients suggest concomitant use of PROCARDIA and beta-blocking agents may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment, especially in patients with compromised left ventricular function or cardiac conduction abnormalities. When introducing such concomitant therapy, care must be taken to monitor blood pressure closely since severe hypotension can occur from the combined effects of the drugs. (See Warnings.)

CONTRAINDICATIONS: Known hypersensitivity reaction to PROCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated, occasional patients have had excessive and poorly tolerated hypotension. These responses have usually occurred during initial titration or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

Increased Angina/Beta Blocker Withdrawal: Occasional patients have developed well documented increased frequency, duration or severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate, or from increased demand resulting from increased heart rate alone.

Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catecholamines. Initiation of PROCARDIA treatment will not prevent this occurrence and might be expected to exacerbate it by provoking reflex catecholamine release. There have been occasional reports of increased angina in a setting of beta blocker withdrawal and PROCARDIA initiation. It is important to taper beta blockers if possible, rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients usually receiving a beta blocker have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for such an event, as the unloading effect of PROCARDIA would be expected to be of less benefit to these patients, owing to their fixed impedance to flow across the aortic valve.

PRECAUTIONS: General: Hypotension: Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blood pressure during the initial administration and titration of PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. See Warnings.

Peripheral edema: Mild to moderate peripheral edema, typically associated with arterial vasodilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions: Beta-adrenergic blocking agents: See Indications and Warnings. Experience in over 1400 patients in a non-comparative clinical trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated, but there have been occasional literature reports suggesting that the combination may increase the likelihood of congestive heart failure, severe hypotension or exacerbation of angina.

Long-acting nitrates: PROCARDIA may be safely co-administered with nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

Carcinogenesis, mutagenesis, impairment of fertility: Nifedipine was administered orally to rats for two years and was not shown to be carcinogenic. When given to rats prior to mating, nifedipine caused reduced fertility at a dose approximately 30 times the maximum recommended human dose. *In vivo* mutagenicity studies were negative.

Pregnancy: Pregnancy category C. Nifedipine has been shown to be teratogenic in rats when given in doses 30 times the maximum recommended human dose. Nifedipine was embryotoxic (increased fetal resorptions, decreased fetal weight, increased stunted forms, increased fetal deaths, decreased neonatal survival) in rats, mice and rabbits at doses of from 3 to 10 times the maximum recommended human dose. In pregnant monkeys, doses 2/3 and twice the maximum recommended human dose resulted in small placentas and underdeveloped chorionic villi. In rats, doses three times the maximum human dose and higher caused prolongation of pregnancy. There are no adequate and well-controlled studies in pregnant women. PROCARDIA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

ADVERSE REACTIONS: In multiple-dose U.S. and foreign-controlled studies in which adverse reactions were reported spontaneously, adverse effects were frequent but generally not serious and rarely required discontinuation of therapy or dosage adjustment. Most were expected consequences of the vasodilator effects of PROCARDIA.

Adverse Effect	**PROCARDIA (%) (N = 226)**	**Placebo (%) (N = 235)**
Dizziness, light-headedness, giddiness	27	15
Flushing, heat sensation	25	8
Headache	23	20
Weakness	12	10
Nausea, heartburn	11	8
Muscle cramps, tremor	8	3
Peripheral edema	7	1
Nervousness, mood changes	7	4
Palpitation	7	5
Dyspnea, cough, wheezing	6	3
Nasal congestion, sore throat	6	8

There is also a large uncontrolled experience in over 2100 patients in the United States. Most of the patients had vasospastic or resistant angina pectoris, and about half had concomitant treatment with beta-adrenergic blocking agents. The most common adverse events were the same ones seen in the controlled trials, with dizziness or light-headedness, peripheral edema, nausea, weakness, headache and flushing each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%. Syncopal episodes did not recur with reduction in the dose of PROCARDIA or concomitant antianginal medication. Very rarely, introduction of PROCARDIA therapy was associated with an increase in anginal pain, possibly due to associated hypotension.

Several of these side effects appear to be dose related. Peripheral edema occurred in about one in 25 patients at doses less than 60 mg per day and in about one patient in eight at 120 mg per day or more. Transient hypotension, generally of mild to moderate severity and seldom requiring discontinuation of therapy, occurred in one of 50 patients at less than 60 mg per day and in one of 20 patients at 120 mg per day or more.

In addition, 2% or fewer of patients reported the following: **Respiratory:** Nasal and chest congestion, shortness of breath. **Gastrointestinal:** Diarrhea, constipation, cramps, flatulence. **Musculoskeletal:** Inflammation, joint stiffness, muscle cramps. **CNS:** Shakiness, nervousness, jitteriness, sleep disturbances, blurred vision, difficulties in balance. **Other:** Dermatitis, pruritus, urticaria, fever, sweating, chills, sexual difficulties.

In addition, more serious adverse events were observed, not readily distinguishable from the natural history of the disease in these patients. It remains possible, however, that some or many of these events were drug related. Myocardial infarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in fewer than 0.5% of patients.

In a subgroup of over 1000 patients receiving PROCARDIA with concomitant beta blocker therapy, the pattern and incidence of adverse experiences was not different from that of the entire group of PROCARDIA treated patients (see **Precautions**).

In a subgroup of patients with a diagnosis of congestive heart failure as well as angina, dizziness or light-headedness, peripheral edema, headache or flushing each occurred in one in eight patients. Hypotension occurred in about one in 20 patients. Syncope occurred in approximately one patient in 250. Myocardial infarction or symptoms of congestive heart failure each occurred in about one patient in 15. Atrial or ventricular dysrhythmias each occurred in about one patient in 150.

Laboratory tests: Rare, mild to moderate, transient elevations of enzymes such as alkaline phosphatase, CK, LDH, SGOT, and SGPT have been noted, and a single incident of significantly elevated transaminases and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of nifedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities have already been associated with clinical symptoms. Cholestasis, possibly due to PROCARDIA therapy, has been reported twice in the extensive world literature.

OVERDOSAGE: Although there is no well documented experience with PROCARDIA overdosage, available data suggest that gross overdosage could result in excessive peripheral vasodilation with subsequent marked and probably prolonged systemic hypotension. Clinically significant hypotension due to PROCARDIA overdosage calls for active cardiovascular support including monitoring of cardiac and respiratory function, elevation of extremities, and attention to circulating fluid volume and urine output. A vasoconstrictor (such as norepinephrine) may be helpful in restoring vascular tone and blood pressure, provided that there is no contraindication to its use. Clearance of PROCARDIA would be expected to be prolonged in patients with impaired liver function. Since PROCARDIA is highly protein-bound, dialysis is not likely to be of benefit.

DOSAGE AND ADMINISTRATION: The dosage of PROCARDIA needed to suppress angina and that can be tolerated by the patient must be established by titration. Excessive doses can result in hypotension.

The starting dose is one 10 mg capsule, swallowed whole, 3 times day. The usual effective dose range is 10–20 mg three times daily. Some patients, especially those with evidence of coronary artery spasm, respond only to higher doses, more frequent administration, or both. In such patients, doses of 20–30 mg three or four times daily may be effective. Doses above 120 mg daily are rarely necessary. More than 180 mg per day is not recommended.

In most cases, PROCARDIA titration should proceed over a 7–14 day period so that the physician can assess the response to each dose level and monitor the blood pressure before proceeding to higher doses.

If symptoms so warrant, titration may proceed more rapidly provided that the patient is assessed frequently. Based on the patient's physical activity level, attack frequency, and sublingual nitroglycerin consumption, the dose of PROCARDIA may be increased from 10 mg t.i.d. to 20 mg t.i.d. and then to 30 mg t.i.d. over a three-day period.

In hospitalized patients under close observation, the dose may be increased in 10 mg increments over four to six-hour periods as required to control pain and arrhythmias due to ischemia. A single dose should rarely exceed 30 mg.

No "rebound effect" has been observed upon discontinuation of PROCARDIA. However, if discontinuation of PROCARDIA is necessary, sound clinical practice suggests that the dosage should be decreased gradually with close physician supervision.

Co-Administration with Other Antianginal Drugs: Sublingual nitroglycerin may be taken as required for the control of acute manifestations of angina, particularly during PROCARDIA titration. See **Precautions, Drug Interactions** for information on co-administration of PROCARDIA with beta blockers or long-acting nitrates.

HOW SUPPLIED: Each orange, soft gelatin PROCARDIA Capsule contains 10 mg of nifedipine. PROCARDIA Capsules are supplied in amber glass bottles of 100 capsules (NDC 0069-2600-66).

The capsules should be protected from light and moisture and stored at controlled room temperature 59° to 77°F (15° to 25°C) in the manufacturer's original container.

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LABORATORIES DIVISION
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Obstructed Hernia in Nigeria

A common surgical emergency

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A common surgical emergency in the University of Nigeria Teaching Hospital, Enugu, is obstructed hernia. One in every six patients treated for inguinal hernia has the obstructed type. When patients treated by manipulative reduction and discharged are included, the rate of occurrence will be much more. In spite of some shortcomings in facilities for proper management, a mortality rate of only 6 percent was recorded. Farmers appear to be more commonly involved than other groups of workers and this is thought to be the result of strain from manual labor.

Obstructed or incarcerated hernia is a surgical emergency that could be avoided altogether. In developed countries, this condition occurs rather infrequently. This is not at all the case in the developing countries where its occurrence is routine. Obstructed hernia is a very common surgical emergency in Nigeria and it is by far more frequent than trauma. The following study is a review of cases of incarcerated hernia treated by surgery over a period of four years in the University of Nigeria Teaching Hospital, Enugu, Nigeria.

Material and methods

Two hundred and forty-four cases of obstructed hernias treated by operation from January, 1975, to January, 1979, form the basis of this study. Cases treated without surgery through manual or postural reduction, with or without drugs, as recommended by Bekoe,[1] Kauffman and O'Brien[2] and others, and discharged were excluded from the study. The possible causes of obstructed hernias and the relationship to occupations are elaborated.

Age distribution

Patients vary in age from less than 1 month to 70 years of age (Fig. 1). The peak ages appear to be betwen 20 and 50 years.

Types of hernias

The most common type of hernia encountered was the inguinal hernia in 213 cases and were mostly the indirect type (Table I). The accurate number of direct and indirect varieties could not be determined because this information was absent from many of the charts. Where the information was provided, however, the most common type was, overwhelmingly, the indirect hernia. Other hernias in order of frequency are the umbilical, femoral, epigastric, and lumbar types. Although males out-number females by a ratio of 6.6 to 1, (Table II), in the overall incidence, this is the result of the high incidence of inguinal hernias in males (95.3 percent). In regard to umbilical, femoral, and epigastric hernias, however, the incidence was higher in females (Fig. 2).

Occupation

The distribution of cases relative to the patient's occupation is shown in Table III. Farmers are the most affected group of people, accounting for 140 cases or 57.4 percent. A rather distant second position is occupied by all classes of government workers. Although there are more farmers in the area making use of the hospital than other groups of people, more government workers make use of the hospital than farmers. The reasons for this are, (1) most farmers live in rural areas with poor transportation facilities, (2) they have more financial difficulties than government workers, and (3) some of them shy away from hospitals because of previous unsatisfactory experiences.

Clinical presentation

Patients came to the casualty room (emergency) with obstructive symptoms varying from several hours to as long as nine days. The most common complaints were pain in the inguinal area, constipation, nausea, and vomiting (Table IV). Irreducible mass was the most common finding, followed by tenderness, abdominal distension, and dehydration of varying degrees. Anemia was fairly common.

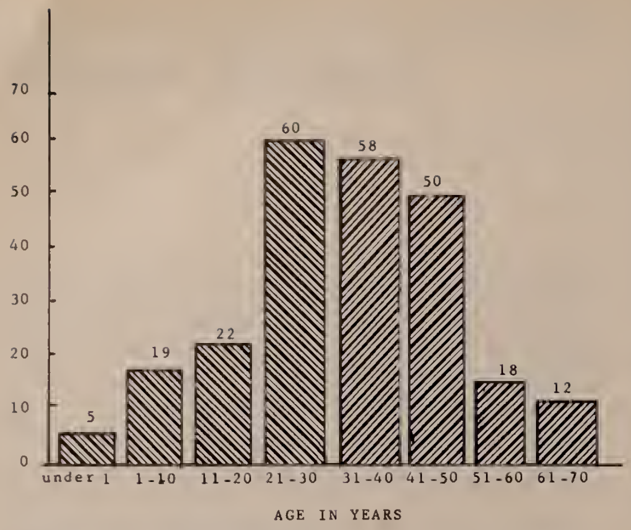

FIGURE 1. Age distribution.

Management

Work-up included findings on hemogram or white blood cell count, urinalysis, serum electrolytes, blood urea or blood urea nitrogen, and blood sugar. Abdominal and chest x-ray films were obtained in a low percentage of patients. Blood typing or grouping and cross matching were done selectively depending on the extent of the anemia and the anticipated surgery to be carried out. Many patients first underwent trial of manipulative reductions with and without muscle relaxants, analgesics as well as postural reduction, as recommended by Kauffman,[2] and O'Brien, Bekoe,[1] Arnesen,[3] and others.[4–7]

Since the history of the onset of obstructive symptoms is not always reliable, the decision as to who deserved trial of manipulative reduction depended mainly on physical findings. Patients with very tender mass associated with abdominal distension were spared from the maneuvers of manual reduction and prepared for surgery. Those who underwent successful manual reductions were discharged after adequate observation in the casualty room. The reason for this was the chronic lack of beds which were usually reserved for those needing surgery or other more serious conditions. The number of such discharged patients could not be accurately stated due to improper records on this group of patients. Preoperative preparation for those needing surgery consisted of insertion of nasogastric tube for gastric suction, intravenous fluids with balanced salt solutions, and preoperative parenteral antibiotics, especially where bowel resections were anticipated. Urinary output was used as a guideline for adequate hydration in dehydrated patients. Attempts were made to correct existing electrolyte imbalance where possible, but invariably it took several days for results of serum electrolytes to be obtained.

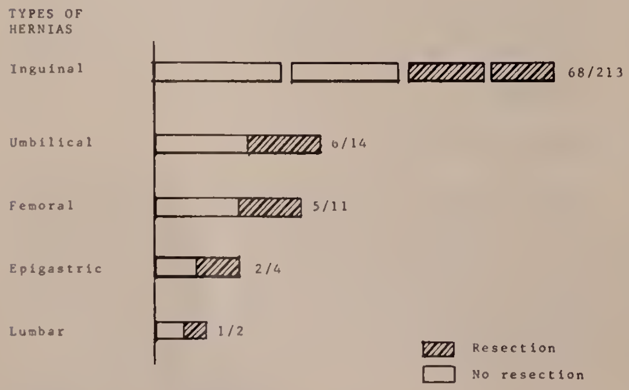

FIGURE 2. Resections.

Operation

The operations were done mostly by the surgical residents under the supervision of qualified surgeons. In some difficult cases involving bowel resections, the surgeons performed the operations. Eighty-two patients needed bowel resections (Fig. 3).

Postoperative management consisted of further hydration, intestinal decompression with nasogastric tubes where bowel resections were carried out, and appropriate parenteral antibiotics.

Results

Wound infection occurred in 18 cases, all but 2 of which occurred among the resected group. Two patients developed scrotal abscess while two others had pneumonia. There was only one small bowel obstruction postoperatively which needed reoperation. There were 15 deaths, 13 of which were from the resected group. The mortality rate is thus 6 percent overall (Table V), but 15.9 percent was in the resected group. This is an acceptable rate, considering the poor condition of many of our patients.

Comments

In an earlier article, Attah and Anikwe[8] showed that intestinal obstruction was the most common surgical emergency in the University of Nigeria Teaching Hospital with 69 percent of patients constituting obstructed hernia. Over the same 4 years of study, 1,354 elective hernia operations were performed. This is a ratio of 5.5 elective hernias to 1 obstructed hernia. The rate of occurrence would be even greater if the discharged patients who had been treated by manipulative and postural reductions were included in this study. Kauffman and O'Brien[2] reported 162 cases with incarcerated hernia to 1,557 elective patients, or a ratio of 9.6 to 1. The incidence of incarcerated hernia in our environment is certainly high because many patients who have uncomplicated hernias rarely seek medical attention. The reasons for this are the poor medical facilities in the rural areas and the lack of appreciation of the potential

TABLE I. Most common hernias

Types of Hernia	Number of Cases	Percent
Inguinal	213	87.3
Umbilical	14	5.7
Femoral	11	4.5
Epigastric	4	1.6
Lumbar	2	0.8
TOTAL	244	99.9

TABLE II. Sex distribution

Hernia	Male	Female
Inguinal	202	11
Umbilical	5	9
Femoral	3	8
Epigastric	...	4
Lumbar	2	...
TOTAL	212	32

TABLE III. Occupational distribution

Occupation	Number of Patients	Percent
Farmers	140	57.4
Government workers	48	19.7
Company employees	15	6.1
Infants and students	24	9.8
Housewives	12	4.9
Others	5	2.0
TOTAL	244	99.9

TABLE IV. Clinical presentation

Obstructive Symptoms	Number of Patients	Percent
Pain	238	97.5
Constipation	204	83.6
Vomiting	190	77.9
Tenderness	218	89.3
Distension	115	47.0
Dehydration	130	53.0
Irreducible mass	242	99

TABLE V. Complications

Condition	Number	Percent
Wound infection	18	7.3
Intestinal obstruction	1	0.4
Postoperative pneumonitis	2	0.8
Mortality	15	6.1

TABLE VI. Nonviable bowel in adults with incarcerated hernia

Author	Number of Incarcerated Hernias	Nonviable Bowel	
		Number	Percent
Dennis and Enquist[6]	118	15	12.7
Arneson[3]	146	36	24.6
Bucy[11]	52	4	7.7
Frankau	654	30	4.5
Bowesman[5]	47	3	6.3
Requarth and Theis[10]	500	25	5
Kauffman and O'Brien[2]	102	12	11.7
Bekoe[1]	113	13	11.5
Attah and Anikwe[8]*	244	82	33.6

* Incarcerated hernias successfully reduced were not included in the series.

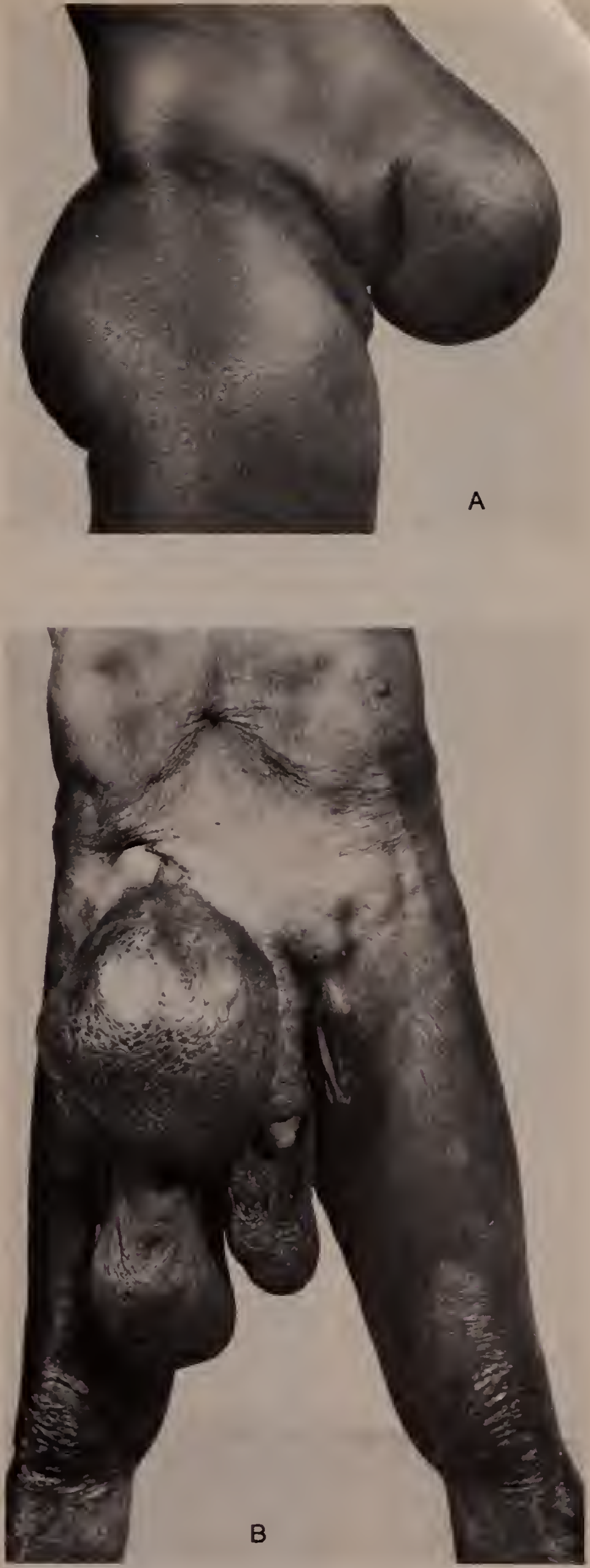

FIGURE 3. Hernias. (A) Obstructed umbilical hernia. (B) Obstructed femoral hernia and hanging groin adenolymphocele on the right side.

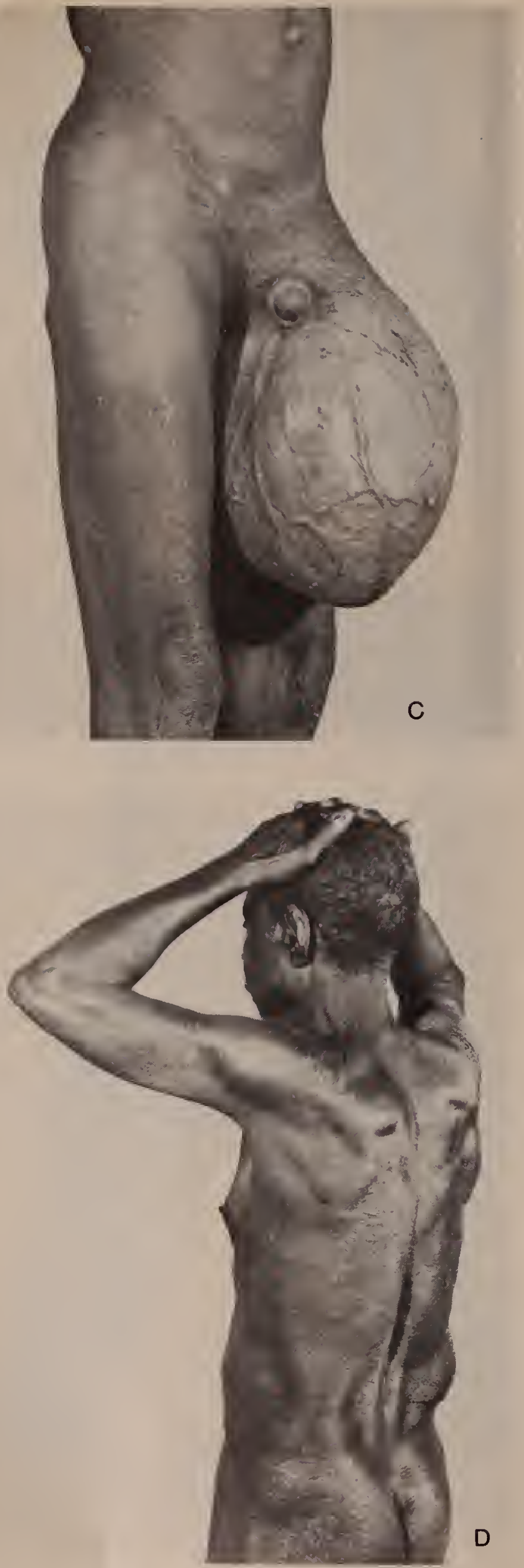

FIGURE 3. Hernias. (C) Giant inguinal scrotal hernia on the left side. (D) Lumbar hernia.

risk of a hernia condition. Inguinal hernia appears to be endemic in this part of the world. The reason is not clear but many factors could be considered. Apart from the presence of patent processus vaginalis in a high percentage of natives, the question of excessive strain at manual labor has to be considered. Whether metabolic factors such as lathyrism, as suggested by Conner and Peacock[9] play a role, is still to be determined. The importance of strain as a causative factor is apparent from the fairly high percentage of involvement among the farmers, 57.4 percent (Table II), whose methods of farming are still crude and entirely manual.

The resection rate of 82 of 244 patients or 33.6 percent is quite high, when compared with those of Requarth and Theis,[10] and Bucy,[11] and Frankau whose resection rates are less than 10 percent, although Arneson[3] has a 24.6 percent resection rate (Table VI). The explanation for our apparent high rate of resection lies partly in the fact that our study excludes patients with successful manipulative reductions and partly because many patients ignore their hernia conditions until incarceration develops. The clinical impression of strangulation correlated poorly with the actual operative findings of nonviable bowel. Out of 173 cases diagnosed clinically to have strangulated bowel, only 82, or 49 percent, had nonviable bowel at surgery. This agrees with the findings of other authorities.[12]

Currently, the government is embarking strongly on the improvement of medical facilities throughout the States. This, coupled with the emphasis on the mechanization of agriculture and increase in industrialization, will positively reduce the rate of obstructed hernias significantly in our States.

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Penetrating Injuries of Chest

Stab and gunshot wounds

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Penetrating injuries of the chest play a major role in thoracic trauma. A review of 100 consecutive cases admitted to Cumberland Hospital over the past two years indicates that early surgical intervention, when indicated, lowers mortality. Early and proper placement of a thoracostomy tube and mechanical ventilation utilizing PEEP (positive end expiratory pressure) lowers morbidity in these injuries. Patients were divided into the following groups: (1) Immediate thoracotomy: 10 patients sustained cardiopulmonary arrest prior to arrival at the hospital and were resuscitated in the emergency room. When cardiac activity was apparent they were immediately taken to the operating room. Three patients survived. (2) Thoracotomy and/or celiotomy: 22 patients were treated in this manner with one death. (3) Observation with (a) chest x-ray or (b) tube thoracostomy: 63 patients were treated in this manner with no deaths. One percent of the patients who reached the emergency room in hemodynamically stable condition died. The overall mortality rate was 8 percent. The rate of complication was 9 percent.

Trauma is the third leading cause of death in the United States.[1] Penetrating injuries of the chest play a major role in thoracic trauma. Lindskog,[2] describing "some historical aspects of thoracic trauma," said that from the days of ancient Greece until the present time, traumatic injuries of the thorax have been all too frequently synonymous with death.

According to Lindskog, such an event was described in Homer's *Iliad*, when Idomeneus slayed Alcathous:

> "Speared him in midmost breast and cleft the coat of bronze about him: it had always kept death off from him before but now it rang dryly as it was split around the spear. Clanging he fell, the spear transfixed his heart which went on throbbing still and shook the butt till heavy Ares stopped it then at last."[2]

A review of the 100 consecutive cases admitted to Cumberland Hospital in the two-year period from June, 1978, to June, 1980, indicated that early surgical intervention properly employed when indicated lowers mortality. Early and proper placement of a thoracostomy tube and mechanical ventilation utilizing PEEP (positive end expiratory pressure) lowers morbidity in these injuries.

Patients and methods

Among the 100 patients admitted, 81 had sustained stab wounds and 19 had sustained gunshot wounds. There were 87 males and 13 females, ranging in age from 14 to 75 years, the average age being 26.5 years. Management of these injuries was accomplished according to the following protocol:

1. Intubation of patients in respiratory distress.
2. Infusion of 5 percent dextrose in Ringer's lactate through a peripheral vein and a central vein through subclavian, internal jugular, or antecubital vein.
3. Blood is sent for type and cross-match.
4. Pulse, respiration, and blood pressure are recorded.
5. Central venous pressure and jugular venous pressure are measured.
6. Pericardiocentesis is done if the site of injury is in the precordial area with associated systolic blood pressure of less than 90 to 100 mm. Hg, accompanied with elevated central venous pressure and distended jugular veins.
7. A Foley catheter is inserted.
8. Physical examination is performed and recorded.
9. A chest x-ray is taken in expiration in the upright position.
10. Tube thoracostomy is done if patient has pneumothorax, hemothorax, or hemopneumothorax.
11. Abdominal tap and lavage are done infraumbilically in the midline using number 16 needle if the site of injury is in lower part of the chest or in the abdomen with associated abdominal tenderness.
12. All patients receive injections of tetanus toxoid and 1 Gm. of oxacillin or cephalothin sodium.
13. Thoracotomy is done in the emergency room or the operating room if indicated, preferably within less than one hour of admission.
14. All patients receive chest physiotherapy and incentive spirometry.
15. All patients who maintain pO_2 (oxygen pressure) of less than 60 mm. Hg postoperatively are started on PEEP (positive end expiratory pressure) of 8 to 10 cm. of water.

Based on initial evaluation the patients were divided into groups as shown in Table I.

Group I. Immediate thoracotomy. Ten patients who had cardiopulmonary arrest prior to arrival at the hospital or before the treatment could be started required immediate thoracotomy. They were resuscitated in the emergency room until cardiac activity was evident and then immediate formal thoracotomy was performed. Six patients died on the operating table. One patient left the operating room in stable condition but never regained consciousness and died on the fourth postoperative day. Of the three survivors, one had some residual brain damage and was later transferred to a chronic care facility. Two survivors were discharged in satisfactory condition. The findings at thoracotomy in these patients showed massive cardiac injury or associated injuries to the major vessels in the mediastinum, or both.

Group II. Thoracotomy and/or celiotomy. Patients in this group were taken to the operating room within 30 minutes to three hours after admission. These patients were further subdivided into three groups depending on (1) the site of injury, (2) central venous pressure, (3) drainage from thoracostomy tube, (4) persistence of hypotension, and (5) findings suggestive of intra-abdominal pathologic condition.

A. *Open thoracotomy.* Eight patients required formal open thoracotomy. The determining criteria were the site of injury in the precordial area, increased central venous pressure, immediate drainage of more than 800 to 1,000 cc. of blood from the thoracostomy tube at the time of insertion, and/or persistence of systolic blood pressure below 90 mm. Hg in spite of adequate replacement of fluids. There were no deaths in this group.

B. *Open thoracotomy with celiotomy.* Nine patients required formal open thoracotomy and abdominal exploration. The determining criteria for open thoracotomy were as mentioned. The site of injury in the lower chest or in the abdomen, or positive results of abdominal tap and lavage, or both of these, were the criteria for abdominal exploration. One death due to respiratory insufficiency on the nineteenth postoperative day was noted in this group.

C. *Tube thoracostomy with celiotomy.* Ten patients whose site of injury was in the lower part of the chest or in the abdomen, and who had positive results of abdominal tap and lavage and minimal pneumothorax, hemothorax, or hemopneumothorax, required only tube thoracostomy for the chest injury but required abdominal exploration because of findings suggestive of intra-abdominal pathologic condition. There were no deaths in this group.

Group III. Observation with (A) chest x-ray or (B) tube thoracostomy. Sixty-three patients who were in no respiratory distress and maintained systolic blood pressure over 100 mm. Hg and drained less than 750 cc. of blood from the chest tube at time of insertion were observed as shown in Table II.

TABLE I. Grouping of patients with penetrating injuries of chest

Group	Treatment Received	Number of Patients	Number of Deaths
I	Immediate thoracotomy	10	7
II	Thoracotomy and/or celiotomy	27	1
III	Observation with or without tube thoracostomy	63	0
TOTALS		100	8

TABLE II. Group III patients

Group	Observation With	Number of Patients	Requiring Thoracotomy	Requiring Celiotomy
III-A	Chest x-ray	33	1	0
III-B	Tube thoracostomy	30	4	1

A. Thirty-three patients whose chest x-ray showed no intrathoracic pathologic condition at the time of admission were observed. Chest x-rays were taken 8 hours after admission and then every 24 hours for 48 hours. One patient in the group who first showed hemothorax eight hours after admission with drainage of more than one liter on insertion of the chest tube and fall in systolic blood pressure to less than 90 mm. Hg required open thoracotomy.

B. Thirty patients had pneumothorax, hemothorax, or hemopneumothorax at the time of admission. All had a number 36 or 38 chest tube inserted in the midaxillary line in the fifth or sixth intercostal space. They were observed with chest x-rays taken 8 hours after admission and then every 24 hours for 3 to 4 days. Drainage from the thoracostomy tube was monitored. Four patients required open thoracotomy because of drainage of more than 150 cc. per hour for four consecutive hours. These patients underwent thoracotomy within 24 hours. One patient with a stab wound on the lower left side of the chest had persistent abdominal pain in the left side. An abdominal lavage performed 24 hours later yielded blood and the patient underwent abdominal exploration.

There were no deaths in this group.

Results

The mortality rate was the highest in group I because of the extensive injuries. The mortality was the highest due to gunshot wounds, among patients who came in with cardiopulmonary arrest. There was one death in group II. There were no deaths in group III. A mortality rate of 1 percent was noted in patients who were in hemodynamically stable condition on admission. The results are comparable to those in Oparah and Mandal's[3] series of 0.9 percent. The overall mortality rate was 8 percent, and the complication rate was 9 percent. Complications were noted as follows:

Atelectasis	4 patients
Pleural effusion	2
Pericardial effusion	1
Pericarditis	1
Respiratory insufficiency	1
Fibrothorax or empyema	0
Total	9

Patients with atelectasis improved with chest physiotherapy. Among two patients with pleural effusion, one needed thoracentesis and one required reinsertion of the chest tube. One patient with pericardial effusion required pericardiotomy after repeated pericardiocentesis failed. One patient with pericarditis responded well to indomethacin. Respiratory insufficiency was the cause of only one postoperative death. There was no fibrothorax or empyema noted in this series.

Comment

In penetrating chest trauma, the rate of survival after extensive cardiac injuries or injuries to major vessels in the mediastinum, or both, is 30 percent in our series. Early surgical intervention is indicated in those patients who arrive in shock and continue to maintain systolic blood pressure of less than 90 mm. Hg in spite of adequate intravenous infusion, or who have immediate drainage of 800 to 1,000 cc. of blood from the chest tube at the time of insertion or who continue to drain 150 cc. per hour for more than four consecutive hours. Pericardiocentesis should be used to relieve pericardial tamponade while preparing the patient for thoracotomy.[4,5] The timely and proper placement of a thoracostomy tube is critical. Thoracentesis as part of the initial treatment as suggested by Griffith et al.[6] has no place in penetrating injuries to the chest. Conservative management in selected patients with chest injuries results in low mortality rates (1.8 percent).[7,8] In this series, there were no deaths among patients whose injuries allowed conservative management. Patients with penetrating injuries of the chest have a high incidence of pulmonary contusion. Mechanical ventilation utilizing PEEP has been shown to have a protective effect on the lung parenchyma, especially if the pO_2 is less than 60 mm. Hg.[1] In this series those postoperative patients who maintained pO_2 of less than 60 mm. Hg were started on PEEP of 8 to 10 cm. of water. All patients received respiratory physiotherapy and incentive spirometry. All patients were started on 1 Gm. oxacillin or 1 Gm. cephalothin at the time of admission and then every six hours. The antibiotics were discontinued after 48 hours if the patient was treated nonoperatively, and continued for 5 to 6 days if the patient had thoracotomy. If there were associated abdominal injuries, 600 mg. of clindamycin every six hours was added.

Conclusion

In conclusion, early surgical intervention properly employed when indicated lowers mortality in penetrating chest trauma, and early and proper placement of a thoracostomy tube with mechanical ventilation utilizing PEEP (positive end expiratory pressure) lowers mortality in patients with these injuries.

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Missile Injuries of Brain

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During the past decade the incidence of missile injuries to the brain has shown a gradual increase. Although this category of injury represents one of the severest type of head trauma, it is known that a considerable number of patients can be saved by prompt and appropriate action. This article reviews ballistic, pathologic, diagnostic, and therapeutic considerations essential to the medical management of the victims.

Injuries inflicted to the head and brain by missiles have some characteristics different from other types of head injuries. The type of projectile and the conditions under which it was fired play an important role as far as initial assessment and prognosis is concerned. This is not the case in contact injuries caused by blunt or sharp instruments.

In addition to the general principles in treatment of head injuries, some knowledge of weaponry and ballistics by the surgeon is useful to evaluate casualties caused by missiles. Far from being a moralist, the surgeon should know "the enemy" in gunshot wounds. This enemy is not the man whose hand pulled the trigger, but the gun whose trigger was pulled.

Violent deaths caused by guns increased spectacularly in the last 20 years; they increased from slightly over 60 percent to a present 85 percent, and the percentage continues to rise. Many victims die from injury to the brain; a proportionate number survive although many remain disabled.

Weapons and missiles

Modern weapons, whether handguns or rifles, expel their bullets with a tremendous force. Their effect on living tissue depends on the caliber of the bullet, the explosive charge, the muzzle velocity, and the distance from gun to target.

The caliber of a gun is determined by the diameter of its bullet, usually expressed in fractions of the inch (.22, .25, .32, .357, .38, and .45) or in the millimeter scale (6.35, 7.65, and 9 mm.). The caliber of rifles generally varies between 7 and 8 mm.; the NATO standard is 7.62 (.308).

After the trigger is pulled, the sequence of events starts with the firing pin hitting a primer sealed at the base of the cartridge. This action sets off the powder charge that fills the cartridge. In modern guns the explosive charge is very explosive indeed, consisting either of cellulose nitrate or a combination of cellulose nitrate and nitroglycerine. The amount of the charge is important. Some cartridges are supercharged and pack a tremendous force. On the other hand, many city police use their .38 revolvers with cartridges of reduced charge (wadcutters). As a result, the penetrating effect of the bullet is reduced at long range to avoid seriously injuring innocent bystanders by a stray bullet while maintaining almost full efficiency at close range. As an example, a .38 standard cartridge with a muzzle velocity of 855 feet per second reduces its velocity to 820 at 50 yards and 790 at 100 yards. By comparison a midrange wadcutter has an initial speed of 770, but only 655 at 50 yards, and 560 at 100 yards.

Few people realize the distance a bullet fired from a modern handgun can travel. A bullet containing the least charge, that of a .22, can still penetrate a half inch of hard wood at 1,400 feet.

The amount and quality of the explosive charge is important as far as the impact on living tissue is concerned. It may also be mentioned that modern charges, in contrast to old manufactures, not to speak of black powder which is hardly used anymore, do not deteriorate much with time; a 10-year-old cartridge is for practical purposes as good as new.

A highly explosive charge can be devastating even in a pistol of not exceptionally high caliber. A .357 Magnum is much more powerful on impact than the similar sized conventionally charged .38. Actually, .38 ammunition can be fired from a Magnum. A .357 Magnum certainly has considerable arresting power; not only is it capable of stopping a man in his tracks but it can actually stop a car by penetrating the engine block. Its heavy centerfire cartridge expels the bullet at a speed of 1,500 feet per second, almost double the speed of the standard .38.

Once the charge in the cartridge explodes, it produces a large volume of rapidly expanding hot gases that blow the bullet from the gun. The muzzle velocity, that is to say the speed of the missile at the point where it leaves the barrel of the gun, is responsible for the energy at the point of impact. The higher the muzzle velocity, the more powerful the impact. Damage caused by "high-velocity" bullets (speed in excess of 2,500 feet per second) is disproportionately greater than that caused by ordinary velocity (less than 1,200 feet per second). The initial muzzle velocity is, of course, reduced by the distance the bullet has to travel. The extreme of muzzle velocity is reached in rifles firing high explosive cartridges; the speed of their bullets is perceptibly reduced only after traveling a considerable distance. The same holds true for military assault rifles, like the M-16 or AK-47, which explains their devastating effect. They are rarely the cause of injuries in civilian life because they are not as easily available as other guns and they are very expensive.

The penetrating power of a bullet depends to a great deal on the charge, which ranges from standard to high explosive; pistol bullets fired from standard .22 or .32 cartridges sometimes do not penetrate bone, including skull.[1]

The core of the bullet is usually lead. This is encased in a hard metal jacket, made from a combination of copper or zinc or steel. In addition, the jacket may be plated with nickel. However, some pistol ammunition is not jacketed but is left bare or covered with a thin layer (wash) of copper or tin that does not add any hardness to the core. Although any bullet may get deformed when it penetrates the skull, these soft bullets are more apt to do so. As a result, they can enter the intracranial cavity in the form of a jagged, irregular chunk of metal, two to three times larger in diameter than they were originally, causing a proportionately larger path of destruction (Fig. 1).

A soft bullet without a jacket or with a jacket that leaves its point bare (soft-point or soft-nosed) is very destructive, the more so the flatter its point. It can be made even deadlier when the bullet nose is filed, split, or drilled. Even more destructive are the hollow-point bullets and the so-called devastators that contain a small explosive charge near the point; this explodes on impact.

All bullets mentioned above are defined by the old-fashioned term of dum-dum bullets, named after a village in India where they were used during the great Sepoy uprising. The Geneva convention forbids their use in war. They are produced, however, for domestic use to increase their killing power in big game hunting. Their effect on man is devastating.

Even a perfectly regular bullet can cause excessive injury when it tumbles in its flight, either spontaneously or by rebounding from a hard surface, and hits the head with its side or at an angle.

Shotgun injuries to the head at close range cause massive skull and brain destruction, frequently resulting in extensive loss of cranial and brain tissue. Much of the extent of the injury depends on the distance of the muzzle from the victim. As a general rule, when the distance is over 30 feet, the wound consists of many holes, each corresponding to the entrance of one pellet. However, when the distance is less than 15 feet, the impact site is one solid mass of wounds, caused not only by the concentrated mass of the pellets, but also by the wadding of the shell.

Rubber or plastic bullets, sometimes used in riot control, are not as innocous as they may seem to be. They can cause linear fractures and depressed fractures of the skull, particularly when they are fired at a relatively close range. On rare occasions they can cause intracranial damage and massive brain edema.[2]

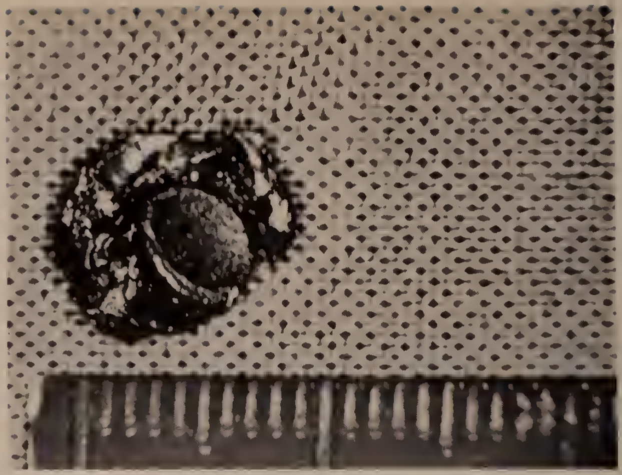
FIGURE 1. Deformed .22 bullet removed from brain. Its impact on the skull increased its original diameter 2.5 times.

Fragments from explosive devices, such as shells, shrapnel, grenades, mines, or homemade bombs may have high velocities—as high as 3,000 to 4,500 feet per second near the site of explosion. These irregular, sharp fragments cause extensive damage to the skull and its contents, frequently carrying with themselves pieces of hats, helmets, and hair.

Stud-gun and nail-gun injuries are being observed with increasing frequency.[3,4] These powder-activated tools are now commonly employed in building construction. Due to the peculiarities of the charge and the great length of the projectile being sometimes slowed down in its path by an attached wire, these missiles, although capable of penetrating the skull, seem to cause less destruction than do regular bullets.

Injuries without penetration of skull

A bullet impact to the head might have serious neurologic sequelae even without penetration of the skull. A glancing blow to the head by a high-velocity bullet results in a tangential wound of the scalp and sometimes of the skull. There is usually laceration of the scalp, sometimes associated with a linear fracture of the skull, but at no time does the missile perforate the skull. About three quarters of these patients have focal neurologic signs or symptoms.[5] About one fifth of them have multiple seizures, none of them in the immediate period after the injury. Surgical exploration is indicated if seizures continue and neurologic deficit does not clear. Many of these patients reveal epidural, subdural, or subcortical hemorrhages with various degrees of cortical laceration or contusion. At other times a bullet, usually fired from a pistol of low muzzle velocity and perhaps using outdated ammunition with deteriorated powder charge, penetrates the scalp down to the galea and then glides over the skull subcutaneously without penetrating it, sometimes to a considerable distance, only to be found by palpation under the skin several centimeters from the point of entry.

Injury to skull

Once the bullet enters the skull it might remain lodged in the intracranial cavity or it might exit, usually at a point opposite to its entrance. The entrance wound is usually smaller than the exit wound, but there may be a great deal of variation in their relative sizes; a tumbling bullet may cause a large, irregular area of destruction at its point of entrance. Multiple linear fractures radiating from either the entrance or exit wounds are common. Some fractures may be far away from the trajectory of the bullet, particularly in thin bones such as the roof and of the orbit and the paranasal sinuses. This is caused by the sudden explosive rise in intracranial pressure rather than by the direct effect of the missile. Such distant fractures are frequently not suspected and might not be even visible on customary skull x-ray films. However, they might lead to cerebrospinal fluid leaks, particularly rhinorrhea, which does not become manifest until some time after the injury when intracranial pressure returns to normal.

Careening can also occur inside the skull where the bullet, once it has penetrated the skull at an angle, slides along the inside of the skull. Such bullets can do considerable damage without entering the brain substance by ripping open major cerebral veins and causing hemorrhages and infarction. In one remarkable case a young man was shot in the back of his head by a .38 revolver from a distance of about 20 feet. The bullet penetrated the occipital bone in the midline just under the external occipital protuberance at a slightly upward elevated angle. It entered the torcular Herophili and continued along the inside of the skull in the midline only to rest a few centimeters above and behind the level of the crista galli. In its course it ripped the entire superior sagittal sinus open.

Bullets might get stuck anywhere in the brain, having traversed some of it without exiting. Quite frequently they traverse the entire width of the brain but do not have enough kinetic energy to escape by fracturing the skull on the other side. They either stop at the internal table or rebound from there back into the brain substance. This might occur in the path of the original track or, when they hit the internal table at an angle, they might rebound from there at the same angle in the opposite direction, forming a new track. Bullets that break into two or more pieces on penetrating the skull might split into different directions, each fragment forming a different track.

Injury to brain

On entering the brain bullets cause rapid, temporary cavitation around the missile path, imparted to the tissue by radial velocity.[6] This cavitation is much more pronounced with high-velocity bullets. This results in widespread rupture of cell membranes far remote from the bullet track. The tearing of tissues results from the kinetic energy of the missile and additional injury from the temporary cavity formation, which may be more than a hundred times larger than the volume of missile.[7]

High-velocity bullets hitting the head at close range can cause complete devastation of the brain. Large portions of the brain, sometimes a whole hemisphere, can be blown out through the large exit defect of the skull.[8]

The permanent bullet track through the brain is usually fusiform, lined by necrotic brain tissue. The layer of necrotic brain tissue around the track is proportional to the velocity of the missile. Injuries to the major cerebral arteries, veins, or venous sinuses can occur during any of the bullet's intracranial passage. The walls of the track are frequently peppered with metal shavings and with indriven bone fragments.

Intracranial hematomas are frequent. They are usually the result of accumulation of blood in the missile canal resulting from the laceration of major blood vessels in the bullet path. Equally frequent are subdural hematomas; the two are frequently combined. Epidural hematomas resulting from a torn main stem or branch of the middle meningeal artery or intraventricular hematomas are less frequent.

Bullets or their fragments frequently traverse or lodge in the ventricular system. The lateral ventricle is most frequently involved, the third only occasionally.

Cerebral injuries caused by missiles result in an immediate or transitory increase in ICP (intracranial pressure), lasting for a few minutes.[9] Shortly thereafter the pressure stabilizes at a steady state value, usually above the normal range. At a variable time afterwards and depending on the severity of the injury, the pressure rises again. The ICP level depends on the extent of intracranial bleeding, which may be profuse, even in the absence of injury to major vessels. The delayed increase can also be caused by loss of autoregulation, falling cerebral blood flow, an increase in cerebral blood volume, and eventually increased brain volume due to edema.[10] High-energy missile wounds are frequently associated with bradycardia, blood pressure changes, and a marked alteration in respiration indicating brain stem damage caused by the initial pressure wave or massive cerebral edema even in such wounds that are far away from the mesencephalon.[11]

Diagnostic studies

Every effort should be made to localize metallic and bone fragments and intracranial hematomas prior to surgery. Ordinary skull x-ray films show the location of metallic and bone fragments in addition to the deformity of the skull around the entrance and exit wounds. The presence and location of hematomas are best seen on CT (computed tomography) scans. Although the CT scan is sometimes difficult to evaluate because of the artifacts caused by metallic objects, it is usually possible to obtain satisfactory

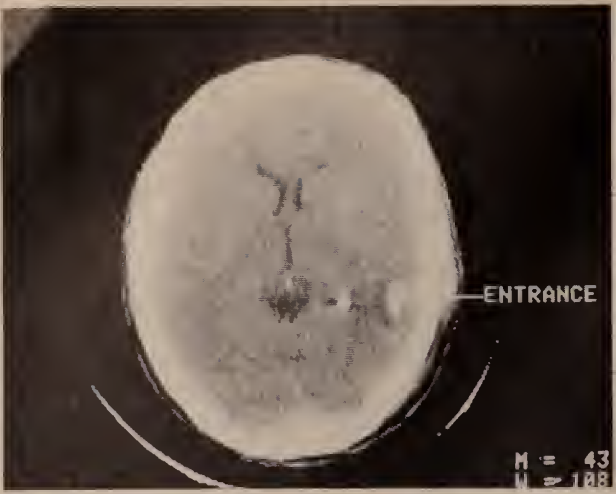

FIGURE 2. CT scan reveals not only metallic fragments, but also area of tissue destruction and missile track. (From Bakay and Glasauer.[15])

pictures which frequently show not only the foreign bodies and hematomas but also the missile tract (Fig. 2).

One should always perform skull radiography in obscure penetrating injuries of the skull no matter how small the scalp laceration and bone injury may be. We detected a two-inch metallic screw deep in the frontoparietal region of the brain that penetrated through a very small hole in the frontal bone (Fig. 3). There was no history of a shot being fired; these low-velocity, long, but very slender objects can penetrate deep into the brain leaving only a very small superficial wound as evidence. On another occasion we removed a 2½-inch nail fired from a nail gun through the cerebellum and the tentorium into the occipital lobe where it rested. There was a tiny, round laceration of the skin at the point of entrance with no evidence of penetration beyond the skin by superficial examination. Initial x-ray films were not taken, the patient returned to work, and the nail was not detected until two weeks later when he started to complain of headache, dizziness, and ataxia.

Treatment

Immediate surgical repair of these wounds is mandatory after the patient's vital signs are stabilized. This is in marked contrast to high-velocity missile wounds of other parts of the body where primary closure is to be avoided. Any delay in definitive treatment leaves the door open for infection ranging from early bacterial meningitis and encephalitis to late intracranial empyemas and brain abscesses.

There is a great deal of difference in the optimal management of missile injuries sustained in war and those sustained in civilian life. There are various reasons for that. The great majority of civilian missile injuries are caused by bullets, whereas in war, between 80 and 90 percent of head wounds are caused by fragments; the latter are usually much larger, causing severe destruction of bone and brain substance and with a high incidence of intracranial hematomas. In civilian injuries the wounded person can be rapidly evacuated to a fully equipped hospital with all necessary ancillary services. In contrast, during war evacuation to a hospital where definitive treatment can be rendered is often delayed, and diagnostic and supporting services are usually less sophisticated. Consequently the treatment of civilian gunshot wounds of the brain is generally more conservative than is the treatment of military wounds.[12]

The proper treatment focuses on removal of intracranial hematomas and surface debridement, but in injuries caused by high-velocity bullets or by fragments of explosives that cause destruction in large areas in the skull and brain, proper inspection of the brain requires a wide exposure.

A limited exposure of the entrance and exit wounds can be carried out from a linear incision through the center of the scalp wound. However, in destructive wounds one usually resorts to an exposure achieved by reflecting a semicircular scalp flap and removing some of the bone surrounding the entry and exit wounds. This also might be necessary in the presence of large depressed fractures that require the removal of many bone fragments.

Whatever approach is used, the lacerated and frequently charred wound edges have to be excised. This also might include the removal of skin that shows evidence of fouling or smudging by smoke when the shot was at close range and powder burns (stippling), fragments of burned or unburned powder embedded in the skin. These are important clues as to the proximity of the gun to the head and are of considerable legal importance. Careful observation

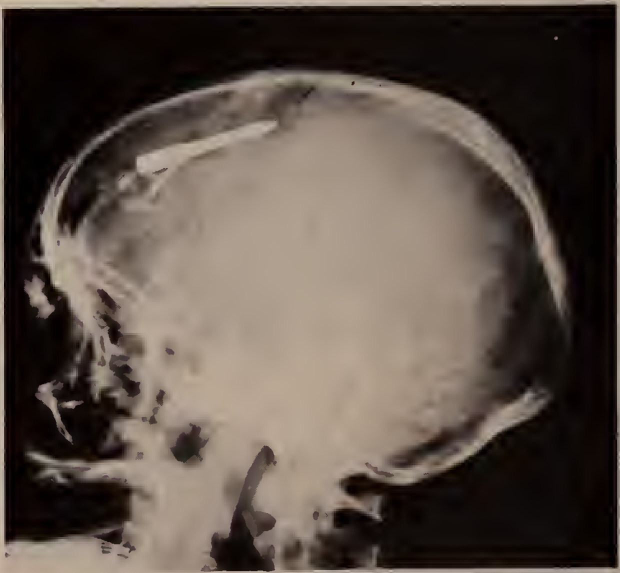

FIGURE 3. Lateral skull roentgenogram shows frontal bone defect and location of nail screw from stud gun in left frontal lobe.

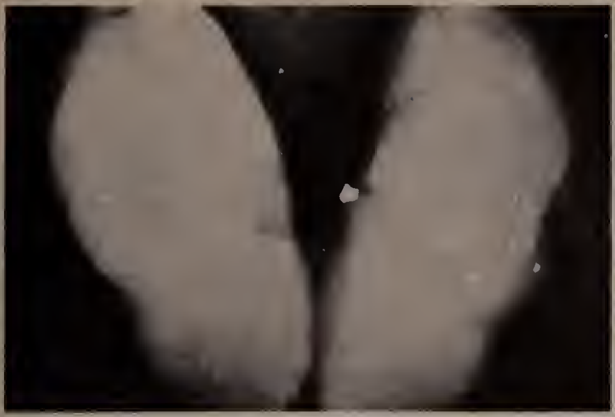

FIGURE 4. Roentgenogram of brain removed at autopsy reveals widespread fragments of .22 bullet.

of the field should be made by the surgeon; it is also advisable to save the removed parts of skin for investigation by the forensic pathologist.

Whatever the technique of the surgical exposure, the bullet track should be investigated. This is best achieved by inserting a soft rubber catheter into the entire length of the track and irrigating the bullet track under moderate pressure with saline solution. This may be followed by irrigation with hydrogen peroxide to flush out further tissue debris and to achieve hemostatis of small bleeding vessels. Probing with rigid instruments should be avoided, since it may induced bleeding, sometimes of arterial origin, from the depths of the brain out of direct vision. The bulk of the missile should be removed only when technically feasible; in many cases it is not. Small metallic fragments that sometimes outline the bullet track or pepper the brain tissue are removed only when they came out with the pulped brain tissue on gentle suction of the track. Those that are firmly embedded in the wall of the canal or beyond should be left alone; bleeding ensues when they are forcefully dislodged (Fig. 4).

A missile or fragment that failed to exit and is situated close to the internal table opposite to its entrance is best left alone during the primary repair of the wound unless it is associated with a significant hematoma. It may be removed later through an appropriate craniotomy on the other side. It must be remembered that even seemingly large fragments are difficult to locate when embedded in the brain, and more harm than good may be done by trying to track them down, particularly in such sensitive areas as the motor strip or the dominant temporal lobe.

Missiles crossing the midline without exiting on the other side of the skull may represent a problem. According to Meirowsky et al.,[13] they were found in 13.8 percent of 1,030 cases of penetrating head injuries during the Vietnam War. These authors call attention to the fact that while removal of bone fragments has long become standard surgical technique, a far more liberal attitude has been adopted with regard to indriven metallic fragments. Although bullets are rendered sterile by the heat of explosion, they might acquire bacteria on their surface when entering the skin. This is more likely the case in large, rugged fragments, than in bullets. In fragment wounds the introduction of foreign matter, clothing, and hair frequently occurs and the danger of a brain abscess is great.

Pulped brain tissue should be removed by gentle suction. It is extremely important to remove all major hematomas including those formed in the deeper portion of the track. When not removed they significantly increase mortality be keeping the intracranial pressure elevated.

It is very important to remove from the track any nonmetallic foreign bodies, including bone fragments, that could be the cause of infection. Brain abscesses can develop around bone fragments that contain bacteria still virulent many years after the initial injury.[14]

Every attempt should be made to remove missiles from the ventricles because there is an increased incidence of migration along the cerebrospinal fluid pathways. This can be usually accomplished by adequate craniotomy and retraction of the edges of the canal under good illumination. The delayed removal of an intraventricular bullet after the tract has healed and scars formed is a much more difficult surgical procedure.

Hemostasis must be achieved before the wound is closed. Gelfoam or microcrystalline collagen may be applied, but it is preferable to remove the gelfoam before final wound closure. Drainage should be avoided except for those rare occasions when significant oozing from the missile track cannot be stopped. At the end of debridement the dura must be closed water-tight, applying grafts from the pericranium or fascia lata if necessary. When extensively lacerated the scalp over the wound should be closed by a sliding flap.

Increased intracranial pressure is a major problem in the management of these wounds.[15] In the acute stage, controlled hyperventilation is usually helpful. Hypertonic solutions (20 percent mannitol) and corticosteroids are also routinely given, but they are usually not effective in massive brain damage, in which cell membranes are diffusely destroyed in a large portion of brain. Barbiturate coma may be helpful but the result of this method of treatment in bullet wounds of the brain is still not adequately known.

Although the prophylactic use of antibiotics is controversial in head injuries, the administration of broad-spectrum antibiotics is recommended in missile wounds because of the ever-present danger of infection. It is also advisable to irrigate the bullet track before closure with an antibiotic solution such as bacitracin.

Late complications include infection; brain abscesses may develop years after the original injury. Missiles embedded in the brain may wander away from their initial site within the white matter, but this is quite rare in contrast to the movement of the bullet when it comes to rest in the ventricular system. Late electrolytic changes sometimes develop around missiles composed of lead, copper, or zinc alloys. These metals cause a toxic reaction in the surrounding brain tissue, resulting in degenerative changes, necrosis, and cyst formation.

The neurologic status, as far as focal signs are concerned, depends to a great extent on the area that is damaged by the missile and the surrounding pressure wave. It is hard to prognosticate the extent of disability during the acute phase of the injury. Frequently the disability is permanent and a hemiplegia resulting from the transection of the internal capsule will obviously not improve with time. However, we have seen remarkable improvement of neurologic status, including complete hemiplegia, months later. A tentative assessment can be made at six months after the injury because significant improvement after that time if there was none before is unlikely.

Posttraumatic epilepsy is a frequent complication of bullet injuries to the brain. Approximately 40 percent of the patients develop it, and permanent epilepsy is found in 15 percent. The first seizure usually occurs within the first three to six months but seizures resulting from glial scars may not develop until years later.

Prognosis

The greatest number of missile injuries to the head were collected from a succession of modern wars starting with World War I. Results improved considerably. Where the overwhelming majority of soldiers shot during World War I died as a result of their head wounds, there was a considerable salvage rate in World War II which further improved during the Korean War and the war in Vietnam. Some of the improvement can be attributed to increased skill in treatment. Wound repair with tight dural closure, the avoidance of secondary infection because of lack of dural repair, and the more definitive treatment which included the removal of fragments, particularly bone fragments and intracranial clots, contributed greatly to the decreased mortality. The rapid evacuation of wounded soldiers by helicopters from the field into a hospital competent to deal with his wounds and the decrease of delay from many hours to a very few hours as well as the availability of effective antibiotics were equally important.

The prognosis in terms of survival is difficult to assess in the early stages of missile injuries. The level of consciousness is perhaps the most important indicator as far as survival is concerned. Almost 90 percent of patients who are alert on admission survive; this certainly represents a small group. Of those who are drowsy 66 percent survive. Only 21 percent of those who are unconscious but reacting to painful stimuli survive, but 65 percent of those who arrive in deep coma die.[16] In those patients who are not obviously moribund at the time of admission some prognostic help can be gained from the circumstance of the injury. Those shot by pistols are more likely to survive provided that vital areas such as the hypothalamus or the mesencephalon are not injured directly or indirectly. Most pistols do not have a muzzle velocity greater than 800 to 900 feet per second. Those shot by high-velocity guns rarely survive if the mass of the brain is traversed unless they are shot from a great distance and the bullet is already "spent." The range of these guns are so great that even a shot delivered at 100 to 200 yards counts as relatively close range.

Very few people who are shot in the brain with a high-velocity rifle survive. However, there are exceptions, usually due to special circumstances.

Unusual cases

The chance of survival is enhanced when the bullet travels through several bony layers of the face. Much of the original kinetic energy can be dissipated by the passage of the bullet through and the breaking of facial bones and the base of the skull.

Case 1. A young man attempted to commit suicide by placing the muzzle of a rifle firmly under his chin and pulling the trigger with his big toe. The bullet grazed the inside of the mandible and then went through the hard palate, the maxilla, the inside rim of the orbit, and the ethmoid sinuses to enter the skull through the anterior fossa close to the midline but lateral enough to avoid hitting the sagittal sinus. It went through the frontal lobe and hit the internal table on the vertex close to the level of the coronal suture. From there it bounced back forming a new track through the frontal lobe somewhat more posteriorly and became partially embedded in the bone of the base close to the sphenoid ridge. The patient was slightly responsive on admission and for that reason surgical treatment was restricted to debridement. There was no hematoma in the intracranial cavity. Not only did this man survive but he made a remarkable functional recovery. Six months later the only remaining deficit was some intellectual dulling and a slight weakness of the contralateral leg caused by injury to the upper portion of the motor cortex.

Immediate bony decompression and extrusion of a large blood clot, either spontaneous or surgical, can be life-saving.

Case 2. An Attica prisoner was shot during the prison riot in the back of his head with a .270 rifle from an estimated distance of 200 yards. On arrival to the hospital one and one-half hours later he was deeply comatose with a fixed, dilated pupil on the ipsilateral side and stopped breathing during the hurried initial examination. There was massive scalp laceration and the left occipital bone was shattered. Some loose bone fragments were immediately removed with a hemostat through the gaping wound whereupon a large clot was expelled spontaneously. He immediately resumed breathing and was taken to the operating room. X-ray films showed that the bullet split into two fragments, one of them still in the occipital area while the other was lodged in the parietal region close to the internal table (Fig. 5A). A large amount of necrotic occipital lobe was removed as well as additional intracerebral hematomas and bone fragments. A 2 by 3 cm. area of the dura was missing. All the loose bone was removed resulting in a generous bony decompression (Fig. 5B). No attempt was made to remove the bullet fragment in the parietal lobe. The patient regained consciousness on the next day. He was densely hemiplegic. The parietal fragment was removed through a separate craniotomy one month later and eventually a cranioplasty was performed to replicate the missing occipital bone (Fig. 5C).

Although we were initially convinced that this patient's hemiplegia, which was complete, would remain permanent, much to our surprise it started to improve about one month after the injury. Six months later it was all but gone.

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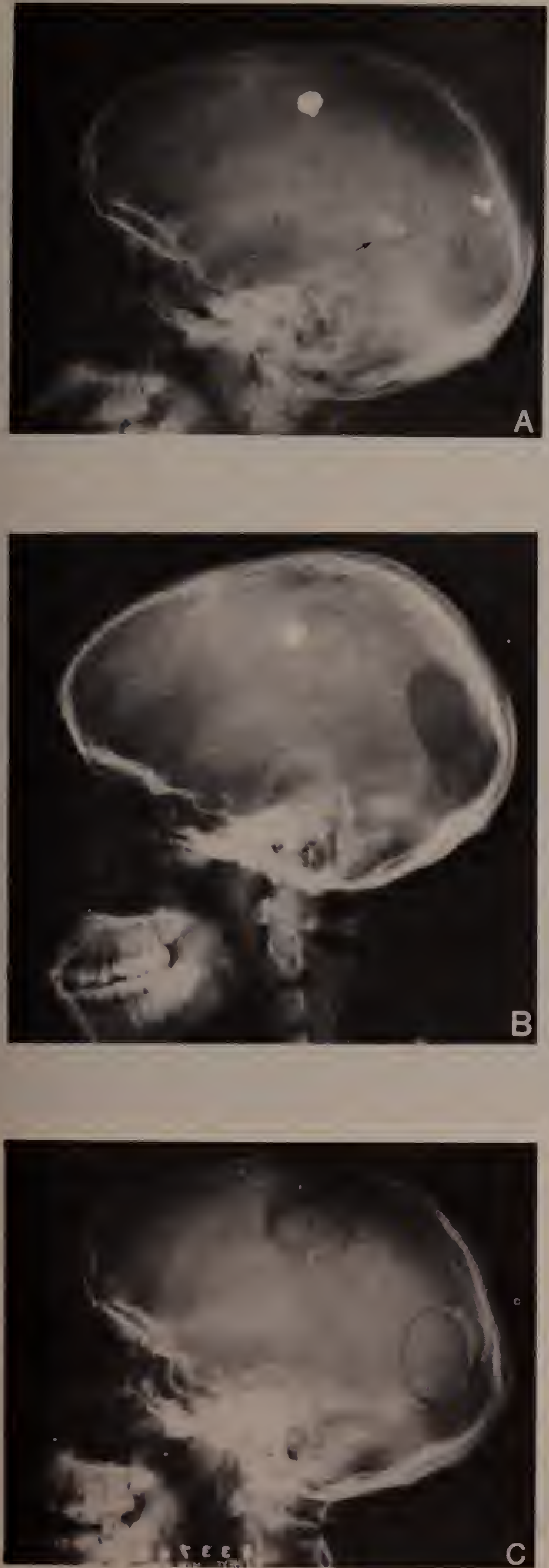

FIGURE 5. Case 2. (A) metallic and bone (arrow) fragments in brain of patient shot through occiput with .270 rifle. (B) After removal of occipital half of bullet and bone fragments. (C) Frontoparietal fragment removed through separate craniotomy. Occipital craniotomy defect repaired by acrylic mesh cranioplasty. (From Bakay and Glasauer.[15])

Brief Summary

***INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective for the relief of moderate to moderately severe pain in those situations where the physician wishes to add a mild sedative effect

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Hypersensitivity to dihydrocodeine, codeine, promethazine, or aspirin.

WARNINGS: Salicylates should be used with extreme caution in the presence of peptic ulcer or coagulation abnormalities.

Drug Oependence: Dihydrocodeine can produce drug dependence of the codeine type and therefore has the potential of being abused. Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of dihydrocodeine, and it should be prescribed and administered with the same degree of caution appropriate to the use of other oral narcotic-containing medications.

Like other narcotic-containing medications, dihydrocodeine is subject to the provisions of the Federal Controlled Substances Act.

Usage in Ambulatory Patients:. Dihydrocodeine and promethazine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery. The patient using Synalgos-DC should be cautioned accordingly.

Interactions with other Central-Nervous-System Depressants: Patients receiving other narcotic analgesics, general anesthetics, other phenothiazines, tranquilizers, sedative-hypnotics or other CNS depressants (including alcohol) concomitantly with Synalgos-DC may exhibit an additive CNS depression. When such combined therapy is contemplated, the dose of one or both agents should be reduced.

Patients who have demonstrated a hypersensitivity reaction (e.g., blood dyscrasia, jaundice) with a phenothiazine should not be reexposed to any phenothiazine, including Synalgos-DC, unless in the judgment of the physician the potential benefits of the treatment outweigh the possible hazards.

Usage in Pregnancy: Reproduction studies have not been performed in animals. There is no adequate information on whether this drug may affect fertility in human males and females or has a teratogenic potential or other adverse effect on the fetus.

Usage in Children: Since there is no experience in children who have received this drug, safety and efficacy in children have not been established.

PRECAUTIDNS: Promethazine should be administered cautiously to patients with cardiovascular or liver disease. Synalgos-DC should be given with caution to certain patients such as the elderly or debilitated, and those with hypothyroidism, Addison's disease, and prostatic hypertrophy and urethral stricture.

ADVERSE REACTIONS: The most frequently observed reactions include light-headedness, dizziness, drowsiness, sedation, nausea, vomiting, constipation, pruritus, skin reactions, and rarely hypotension.

OOSAGE AND ADMINISTRATIDN: Dosage should be adjusted according to the severity of the pain and the response of the patient. Synalgos-DC is given orally. The usual adult dose is two capsules every 4 hours as needed for pain.

DRUG INTERACTIONS: The CNS depressant effects of Synalgos-DC may be additive with that of other CNS depressants.

See Warnings.

Aspirin may enhance the effects of anticoagulants and inhibit the uricosuric effects of uricosuric agents.

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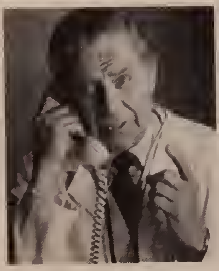

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Typhoid Fever, the Typhus-Like Disease

Historical Perspective

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Typhoid fever (typhus-like) and typhus fever, with their many features in common, caused diagnostic confusion for hundreds of years in patients with enteric fevers. The differential diagnostic features of typhoid fever and typhus have been discussed from an historical and clinical perspective.

Typhoid fever is a disease of antiquity, but its early history is lost among the acute febrile enteric disorders known to the ancients. Typhoid means "like typhus," the disease with which it was most often confused. The word typhus is derived from the Greek, meaning cloudy and hazy; it was used to describe individuals in the Hippocratic era who had a cloudy sensorium associated with enteric fevers. Because typhoid fever and typhus have so many features in common, it took many years to clearly differentiate between these two disease entities.

Historic perspective

Van den Spieghel, a Brussels anatomist, was the first to describe the clinical presentation of typhoid fever in 1624. He also followed the patient to autopsy where gangrenous Peyer's patches were noted in the intestine. However, Thomas Willis in 1669 made the first attempt to separate typhoid fever (febris putrida) from typhus (febris pestilens). The differential features that Willis noted related to epidemiology and clinical presentation. He noted that typhus was much more contagious than typhoid, and was also more extensive and hemorraghic. He also noted that typhoid fever subsided by gradual defervescence over a period of several weeks, whereas in typhus the fever decreased suddenly by crisis. In subsequent observations, Willis noted that only in typhoid fever were intestinal ulcers and enlarged mesenteric lymph nodes found.[1]

Although the clinical pathologic differentiation between typhoid fever and typhus fever was recognized by the mid-seventeenth century, confusion in distinguishing the disease recurred at the beginning of the nineteenth century because of geographic differences in the prevalence of both diseases. On the European continent, typhoid was rampant but typhus fever did not exist. It was assumed that the typhoid fever of Europe was the same disease as was the similar condition thought to be typhoid fever in England. In Ireland, and to a lesser extent in England, typhus had been a significant health problem for hundreds of years and was referred to as spotted fever, petechial fever, ship fever, or English jail fever. English physicians failed to understand why their clinical descriptions and autopsy findings differed so much from the descriptions of the Germans and the French.[2] Bretonneau in 1804 described 200 autopsied cases of typhoid fever, which were constantly associated with definite intestinal lesions in the lymphatics, and he named this disease "dothinenteritis." Because Bretonneau had never seen a case of typhus, he considered the "dothinenteritis" (typhoid fever of France) to be identical with the typhus found in Ireland and England. Bretonneau also noted that an attack with typhoid fever consistently produced immunity from subsequent attacks.[3] At approximately the same time, Nathan Smith, president of Yale, was the first to describe typhoid fever in the United States. Smith recognized that typhoid fever was contagious and was transmissible by water. He described the clinical pathologic findings of the disease, as well as this epidemiologic fact in his "Practical Essay on Typhous Fever" (typhoid fever).[4] The term typhoid fever was introduced in 1829 by the French physician Pierre Louis. Using pathologic studies, he clearly separated typhoid fever from the other enteric or putrid fevers common in France at the time. Once again, because typhus was not present in continental Europe, he was unable to differentiate between typhoid fever and typhus. The final clinical distinction between both diseases was made by William Gerhardt in 1837.[5] He was able to make the distinction because of his experience with both diseases in Great Britain and in France. He commented, "There are two different fevers, one highly contagious which I call the Irish Typhus, and in which the cephalic symptoms predominate to the exclusion of abdominal alterations. The other (typhoid) which is sporadic, and most likely not so infectious, and in which the abdominal symptoms are more prominent." Gerhardt characterized typhoid fever as producing minimal changes in mental status as compared with typhus. Abdominal pain and diarrhea were features of typhoid. Pneumonia was a frequent accompaniment of the disease, and rose spots were peculiar to this disease entity. In contradistinction, conjunctival suffusion

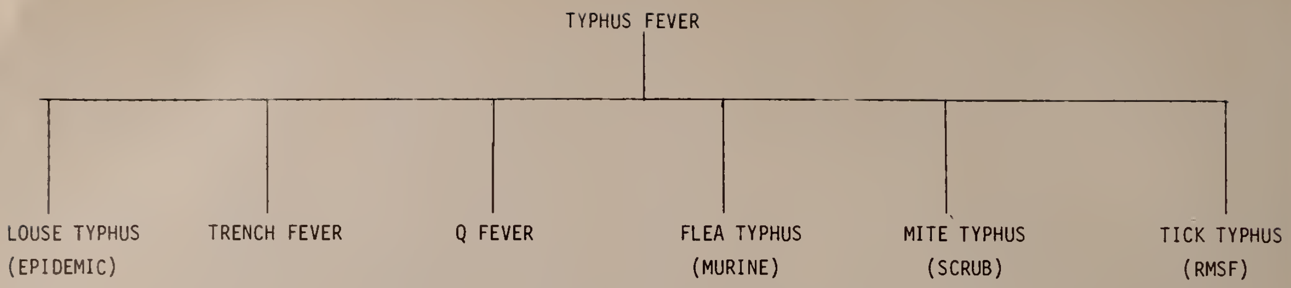

FIGURE 1. Classification of rickettsial fevers.

was a consistent finding in typhus as were significant changes in mental status, such as stupor. No abdominal symptoms were present in typhus, and a petechial skin eruption was also noted in patients with typhus. Gerhardt was able to observe patients at the Pennsylvania Hospital with both types of typhoid, which gave him the opportunity to compare, firsthand, these two similar diseases. His studies in Philadelphia led him to conclude that the typhus in Philadelphia was the same as typhus in Ireland and England and was highly contagious, and that the enteric fever of France and England was typhoid fever.[5,6]

Clinical features

To fully appreciate the difficulty of separating typhus from typhoid it is useful, at this point, to review the essential features of both disease entities.

The onset of typhus, as with the other rickettsial diseases, is typically abrupt; the onset of typhoid is more gradual. The predominant symptom of early typhoid may be respiratory, thereby mimicking a urinary tract infection. Constipation is more common at the outset than is diarrhea. The fever in typhoid increases daily in a "stepladder" fashion (Fig. 2A); the temperature in typhus rises rapidly at the end of the second day and then remains at an elevated plateau (Fig. 2B). These features are helpful in distinguishing the two entities.

Headache is severe in typhus (commonly associated with rickettsial diseases), but is less prominent in typhoid (Fig. 1). Although less prominent than in typhus, headache is the most common early symptom of typhoid fever. Epistaxis occurs early in both diseases, but is more frequently associated with typhus. Transient and slight deafness is common to both during the first week of illness, (10 percent of typhoid patients, and 90 percent of typhus patients). Meningismus is also common to both illnesses, but frank purulent meningitis is associated only with typhoid fever.

The patient's face in typhoid is apathetic ("typhoid facies"), with moist, flushed cheeks. Of differential diagnostic importance is the presence of "conjunctival suffusion," characteristic of typhus and not a feature of typhoid.

Unfortunately, relative bradycardia and splenomegaly are features of both diseases and, therefore, are of no value in the differential diagnosis.

The characteristics of the rash, which help distinguish typhoid from typhus, are an important feature. The rose spots of typhoid begin on the seventh to the tenth day, are often evanescent, may last only two to three days, and are usually found on the abdomen. The "mulberry rash" of typhus described as "subcuticular mottling" by Murchison[1]

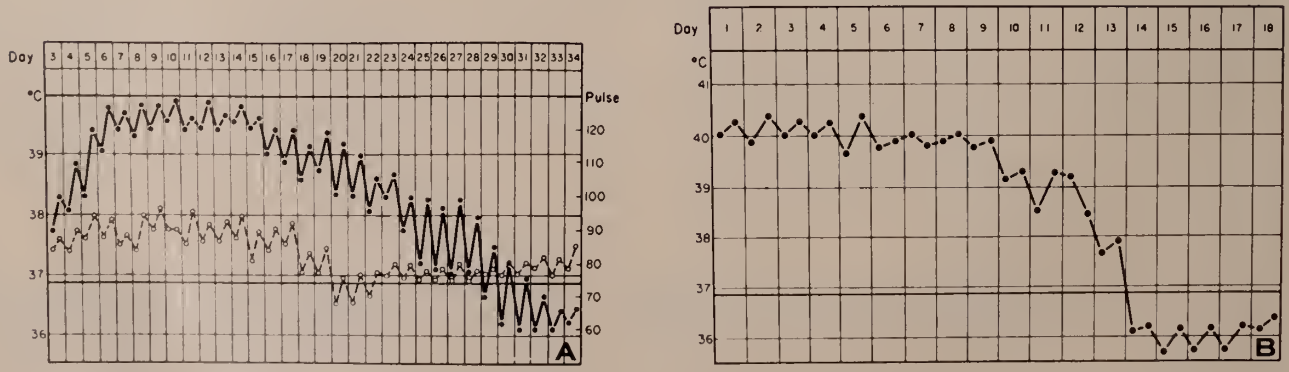

FIGURE 2. (A) Temperature curve in typhoid fever.

(B) Temperature curve in typhus fever.

TABLE I. Differential diagnostic features of typhoid and typhus*

Symptoms and Signs	Typhoid Fever*	Typhus Fever†
Symptoms		
Onset	Gradual	Sudden
Chills	–	+
Headaches	+ (early)	+ (severe)
Myalgia	+	+
Anorexia	+	+
Nausea/vomiting	–	+
Epistaxis	+	+
Transient deafness	+	+
Signs		
Fever	+ (stepladder)	+ (rapid peak)
Relative bradycardia	+	+
Conjunctival suffusion	–	+
Jaundice	–	±
Dry mouth	+	+
Meningismus	+	+
Abdominal distension	+	–
Splenomegaly	+	+
Bronchitis	+	+
Constipation	+	+
Rash	+ (rose spots)	+ (petechial rash)
Mental status	Apathetic	Stupor

* Incubation period: 7 to 21 days (average 14 days).
† Incubation period: 5 to 23 days (average 12 days).

TABLE II. Differential diagnostic features of typhoid and typhus

Complications	Typhoid Fever	Typhus Fever
Lobar pneumonia	+	–
Venous thrombosis	+	+
Alopecia	+	+
Extremity gangrene	–	+
Hemolytic anemia	+	–
Nephrotic syndrome	+	–
Nephritis	+	+
Meningitis	+	–
Peripheral neuropathy	+	–
Paraplegia/hemiplegia	–	+
Pharyngitis	+	+
Suppurative parotitis	+	+
Skin desquamation	+	+
Endocarditis/myocarditis	+	–
Intestinal hemorrhage/perforation	+	–
Orchitis	+	–
Arthritis	+	–
Osteomyelitis/chondritis	+	–
Suppurative cholangitis	+	–
Cholecystitis	+	–
Coma/convulsions	–	+

appears on the fifth to sixth day, lasts up to 10 days, and is petechial in nature, and truncal in distribution.

The most important differential points (mode of onset, fever pattern, and distinctive rash) are useful in making a presumptive diagnosis. There are other features that are helpful (later in the course of both illnesses) in separating these two infectious diseases (Tables I and II).

Late complications of typhoid include myocarditis, thrombophlebitis, intestinal hemorrhage/perforation, parotitis, pneumonia, cholecystitis, suppurative cholangitis, pyelophlebitis, nephritis, meningitis, neuritis, osteomyelitis, chondritis, and frank psychoses.[1–9]

Diagnosis

The age of bacteriology began in 1880, and Edwin Klebs and Karl Joseph Eberth isolated the causative agent of typhoid fever.[1] The organism was called *Bacillus typhosus* by Klebs, and later renamed *Eberthella typhosa.* The organism has also been called *Salmonella typhosa*, and is now known as *Salmonella typhi.* Metchnekoff in 1911 produced typhoid fever by oral pharyngeal inoculation of pure cultures of typhoid bacilli into the mouths of chimpanzees.[2] The organism may remain alive for months in soil, water, or feces, and it survives best in water where the coliform counts are low, such as in spring water.[1,2]

The organism is transmitted by way of the fecal oral route, and the organism enters the lymphatics of the gastrointestinal tract and is phagocytized. The phagocytic cell resembles a plasma cell, is characteristic of typhoid fever, and has been called the "typhoid cell." Intracellular proliferation occurs for the first week, accounting for the inability to culture the organism from the blood or gastrointestinal tract during the early stages of the disease. The intracellular multiplication is eventually followed by necrosis of the cells and release of the organisms outside of the reticuloendothelial system. Since part of the reticuloendothelial system is concentrated in the liver, lysis of infected cells in the liver releases the organisms into the bile where they multiply further.

The laboratory diagnosis of typhoid in the 1850s rested almost entirely on Ehrlich's diazo reaction. This test was performed on the urine of patients with typhoid, and the findings were positive in about 80 percent of cases. Unfortunately, false positives occurred with tuberculosis, relapsing fever, and typhus in 5 percent of cases. In underdeveloped nations where laboratory facilities are minimal or nonexistent, Ehrlich's reaction is still an important diagnostic test.

The hemogram is somewhat helpful in the typhoid-typhus differential diagnosis. In the appropriate clinical setting, leukopenia and varying degrees of hemolytic anemia strongly favor the diagnosis of typhoid fever. Conversely, either leukocytosis or hemoconcentration strongly suggests typhus.

Although bacterial isolation of the organism is the first and remains the most direct way to diagnose typhoid fever, in 1896 Gruber and Durham developed an agglutination reaction, thereby making the serodiagnosis of typhoid possible.[1]

Widal's reaction was introduced in 1909 and remains the basis for serologic diagnosis at the present time.[6–9] A fourfold or greater rise in the 0 agglutinin titer of convalescent serum is strong presumptive evidence for recent infection if the patient has not been vaccinated.

Treatment

In 1854, treatment consisted primarily of rest, diet, and hydrotherapy.[6] In 1948, chloramphenicol was introduced and was shown to appreciably decrease mortality and morbidity incidents. Chloramphenicol quickly became, and remains, the drug of choice in typhoid fever. Although inferior to chloramphenicol, ampicillin, and, to a lesser extent, the tetracyclines have been successfully used to treat typhoid fever. Currently, intravenous trimethoprim-sulfamethoxazole (TMP-SMX) has been found to be as effective as chloramphenicol to treat typhoid fever.

Corticosteroids are useful ajunctive therapy for severely toxemic patients. Steroids given during the first few days of fulminant typhoid fever shorten the toxic-febrile stage considerably.

The morbidity and mortality incidents associated with intestinal hemorrhage or perforation have decreased with volume replacement, antimicrobial therapy, and surgical intervention. Although antibiotic therapy has reduced the incidence of perforation and peritonitis, some patients will still perforate. Perforation may not be accompanied by the classical "peritoneal signs" on physical examination, and may occur in mild cases of typhoid. The clinician must be just as watchful today as he was in the 1850s for peritonitis or hemorrhage. The only clue to these complications may be the development of leukocytosis superimposed on the leukopenia associated with typhoid fever.[7–10]

Carrier state

It has been known for years that about 3 percent of asymptomatic patients recovered from clinical typhoid will continue to excrete the organism in the urine or, more commonly, in the feces; 97 percent of patients will continue to excrete the organism three months after the illness. Those who continue excretion after three months are called "chronic carriers." Chronic typhoid carriers usually have cholelithiasis or bladder calculi. Antibiotic therapy is ineffective in these situations because the antibiotic cannot readily penetrate the calculi and eliminate the organism. Therefore, the removal of calculi by surgical means is the only sure way of eliminating the chronic carrier state in these individuals. It only recently has been appreciated that oral therapy with ampicillin or tetracycline may prolong the carrier state in patients recovering from typhoid.[9–11]

Prevention

In terms of typhoid prevention, most progress has been made by improved sanitation and the recognition of chronic carriers in spreading the disease. However, because of the increase in international travel, the number of cases of typhoid fever approximates that seen in the United States a century ago.

Immunization against typhoid fever was accomplished soon after bacteriologic identification of the organism. It had been noted by Bretonneau many years before that an attack of typhoid fever conferred lasting immunity. Experiments in guinea pigs with convalescent serum from typhoid patients produced a significant degree of protection against the typhoid bacillus. Finally, in humans, killed cultures of the bacillus were used to immunize individuals. Absolute immunity was still not possible due to the poor anergic quality of the polysaccharide cell wall of salmonella microorganisms, and the effective immunization may be overcome by ingesting a large inoculum of organisms. However, public health progress and an effective vaccine are responsible for the progress we have made against typhoid fever in the last century.[12,13]

Conclusion

Typhus is still seen today, and usually occurs as a mild disease in people from Central Europe. This noncontagious, mild variant of typhus is known as Brill-Zinsser disease; presently it is thought that this disease is a recrudescence of epidemic typhus acquired 20 to 30 years previously.

Typhoid fever remains an interesting disease. The clinician still bases his diagnosis on the characteristics of the rash and the fever curve, in the same way Osler did in the 1800s. Fortunately, the diagnostic advantages of the modern microbiology laboratory are valuable in confirming the diagnosis. Because there are so few cases of typhus today to confuse with typhoid fever, there is little appreciation for the diagnostic dilemma faced by the clinicians of the past.

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NEW YORK TRANSPLANTATION SOCIETY

EDITOR'S NOTE. The New York Transplantation Society has held four scientific meetings from which the Journal published several papers. From the first and second meetings the following two articles were published: "Kidney Transplantation: Use of Gamma Globulin as Immunosuppressive Agent," by Robert Riggio, M.D., et al., in the September, 1980, issue and "Kidney Preservation: Current Status," by Robert E. McCabe, M.D., in the October, 1980, Journal. Participating in the third meeting were two reports that were published as articles in the October, 1981, issue: "Skin Transplantation: Current Status in Burn Injury Treatment," by Arnold Luterman, M.D., Edward Kraft, and Stephen Bookless; and "Endocrine Transplantation: Progress," by Keith Reemtsma, M.D. and Collin J. Webber, M.D.

LUNG TRANSPLANTATION

*Present status**

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In previous work we have shown that neither severe pulmonary vascular disease nor advanced emphysema constitute serious obstacles to successful single lung transplantation.[1-4] Over the past several years the chief obstacles to successful human lung transplantation have been the scarcity of suitable donor lungs, imperfect healing at the bronchial anastomosis, and allograft rejection.[5]

There are many reasons why it is more difficult to obtain good human donor lungs than it is to obtain other organs for transplantation.[4] An effective method of lung preservation that would also permit transportation of donor lungs would clearly help to alleviate the shortage of donor lungs. Over the past five years we have developed relatively simple methods that should allow lungs to be preserved at least 24 hours and transported prior to transplantation. These methods involve vascular flushing and immersion cooling to 4°C. with hypertonic solutions having ionic concentrations resembling intracellular fluid. Lung allografts preserved up to 21 hours in this fashion have provided total pulmonary function up to 40 days for dogs that have undergone contralateral pulmonary artery ligation immediately after receiving the preserved lung as a transplant.[6] Canine lungs that have been preserved 24 hours and then autotransplanted have provided total pulmonary function up to 2 years.[7,8] We believe adaptations of these methods should facilitate longer periods of preservation and permit successful preservation and transportation of human lung transplants. Our future studies to develop methods for dependably preserving lungs more than 24 hours will utilize, in addition to the canine lung allograft and autograft models already described, a rat lung isograft model and an isolated rat lung perfusion system that we have recently developed.

Impaired healing at the bronchial anastomosis of lung transplants probably has a complex etiology with impaired blood supply to the donor bronchus, rejection, effects of immunosuppressive agents such as corticosteroids and azathioprine, and technical factors all exerting detrimental effects.[4,5] Over the past several years, we have performed several studies to elucidate the pathogenesis of poor bronchial anastomotic healing and to prevent its occurrence.[9-12] One important aspect of these studies documents that minimizing donor bronchial length improves bronchial anastomotic healing. Another provides an experimental basis for improving bronchial anastomotic healing by showing that the bronchial arteries of the transplant may be revascularized by their direct microvascular anastomosis to an intercostal artery. It is hoped that improved techniques stemming from this experimental work plus better, less toxic immunosuppression will help to eliminate bronchial anastomotic problems in future clinical lung transplant efforts.

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Prevention of lung allograft rejection, either in its typical or classic form, or in its atypical or alveolar form, has always been difficult with standard immunosuppressive drugs.[13-15] Less than 10 percent of dogs rendered totally dependent on their allograft survive over one month and rarely does such an animal survive over one year.[13,16] The recent introduction of a product of yeast fermentation, cyclosporin A, which has been shown to be highly immunosuppressive in animals and man, offers hope that lung allograft rejection will be more easily controlled in the future.[17-19] This drug has been used recently in combined heart and lung allotransplantation. Reitz and his colleagues[20] reported on several monkeys that survived up to a year after this procedure. In addition, we have found that cyclosporin A is a potent immunosuppressive agent that appears safe and effective for animals that receive single lung allografts. Of the first three animals given this drug and single lung allotransplants, all survived over six months. One animal has normal function and no histologic evidence of rejection in its transplanted lung; the other two have had mild rejection episodes which were more easily controlled with steroids than are rejection episodes in lung recipients receiving standard immunosuppressive drugs.[21] Although more experimental investigations of the efficacy and safety of this new drug are clearly needed, those already cited indicate that cyclosporin A, perhaps used in combination with small amounts of other immunosuppressive agents, may be useful in future clinical lung transplantation efforts.

It is our firm belief that investigations performed in the experimental laboratory will allow the development of solutions to the problems that have prevented successful human lung transplantation to date.

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Role of HLA DR in Renal Transplantation

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Although the HLA gene complex is regarded as the major histocompatibility barrier in human transplantation, the question still remains open as to

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which of the products of the HLA loci most influence the graft survival.

The effect of matching for the serologically detectable A and B, or Class I, antigens in cadaver kidney transplantation has not been impressive, since the difference between the best- and the worst-matched grafts has been only 10 to 20 percent. On the other hand, it is undeniable that renal transplants between siblings who share the same parental haplotypes result in an excellent graft survival (90 percent for one year). The difference has been attributed to the fact that the living related pairs are also fully compatible for the HLA D locus products, as assessed by the nonstimulation of the recipient's T lymphocytes by the donor's B lymphocytes co-cultured for five days in MLC (mixed lymphocyte culture). Although the length of time required to perform the MLC precludes its use in selecting donors for cadaveric transplantation, retrospective studies have shown better survival in low versus high reactivity in the test.[1]

Lately, D matching in cadaver transplants has become possible by typing the transplanted pairs for the D-related, or DR, antigens, a newly defined group of HLA Class II antigens. The DR determinants, DR1 through DRW8, correspond to most of the defined D specificities and can be serologically detected on separated B lymphocytes, monocytes, and endothelial cells. The DR determinants are closely linked to the HLA D determinants that stimulate in the MLC test, but are not identical to them; therefore there are some discrepancies: for example, DR4 corresponds to DW4 and to DW10, DR7 to DW7 and also to DW11, and so forth.[2,3] DR antigens show a limited polymorphism (Table I) compared with that seen for the HLA A and B series.

In addition to the DR determinants, two "public" specificities, MB and MT, have been found to be associated with the DR antigen groups: that is, individuals typing for MT1 or MB1 also type for DR1, DR2, or DRW6, and MB2 individuals type for DR3 and DR7 or both, and so forth. It is not known whether the MB and MT antigens are located on the same molecule as the DR or are expressed on different but genetically closely linked molecules.[4] One can envisage that in the HLA D-DR region a complex of closely linked genes express cell surface determinants, some of which initiate in vitro the T cell response in the MLC. On the other hand, Class I antigens (HLA A, B, C) provide the targets for T-killer cells (K cells) in the effector phase of the immune response measured in vitro by the CML (cell-mediated lympholysis) test. When analyzing the rejected allografts for their content of infiltrating cells and antibodies, one finds an abundance of cytotoxic T cells, K cells that mediate antibody-dependent, cell-mediated cytotoxicity, macrophages, and also antibodies directed to both Class I and II antigens as well as antiendothelial antibodies.[5]

TABLE I. HLA DR antigen and gene frequencies in New York City area among unrelated normal individuals

Antigen	Caucasians (N = 420) a.f.*	g.f.†	Blacks (N = 45) a.f.	g.f.
DR1	0.19	0.10	0.20	0.11
DR2	0.28	0.16	0.25	0.13
DR3	0.24	0.13	0.32	0.18
DR4	0.31	0.18	0.14	0.07
DR5	0.19	0.10	0.18	0.10
DRW6	0.15	0.08	0.18	0.10
DR7	0.25	0.14	0.18	0.10
DRW8	0.04	0.02	0.16	0.08
DRX	...	0.09	...	0.11

* a.f.—antigen frequency.
† g.f.—gene frequency.

Although both Class I and II determinants are involved in graft rejection, as mentioned before, matching for HLA A,B (Class I) antigens has resulted in significant but not striking influence on graft survival. On the other hand, recent reports have shown that matching for Class II, or DR, antigens improves considerably the success rate of kidney transplants.

HLA DR matching results

The reports of four major European transplant centers, Eurotransplant (599 cases), Oxford (190 cases), London (769 cases), and Oslo (170 cases), have shown that patients receiving kidneys fully matched for HLA DR had a significantly better outcome (75 to 85 percent at one year) than patients with one or two DR incompatibilities (45 to 60 percent), the latter two groups finding similar survival rates.[6–10] The same trend appeared also in the United States transplant data collected during the Eighth Histocompatibility Workshop where a better graft survival (78 percent) at six months was seen in the group sharing two DR antigens, versus the group sharing one or no DR antigens (55 percent graft survival at six months).[11] In addition, the European groups have found the effect of shared DR antigens between donors and recipients (DR identities) not to be much different from the effect resulting from the absence of detectable incompatibilities (0 DR mismatches). Indeed, when the 0 DR-mismatched group was divided into those who shared two DR antigens (DR identicals) and those who shared one or no DR factors, there was no significant difference in graft survival in the two groups.

One could explain this phenomenon by the low immunogenicity of the nondetectable antigens for which serologic reagents are not at present available. These findings and the limited polymorphism of HLA DR seem to imply that matching for DR should be relatively easy, providing the recipients are not highly immunized against the HLA determinants which would preclude the use of otherwise DR-matched kidneys. Indeed, in the Eurotransplant group, where the recipient pool is not highly immunized, more than 20 percent of the recipients received an organ with no HLA DR mismatches.[12]

TABLE II. DR matching and cadaver kidney allograft survival in 68 transplants in the New York City area

Number DR Antigens	Number Transplants Functioning at 6 Months/Total (Percent)
Matched	
2	2/3
1	11/26 (42)
0	21/39 (53)
Mismatched	
0	3/6
1	18/36 (50)
2	13/26 (50)

In the New York City area the story is different since the recipients awaiting a kidney transplant are highly immunized (50 to 80 percent) against HLA and probably also against non-HLA determinants, through transfusions or viral infections. We should note that 80 percent of recipients had received pretransplant transfusions. Therefore, the concurrence of a negative cross-match and 0 DR mismatches was rare: among 68 transplants only 3 DR matches were found (Table II). Since only 3 of 68 transplants were performed in donor-recipient combinations matched for two DR antigens, the data do not permit the analysis of the effect of complete DR matching on kidney graft survival. However, the findings in this study that grafts matched for one or no DR antigens have similar transplant survival rates support the previous reports on the effect of such matching on kidney graft outcome.[10,13] More important, despite the high level of sensitization exhibited by our recipients, and despite the fact that 20 of 68 transplants were interracial ones (Caucasian donors into black recipients), the six-month graft survival rate of 50 percent found in this study compares very favorably with the published information in similar matched donor-recipient combinations.[10,12,13] In fact, when graft survival rates were analyzed based on the race of the recipient, it was found that graft survival rate was only 35 percent in the 20 black recipients (7 of 20) and 62.5 percent in the remaining 48 Caucasian recipients (30 of 48). Similar results of inferior graft survival in black as compared with Caucasian recipients have been reported by other investigators as well.[12,14,15]

The suggestion that the poor results of interracial transplants could be due to the Lewis blood group incompatibility was not confirmed in our transplant series since all rejected kidneys (13 of 20) were from Lewis-compatible donors.

In a retrospective study, Duquesnoy et al.[16] have observed that matching for the broader MB system appeared to be even more important than matching for DR in patients receiving kidney transplants from related donors matched for a single HLA haplotype. These data could not be confirmed in cadaver kidney allografts.[10]

The good influence of concomitant DR and HLA A and B matching remains controversial: Albrechtsen et al.[13] and Ting, Morris, and Williams[8,9] found no benefit by the combined matching, whereas in the Eurotransplant data, one finds an excellent (90 percent) graft survival at one year in the HLA DR-identical group with three to four AB identities.[12]

DR matching and transfusion

The transfusion story dates back to 1973 when Opelz, Mickey, and Terasaki[17] reported that the outcome of grafts in patients never transfused before the transplant was much worse than that of transfused patients. Since their initial report, the poorer survival rate of grafts in nontransfused patients has been confirmed by the majority of but not all transplant centers. The mechanism of the effect of pretransplant transfusions on kidney allograft survival remains an enigma.

From both Eurotransplant[12] and Eighth Workshop[11] data it appears that DR matching and blood transfusions do not potentiate each other. The benefits of DR-matched versus mismatched donor-recipient combinations were evident in the nontransfused group and, conversely, the best effect of pretransplant blood transfusions was found in the group of HLA DR-mismatched grafts. The conclusion is that one can either administer pretransplant blood transfusions, or one can select an HLA DR-identical donor to obtain almost optimal results. Even so, the question is why some HLA A, B, C, DR-matched kidneys given to transfused patients still undergo early rejection. It is obvious that some other factors influence the graft survival. One is tempted to implicate in such cases the endothelial-monocyte antibodies produced by the recipient and found in the rejected kidneys. These antibodies bind to the endothelium of the peritubular capillaries and could lead to platelet aggregation followed by an irreversible vascular rejection.[18] To this, one can also add the possible involvement of the Lewis blood group incompatibility in graft rejection.[19]

B lymphocyte antibodies in renal transplantation

The data presented so far indicate that DR antigen matching greatly influences renal allograft survival; consequently, one would expect the presence of the corresponding anti-DR antibodies in the pre- or posttransplant period to have a harmful effect on graft survival. Instead, an apparently paradoxical situation has developed, namely, several reports have shown that the presence of B lymphocyte antibodies before transplantation was not associated with graft failures since in many instances grafts could be carried out safely across positive cross-matches, while the presence of the same antibodies after transplantation was claimed to be associated with poor graft prognosis.

A. Transplantation with positive B cell cross-match. Although presensitization to donor B cell antigens has been found associated with early allograft failure by several transplant groups,[20–22] the majority of recent data indicate that many trans-

TABLE III. Outcome of transplants with positive and negative B lymphocyte cross-matches in the New York City area

Cross-Matches	Number Successful Grafts at 6 Months/Total (Percent)
B Cell-Positive	
37°C.	2/4
4°C.	2/4
37° and 4°C.	4/8
	8/16 (50)
B Cell-Negative	33/55 (60)

plants can be performed across a B cell-positive cross-match without immediate rejection, thus preventing wastage of cadaveric kidneys.[9,23–27] Moreover, positive B cell cross-matches have been claimed to be associated with improved graft survival.[28,29] This kind of graft enhancement was considered to be similar to the one described in animal studies in which antibodies specific for Ia antigens, readily detectable on B but not on T lymphocytes, were beneficial to the graft.[30] In 1978 Iwaki et al.[29] tentatively divided the B lymphocytotoxins causing the positive B cell cross-matches into cold and warm and further postulated that cold (4°C.) cytotoxins are enhancing autoantibodies,[31] whereas warm (37°C.) alloantibodies can cause graft failure. Recently, Takahashi et al.[32] demonstrated that the cold cytotoxins are directed against IgM present on the surface of autologous lymphocytes and are probably immunoregulatory antibodies. The benefits of cold versus warm cytotoxins in kidney allograft survival could not be confirmed by Lobo, Westervelt, and Rudolf,[26] Ting, Morris, and Williams,[8,9] nor by our data. Thus, in our group of 71 cadaver transplants, where a T cell-negative cross-match has been used as the definitive cross-match, 16 of the recipients were transplanted across a positive B cell cross-match of either cold, warm, or combined cold and warm variety (Table III). No benefits from cold versus warm cytotoxins were observed since half (50 percent) the transplants were rejected in all groups. A slightly better outcome appeared in the B-negative cross-match group of patients where 33 of 55 transplants (60 percent) were functioning at six months.

This diversity of results reported by various transplant centers suggests that several types of allogenic B cell antibodies can cause a donor-specific positive cross-match, namely:

1. Antibodies directed against the HLA DR antigens of the donor, generally found to be harmful to the graft.[22,27,33–36]
2. Weak HLA A, B, C antibodies which may react preferentially with B but not T lymphocytes due to the greater density of the A, B, C antigens on B cells,[37] and to the fact that B cells are more prone to lysis by rabbit complement.
3. Non-HLA DR cold (4°C.) IgM autoantibodies directed against IgM on B lymphocytes, which were claimed to have an enhancing effect on the graft.[32]
4. Non-HLA DR warm (20° or 37°C.) antibodies (viral induced?) nonplatelet absorbable, not linked to HLA, not leading to immediate graft rejection.[38]

Consequently, the lack of harmful effect of many positive B cell cross-matches cannot be attributed to the anti-HLA DR antibodies, but rather to the non-anti-DR cytotoxins. It has been suggested by d'Apice and Tait[38] that non-DR-positive B cell cross-matches are an epiphenomenon, and that the causative antibodies do not have a direct influence on graft outcome but serve as markers for some other enhancing mechanism.

In essence the heterogeneity of the anti-B cell antibodies appears to explain the diversity of reports about their harmful or beneficial effects on kidney graft survival. The recognition of the many specificities is hampered by the fact that most of the antibodies are broadly reactive and often give weak reactions against all the panel cells tested. Finally, unless one can distinguish harmful from innocuous anti-B cell antibodies, transplantation across a B cell-positive crossmatch cannot be recommended.

B. Influence of posttransplant anti-DR antibodies on renal allograft function. If the controversy still persists concerning the innocuous effect of positive B cell cross-matches for allograft survival, the development of B cell antibodies after transplantation has been generally recognized to be associated with allograft rejection.

Suciu-Foca et al.[20,21] and Hardy et al.[35] were among the first to stress that non-HLA A, B, C antibodies displaying donor-specific MLC inhibitory activity correlate with humoral rejection.[20,21,35] Later, many transplant groups reported a strong correlation between the onset of humoral rejection and the appearance of donor-specific anti-HLA DR antibodies.[23,39,40] Moreover, eluates prepared from the rejected kidneys demonstrate anti-B cell activity.[41] The only divergent report originates from Ting and Morris[42] who found no correlation between the development of donor-specific B lymphocyte antibodies post transplant and graft failure. Since they did not identify the specificity of the anti-donor B cell antibodies involved, it is possible that many of those antibodies were not directed against the HLA DR determinants and consequently had no harmful effect.

Factors influencing kidney graft survival

It is certain that many factors influence graft outcome: transfusions, HLA A, B, C and DR matching, endothelial antibody formation, and immunosuppression; but the most important factor of all remains the immune responsiveness of the transplanted recipient itself. For a low responder, neither HLA matching nor pregraft blood transfusions are necessary; any graft can be tolerated. For the high responders, blood transfusions may help by blocking the recognition phase initiated through differences for the HLA DR antigens, whereas in the absence of transfusions, DR matching becomes more important by blocking the same recognition phase.[43] Sometimes, even transfused and HLA DR and A, B, C-matched, high responders are still rejecting their grafts. Recently, an association has been reported by Goulmy et al.[44] between a specific HLA DR determinant of the recipient and his immune response status. Indeed, they discovered that DR4-positive recipients were more prone to develop CML (cell-mediated lympholysis) nonreactivity against their donors, a status that was coincidental with good renal function. This may indicate that there is a correlation between DR4 and low responsiveness against allogeneic antigens.

Summary and conclusions

It is recognized beyond doubt that the principal role in human kidney allograft survival is played by the recipient's immune response status: the nonresponders accept a completely HLA-incompatible graft, the responders sometimes reject a perfectly HLA-matched one. Today two major factors influencing graft survival can be added: pretransplant blood transfusions and HLA DR donor-recipient compatibility. The mechanism by which transfusions are beneficial to the graft still remains an enigma. Transplanting donor-recipient pairs with minimal HLA DR disparity, which is the primum movens in the recognition of foreignness, reduces the likelihood of early allograft rejection. The presence of anti-donor DR antibodies in recipients' sera in the pre- or posttransplant period has been found to be deleterious to the graft. Consequently there is more and more evidence that transplantation across B cell-positive cross-matches, as advocated by several transplant centers in the past, is hazardous, since the distinction between harmful anti-DR antibodies and non-DR innocuous ones, both of which cause positive B cell cross-matches, is extremely difficult. Specificity analysis of the sera is cumbersome since most of them are broadly reactive and often give weak reactions against all panel cells tested.

In conclusion, it becomes evident that further studies must be directed at the differentiation of the various types of allogeneic B cell antibodies, so that their effect on the outcome of renal allografts can be defined more precisely.

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Younger children good candidates for kidney transplants, study finds

Children under seven years of age grow at a faster rate than older children after kidney transplants—making them good, and in some ways better, candidates for the surgery, according to a study published in the August issue of *Pediatrics*. The journal is the official publication of the American Academy of Pediatics.

In the study, a team of physicians at Children's Hospital Medical Center, which is affiliated with Harvard Medical School in Boston, studied the rate of growth of children who had received kidney transplants over an eight-year period. Abnormally slow growth is a characteristic of children with kidney disease.

Eleven patients were between three and seven years old at the time of their transplants; 16 were between seven and 12 years; and 81 children were more than 12 years old.

In assessing rates of growth after surgery, the researchers studied factors which might have influenced the rates. An example of such factors was the type and severity of disease the children originally had.

These factors were not found to be related to the growth rate differences between age groups, which were significant. Most of the patients who were 12 or older when they had their transplants either didn't change their rates of growth or grew less well than they had before the operation. Similar results were found in the group of patients aged between seven and 12 years at the time of transplant.

In contrast, eight of the 11 children who were between three and seven years of age at the time of transplant grew faster than normal after their operation. In seven cases, the children grew so fast—up to twice the normal rate—they were able to "catch-up" with children their own age. In most of the cases in which faster growth didn't occur, the children had rejected their new kidneys; in these cases, they would not be expected to grow.

Electrocardiograms of the Month

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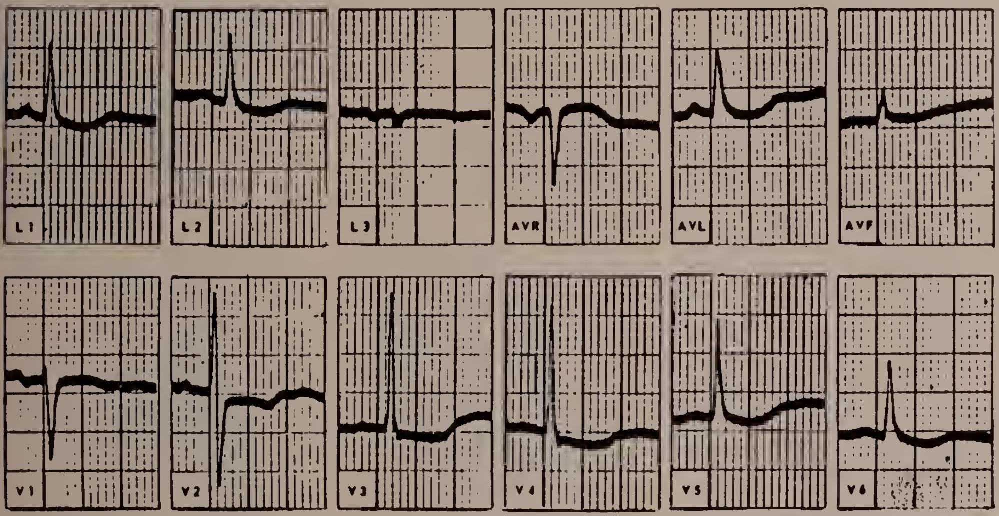
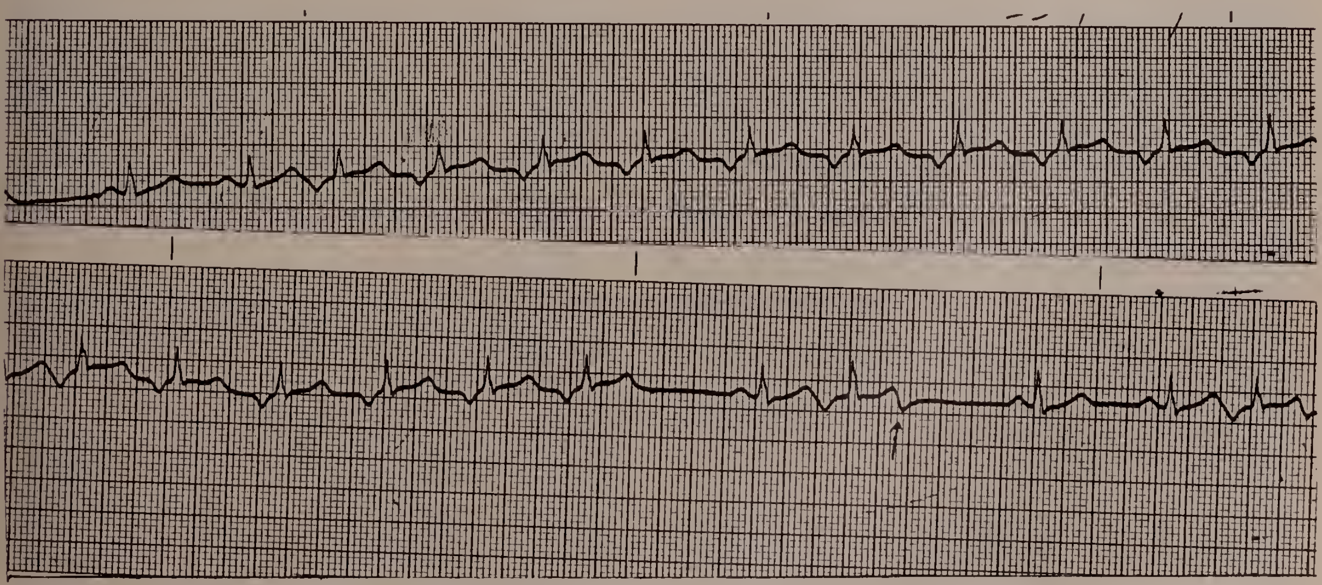


QUESTION 333. The patient was a 70-year-old woman, admitted to the hospital with increasing exertional chest discomfort and congestive heart failure. She was receiving digoxin. What is the interpretation of the electrocardiogram?



QUESTION 334. Continuous lead 2. What is the rhythm?

Electrocardiograms of the Month

ELUCIDATION

Answer 333. The rhythm is regular sinus with a P-R interval of 0.14 second. The QRS duration is 0.10 second. In leads 1, 2, aVL and V_2 to V_6 the S-T segment is depressed. The depression is downsloping and in V_2 is approximately 2 millimeters. The QRS is nearly biphasic in V_2 and there is an R wave in V_3 to V_6. These findings indicate counterclockwise rotation in the horizontal plane, a normal variant.

The S-T segment abnormalities are nonspecific. They may be due to digitalis effects but may also be caused by myocardial ischemia. If myocardial ischemia is suspected serial tracings may help establish the diagnosis.

Answer 334. The basic rhythm is regular sinus. The inverted P wave preceding beat number 3 is an ectopic atrial premature depolarization with a P-R interval of 0.16 second. It is followed by a series of beats from the same focus at a rate of 90 per minute (an ectopic atrial rhythm). The focus continues until the middle of strip 2. A pause then occurs followed by a single sinus beat. Two ectopic atrial premature depolarizations then occur, the second nonconducted. The last 2 beats also arise from the same ectopic focus.

Beverly Hills Diet: A dangerous weight-loss fad

Judy Mazel's *The Beverly Hills Diet* "is the latest, and perhaps the worst, entry in the diet-fad derby," two Maryland physicians say.

Writing in the Journal of the American Medical Association (November 13), Gabe B. Markin, M.D., and Ronald N. Shore, M.D., claim the diet preaches "nutritional nonsense," propogating medical inaccuracies that could present hazards—some possibly life-threatening—to its devotees.

The Beverly Hills Diet is based on three erroneous ideas, according to Mirkin and Shore. The first is that undigested food accumulates and becomes fat, while digested food cannot cause weight gain.

Actually, the physicians point out, undigested food is not absorbed from the intestines; it is excreted, supplying no calories whatever. Instead, it is digested food that has the potential for adding to body weight.

The Beverly Hills Diet also claims that most enzymes cannot work together, often cancelling each other out in the digestive tract.

In fact, enzymes that break down food prior to absorption must be able to work together. Because virtually all foods contain combinations of carbohydrates, protein, and fats, the enzymes that break them down have to work in tandem, the physicians say.

The diet's third tenet is that fruit enzymes make hard-to-digest foods less fattening.

Not so, according to Mirkin and Shore. The enzymes in fruit are proteins, and all proteins are broken down in the stomach and intestines. They do nothing to break down other foods during digestion.

The following are a selection of scientifically inaccurate statements from the Beverly Hills Diet followed by parenthetical comments from the physicians:

- It's not the pancake that's fattening. It's the syrup on top of the pancake that makes you gain weight. (There are more calories in the pancake than in the syrup.)
- The cottage cheese traps the food in your stomach and causes it to ferment. Instead of getting skinny you get bloated. (There are no bacteria in the stomach. Therefore, there is no fermentation there. Fermentation occurs in the lower intestinal tract.)
- It is virtually impossible to overload your body with fiber. (Not so. Large amounts of fiber can cause a deficiency of the following minerals: calcium, phosphorus, iron, copper, zinc, chromium, and molybdenum.)
- Sesame seeds are the richest source of calcium on the planet . . . An added bonus is that their concentrated calcium helps you sleep by relaxing your nervous system. (Untrue. Sesame seeds contain 110 mg. of calcium per 100 Gm. while cheddar cheese contains 750 mg. per 100 Gm. Unless you are calcium deficient to start with, taking additional calcium cannot improve your sleep.)

The Beverly Hills Diet begins with an 11-day regimen of eating nothing but fruit. This can result in severe diarrhea, the physicians warn, with potentially life-threatening consequences such as shock from fluid loss and cardiac arrhythmia due to potassium depletion.

Because the diet does not satisfy the body's protein needs for at least the first six weeks, rapid loss of scalp hair is also a possible side effect.

Radiologic Problem of the Month

Montefiore Hospital and Medical Center
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Editor

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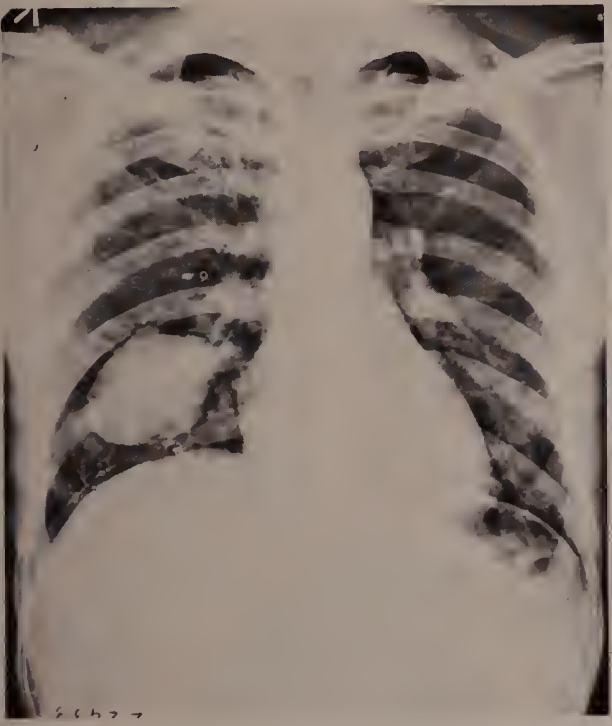
Ovoid Nodule in Right Lung



Radiograph of a 38-year-old Asian Indian whose complaint was "spitting of blood."

Elucidation

The posteroanterior view of the chest reveals a dense, oval nodule in the right lower lung. The nodule is smooth, homogeneous, and well-marginated. Calcification or cavitation is not present. Such lesions with smooth borders are generally due to bronchogenic cyst, bronchial adenoma, hamartoma, metastasis, or primary malignant condition. Bronchogenic cyst may be round or oval, contains fluid and/or air, and is situated anywhere in the lung. The cystic nature of the lesion is established by demonstrating the change in contour on inspiration and expiration films of the chest. Since the shape of this nodule is oval, bronchogenic cyst is a distinct possibility. A bronchial adenoma may also be considered but these adenomas are generally hilar or perihilar in location. They generally take a round shape as they are solid. Hamartoma is another possibility except, again, they are generally round and 25 percent of them demonstrate calcifications. Since the patient is only 38 years old and the borders of the nodule are smooth, a primary malignant tumor is a remote possibility. This nodule is isolated and oval in shape and, particularly in the absence of a known primary malignant tumor elsewhere, metastasis can be ruled out. Of all these possibilities, bronchogenic cyst is likely, but in arriving at a diagnosis, geographic considerations should have importance because certain diseases are distinctly more common in certain areas. From that point of view, this nodule may represent an echinococcal (hydatid) cyst.

Hydatid cyst is a parasitic infestation in man caused by the larval stage of genus *Echinococcus*, a member of the class *Cestoidea* (tape worm).[1–4] Two main forms of this exist, one *Echinococcus granulosus*, the unilocular form and the second *Echinococcus multilocularis*, the alveolar or multilocular form. *E. granulosus* is subdivided into the more common pastoral variety, the intermediate host being the sheep, and the less common sylvatic form which has the dog and moose as the intermediate host. Endogenous hydatid infection is found in immigrants coming from the Middle East, Russia, Italy, Greece, Spain, Egypt, North Africa, Chile, Argentina, India, New Zealand, and Australia. Native hydatid infections are reported in 15 states, primarily those in the lower Mississippi Valley.[2] Multilocular cystic form and the sylvatic form are common in Canada and Alaska.[3]

Clinically, noncomplicated hydatid cysts do not present any signs or symptoms unless they are very large. However, mild cough and hemoptysis prompt the patient to seek medical help.

The radiologic characteristic of pulmonary hydatid cyst is a solitary, sharply circumscribed, circular or oval nodule of uniform density generally present in the lower lobe. The cysts are multiple in about 20 percent of instances. The size of the cyst varies from 1 to 12 cm. in diameter and, unlike the hydatid cysts in the abdominal organs, pulmonary hydatid cysts do not calcify.[2]

The complications of the hydatid cysts are ruptures into the bronchus and the pleural cavity. When the cyst communicates with the bronchus, a meniscus of air is observed between the adventitious coat and true cyst wall presenting radiologically a "crescent sign." When the communication is between the bronchus and endocyst, an air and fluid level is observed with floating membranes or daughter cysts commonly referred to as "water lily" or "camelot" sign.[1-4] Occasionally, the communication is at both sites, and air may be present between the adventitia and true cyst wall as well as between the true cyst wall and endocyst. This is known as "Cumbol" sign. Instances are observed where the cyst ruptures into the bronchus and expectoration of the entire cyst contents and membranes takes place.

Diagnosis

Echinococcal (hydatid) cyst in right lower lobe

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Acute maxillary sinusitis in children

Pittsburgh, Pa. (Univ. of Pittsburgh School of Med. and Children's Hosp. of Pittsburgh)—Because criteria have not been developed for the diagnosis and treatment of acute bacterial sinusitis in children, Wald et al. sought to correlate radiographic and ultrasonographic findings and results of cultures of secretions from the throat, nasopharynx, and maxillary sinuses with symptoms and signs of acute maxillary sinusitis.

The authors studied 30 children, aged 18 months to 16 years, who were suspected of having acute maxillary sinusitis. Information recorded for each child addressed the presence and duration (ranging from 2 to 30 days) of signs and symptoms: severe headache (10 children), facial pain or swelling (9), sore throat (7), malodorous breath (15), and—most commonly—nasal discharge (23), cough (24), and fever (19).

Diagnosis and follow-up included radiographs of the paranasal sinuses in all children and A-mode ultrasound studies of the maxillary sinuses in 25 of the 30 children. Aspiration of the maxillary sinuses was performed under sedation and local anesthesia. Aspirates were submitted for Gram stain and were cultured for viruses and anaerobic and aerobic bacteria. Secretions for viral and bacterial cultures were collected from the throat and nasopharynx.

After diagnosis, the children were treated with either amoxicillin or cefaclor by random assignment, with an oral antihistamine-decongestant, and with oxymetazoline nasal spray. Follow-up by telephone was done 24 hours and, if necessary, 48 hours after treatment began. Office follow-up was done at 10 to 14 days after treatment began, when an interval history was obtained, and a physical examination and repeat radiograph were performed.

Sinus aspirate cultures showed that 77 percent of the children (23) had at least one infected sinus. The bacteria most commonly recovered were, in order of frequency, *Streptococcus pneumoniae*, *Hemophilus influenzae* (all nontypeable), and *Branhamella catarrhalis*. No anaerobic bacteria were recovered. Only two of the aspirates yielded viruses. Only *B. catarrhalis* seemed to be limited to the younger children. Rarely was the same species dominant in the nasopharyngeal and throat cultures; sometimes one of the cultures was negative. Different species were cultured from the two infected sinuses in two children.

Although direct evidence of bacterial sinusitis was found in 75 percent of the children with radiographic and clinical findings suggesting acute sinusitis, there was no correlation between the predominant species cultured from the sinus aspirate and nasopharyngeal secretions. The authors conclude that, unlike the reported usefulness of nasopharyngeal cultures in selecting treatment for otitis media, nasopharyngeal cultures do not provide guidelines for choosing antimicrobial treatment for acute maxillary sinusitis. Also, sonographic findings were not consistent predictors of sinusitis. According to Wald et al., much remains to be learned about the usefulness of radiography and sonography in diagnosing sinusitis and about pathogens that may inhabit the respiratory system normally. However, the study did demonstrate that children with upper respiratory tract symptoms and abnormal sinus x-ray films are likely to have bacterial sinusitis.

Wald E. R., Milmoe G. J., Bowen, A., Ledesma-Medina, J., Salamon, N., and Bluestone, C. D.: Acute maxillary sinusitis in children, *N. Engl. J. Med.* 304: 749 (1981).

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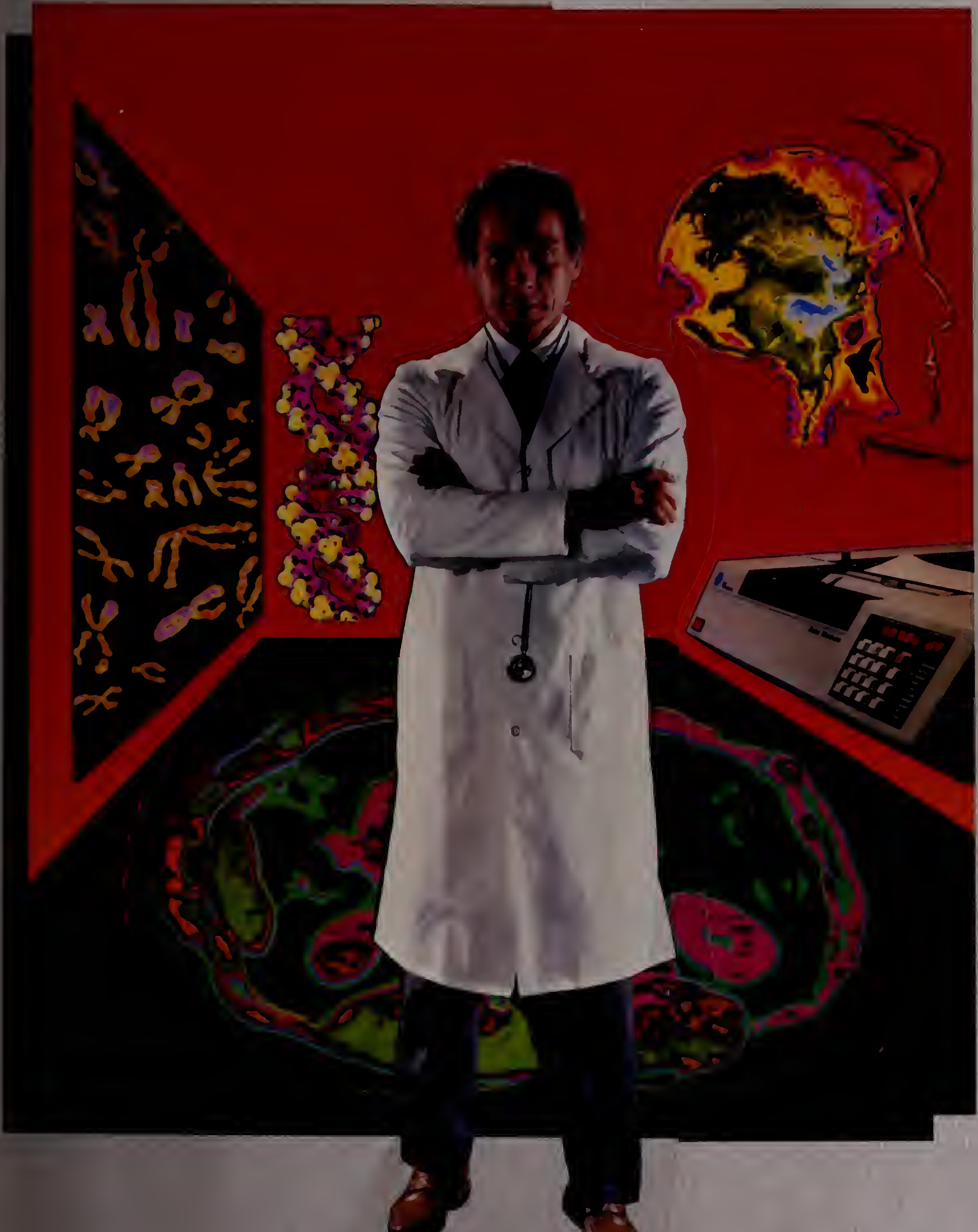
In an era of change,
An Agent of Change...



Your patients are changing

...the population is getting older, more people are holding a second job, patients are more concerned about the medications they take.

Medical knowledge is changing

...there are diagnostic resources and surgical techniques undreamed of only a few years ago, biomedical engineering, new insights also into the action of drugs.

In this changing environment, the way you are practicing medicine is changing too...

Twenty years ago, the benzodiazepines represented a real step forward in the management of anxiety and tension states. In recent years, however, concern about drug accumulation and clearance has led physicians to re-evaluate their use of these agents. In light of current knowledge, many clinicians are changing from multi-metabolite benzodiazepines to Ativan® (lorazepam)—a metabolically and pharmacokinetically distinctive agent that offers clinical advantages which more closely meet the expectations of a modern anxiolytic.

Ativan®: Agent of Change
(lorazepam)

Ativan: Accumulation to steady state
extends for only 2-3 days
No active metabolites
Day
3
depiction of typical blood level
4
3
2
1

because...

it's shorter acting, with less accumulation*

In contrast to long-acting benzodiazepines, Ativan has a short, 12-hour half-life, and no active metabolites. In multiple-dose therapy, Ativan accumulates for only two to three days before reaching steady state; the long-acting benzodiazepines—diazepam CIV, chlordiazepoxide CIV, clorazepate CIV and prazepam CIV—with their active metabolites—accumulate for as long as 20 days, increasing the likelihood of excessive sedation

it doesn't interact with drugs metabolized by P450 microsomal enzymes

Most benzodiazepines undergo oxidative metabolism and thus utilize the hepatic microsomal enzyme system. Ativan® (lorazepam), however, is metabolized by glucuronidation and does not compete with other drugs for cytochrome P450. Thus, when Ativan is given with Tagamet® (cimetidine), for example, clearance is not delayed, nor sedation increased†—unlike reported observations with patients on other benzodiazepines[1-5]

it gives you greater control of therapy

The short half-life of Ativan® facilitates more rapid response to dosage adjustments, allowing you to titrate therapy to patients' changing needs. Also, once you decide to discontinue Ativan, it will be out of your patient's system four days after the final dose—in contrast to long-acting benzodiazepines and their active metabolites which take as long as two weeks to be totally eliminated

Ativan®
for (lorazepam) CIV
Anxiety

See important information on following page

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*Pharmacokinetics cannot as yet be directly related to efficacy

†All benzodiazepines produce additive effects when given with CNS depressants such as barbiturates or alcohol

Ativan®: Agent of Change
(lorazepam) ⓘⓥ

Ativan: Accumulation to steady state
4
3
2
1

- Little accumulation lessens likelihood of excessive sedation
- Unlike most benzodiazepines, Ativan does not compete with other drugs, such as Tagamet® (cimetidine), for the microsomal enzyme system during biotransformation
- Metabolism not affected by age or liver dysfunction
- Short half-life provides greater control of therapy
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- Specifically evaluated and found effective for anxiety associated with cardiovascular and gastrointestinal disorders
- A distinctive change from long-acting benzodiazepines, all of which have active metabolites and are much the same

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS. Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although al these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to commun cate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

Dosage: **Individualize for maximum beneficial effects. Incre dose gradually when needed, giving higher evening dose befo increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. F elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety transient situational stress, 2-4mg h.s.**

How Supplied: 0.5, 1.0 and 2.0mg tablets.

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Pneumothorax and Hydrothorax Following Placement of Central Catheter

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TPN (total parenteral nutrition) is a modality used to provide calories in patients who do not tolerate oral feedings. Major complications, including electrolyte imbalance and sepsis, are well recognized.[1,2]

In introducing the catheter, malpositioning may occur in 5 to 29 percent of cases.[3,4] In addition, pneumothorax,[5,6] hydrothorax,[7,8] thrombophlebitis, brachial plexus injury, carotid artery laceration,[9–11] mediastinal hematoma,[12] and chest-wall abscess[13] may occur. An interesting association of hydrothorax on the right side and pneumothorax on the left was recently encountered when a polyurethane catheter was introduced by percutaneous puncture of the left subclavian vein and advanced to the superior vena cava. After a recurrence of the left pneumothorax, it appeared that the catheter eroded through the superior vena cava three days after placement.

Case report

A 17-year-old white male was admitted to the hospital with an exacerbation of granulomatous colitis as evidenced by fever, severe watery diarrhea, and significant weight loss over a two-month period. The diagnosis of granulomatous colitis was previously made by contrast studies and sigmoidoscopic examination and confirmed by the pathologic finding on rectal biopsy of granulomas and inflammatory infiltrate present throughout the wall of the colon. His disease was poorly controlled despite receiving prednisone, 60 mg. per day, and azulfidine, 3 Gm. per day. In addition, he developed a posterior capsular cataract while on prednisone. Oral intake was tolerated poorly because of anorexia and vomiting.

On admission, examination revealed: temperature 39.6°C., pulse 90 per minute, respirations 28 per minute, and blood pressure 130/98 mm. Hg. His weight was 33 kg. and his height 156 cm. (both fifth percentile). His skin fatfold was 4 mm. (fifth percentile), and midarm circumference 17 cm. (sixtieth percentile). He appeared malnourished and prepubertal (Tanner state II). Ophthalmologic findings of bilateral optic nerve atrophy and postcapsular cataract were seen. The abdomen was diffusely tender. Perianal skin tags were present. Bowel sounds were normoactive.

Laboratory findings included: hemoglobin 9.9 Gm. per deciliter, hematocrit 31.5, white blood cell count 5,900 per cubic millimeter with polymorphonuclear cells 86 percent, lymphocytes 7 percent, monocytes 1 percent, and eosinophils 2 percent. Mean corpuscular volume was 73 cubic microns, mean corpuscular hemoglobin 22.6 pg., mean corpuscular hemoglobin concentration 31 percent, and erythrocyte sedimentation rate 75 mm. per hour. Albumin content was 3.1 Gm. per decililter, globulin 2.2 Gm. per deciliter, cholesterol 114 mg. per deciliter, calcium 8.7 mg. per deciliter, magnesium 2 mg. per deciliter, serum iron 10 mg. per deciliter, and total iron-binding capacity 216 micrograms per deciliter. Serum folate, B_{12}, vitamin A, and amylase levels were normal. The liver enzyme values were normal. Results of antinuclear antibody test were negative. Urinalysis gave normal results. Stool cultures and stool examinations for ova and parasites were negative. A quantitative stool fat determination was 1.3 Gm. of fat per day.

Total parenteral nutrition was initiated to provide bowel rest and improve his nutritional status while reducing the steroid dosage. On the second hospital day, a 16-gauge by 8-inch polyurethane radiopaque indwelling catheter (ARROW) was inserted by percutaneous puncture into the left subclavian vein.

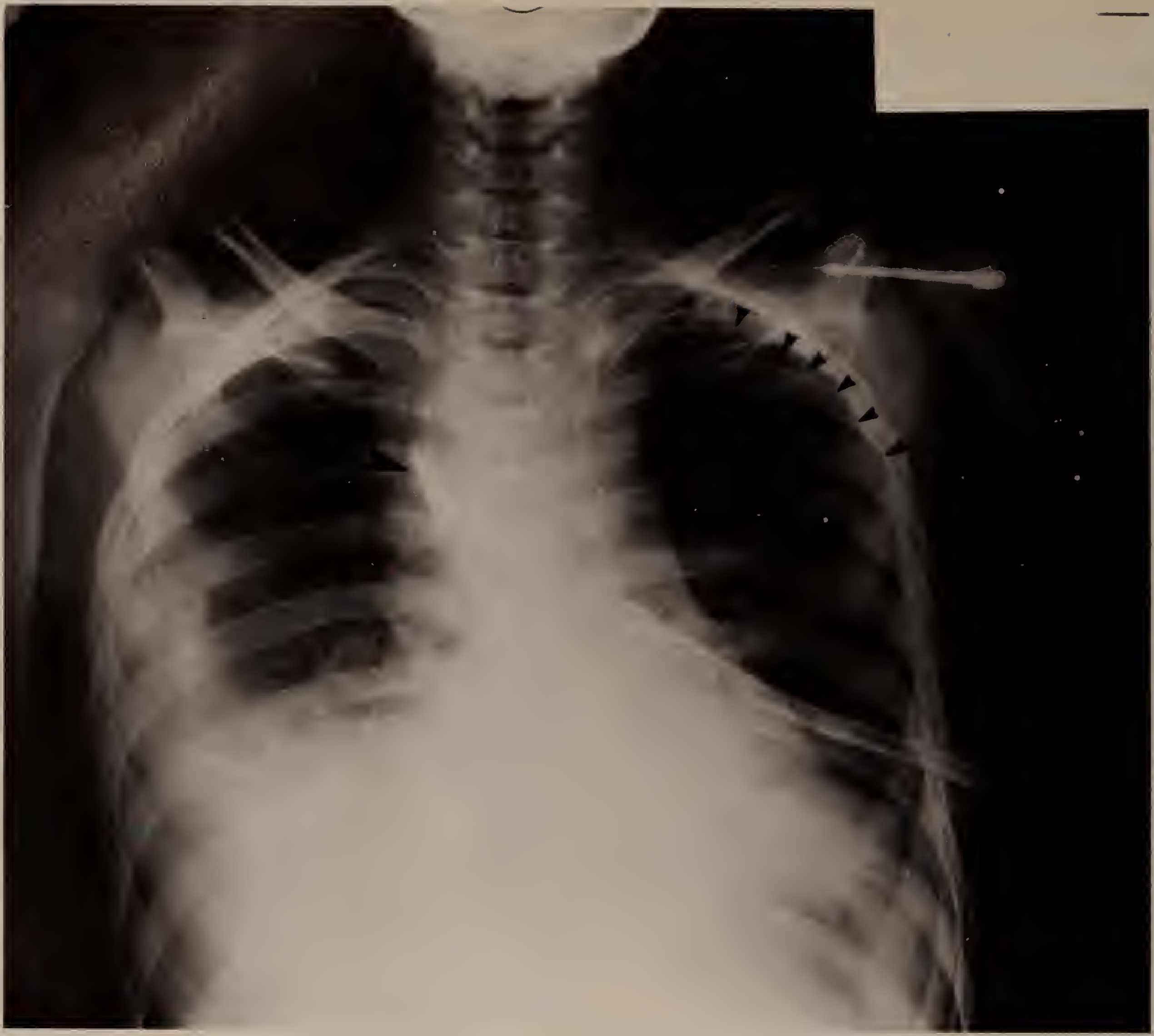

FIGURE 1. Pneumothorax (small arrows) with extravasation of injected dye through catheter tip (large arrow). Note large pleural effusion on right side.

Although the catheter was thought to be radiopaque, it could not be clearly visualized on x-ray of the chest. A small amount of dye was injected through the catheter and the tip of the catheter was noted in the superior vena cava. There was extravasation of the dye. A pneumothorax was seen on the left side, necessitating insertion of a chest tube. The left lung was effectively expanded. Total parenteral nutrition was instituted and was well tolerated for three days. The chest tube was removed 48 hours after insertion. Eight hours later he developed respiratory distress. A repeat chest x-ray film showed a large pneumothorax on the left side accompanied by a pleural effusion on the right side. Dye introduced through the catheter demonstrated extravasation of the dye into the right side of the pleural cavity (Fig. 1). The central line was immediately removed. A thoracentesis was done on the right side and 1,600 ml. of clear fluid were withdrawn. The pleural fluid showed a protein content of 0.1 Gm. per deciliter and a glucose level over 500 mg. per deciliter, consistent with the TPN fluid. A chest tube was reinserted on the left side. The pneumothorax resolved uneventfully. The patient was given an elemental diet and discharged without steroids, with clinical improvement.

Comment

Following insertion of a central catheter, the complication of pneumothorax and hydrothorax was reported to be about 2 percent and 0.2 percent, respectively.[5] To our knowledge, concomitant ipsilateral pneumothorax and contralateral hydrothorax have not been reported. In the case reported here, positioning of the catheter in the superior vena cava was confirmed by contrast injection. A properly seated catheter eroded through the vessel. We believe that the tip of the catheter eroded through the superior vena cava and penetrated into the pleural space on the right side resulting in hydrothorax on the right side. The cause of this erosion is unclear. The rigidity of the catheter may play a role as also suggested by others.[7] A mild shift of the mediastinum following collapse of the left lung may have been a precipitating event. The presence of a pneumothorax should alert the physician to the development of other catheter-induced complications.

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Drug-resistant malaria spreading

The world is facing a resurgence of potentially lethal malaria as the parasite that causes it becomes increasingly resistant to drugs and treatment.

Plasmodium falciparum, a protozoan parasite, is the cause of falciparum malaria, the most serious—sometimes fatal—form in man.

In two cases reported in the Journal of the American Medical Association (August 28), American travelers in East Africa were striken with falciparum malaria after their return to the United States even though each had conscientiously adhered to a standard regimen of malaria prophylaxis with the drug chloroquine. Each patient recovered after hospital treatment with quinine sulfate and antibiotics.

Chloroquine-resistant *P. falciparum* has been identified in more than 20 countries in Africa, Latin America, the Indian subcontinent, and Southeast Asia. Certain drug combinations have been pitted against this strain of the parasite, but none have been uniformly successful. At this time, there is no generally available, consistently effective drug or combination of drugs to prevent falciparum malaria.

These findings gain in significance in this country with the continuing influx of political refugees from endemic areas and as the number of Americans traveling to and from these areas increases.

METHYLDOPA?
RESERPINE?
OR
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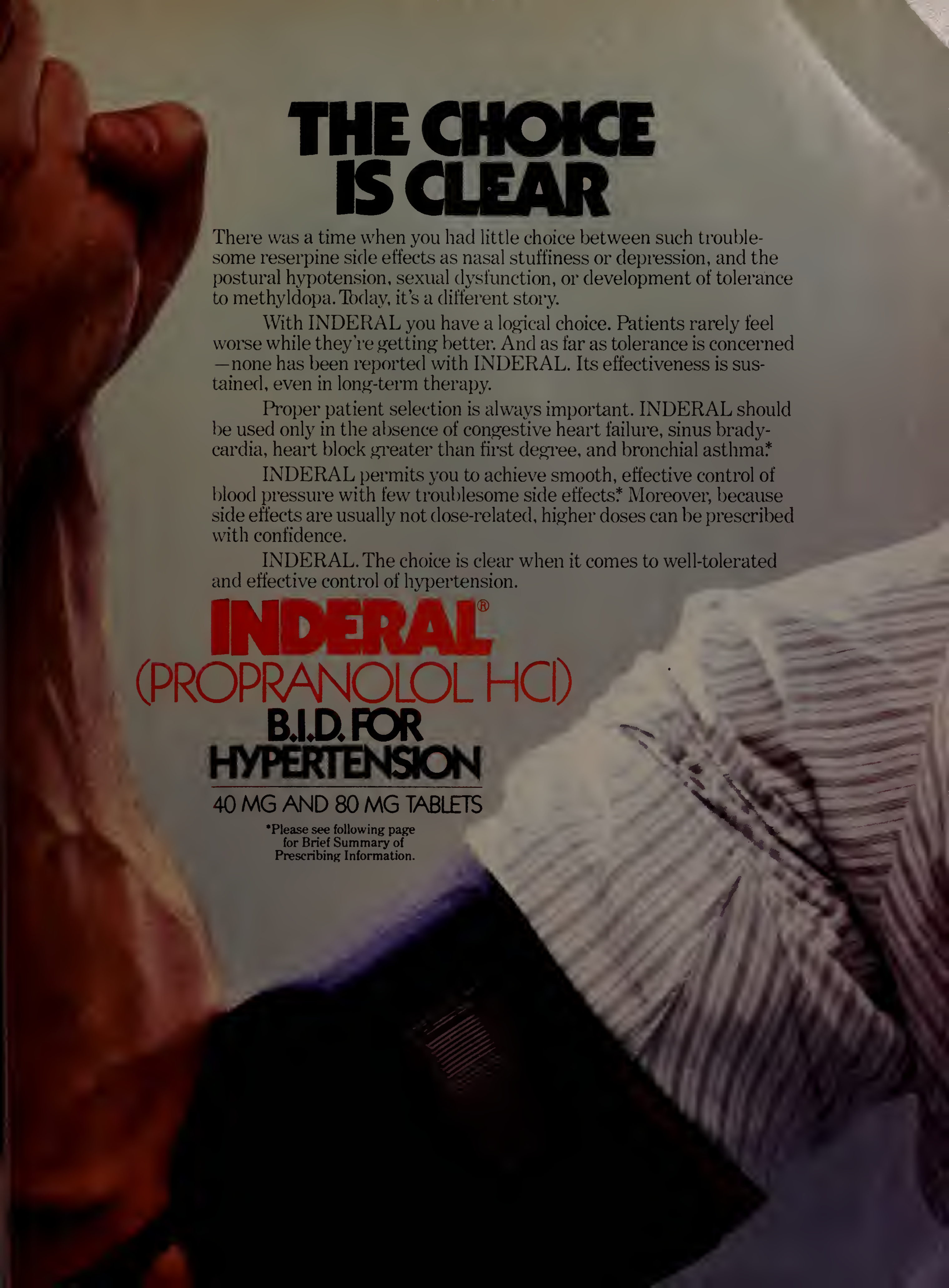
(PROPRANOLOL HCl)



THE CHOICE IS CLEAR

There was a time when you had little choice between such troublesome reserpine side effects as nasal stuffiness or depression, and the postural hypotension, sexual dysfunction, or development of tolerance to methyldopa. Today, it's a different story.

With INDERAL you have a logical choice. Patients rarely feel worse while they're getting better. And as far as tolerance is concerned —none has been reported with INDERAL. Its effectiveness is sustained, even in long-term therapy.

Proper patient selection is always important. INDERAL should be used only in the absence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.*

INDERAL permits you to achieve smooth, effective control of blood pressure with few troublesome side effects.* Moreover, because side effects are usually not dose-related, higher doses can be prescribed with confidence.

INDERAL. The choice is clear when it comes to well-tolerated and effective control of hypertension.

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40 MG AND 80 MG TABLETS

*Please see following page for Brief Summary of Prescribing Information.

THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD

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B.I.D. FOR HYPERTENSION

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

Inderal® BRAND OF **propranolol hydrochloride A beta-adrenergic blocking agent**

BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

INDERAL is contraindicated in: 1) bronchial asthma; 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

WARNINGS

CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i e*, that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect The effects of INDERAL and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dosage of 5 mg propranolol.

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e g*, isoproterenol or levarterenol However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g*, CHRONIC BRONCHITIS, EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function.

ADVERSE REACTIONS

Cardiovascular: bradycardia; congestive heart failure, intensification of AV block, hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory: bronchospasm

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION—*Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day. If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control.

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED:

BRADYCARDIA—ADMINISTER ATROPINE (0 25 to 1 0 mg). IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROTERENOL CAUTIOUSLY

CARDIAC FAILURE—DIGITALIZATION AND DIURETICS

HYPOTENSION—VASOPRESSORS, *e g*, LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE)

BRONCHOSPASM—ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE.

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

TABLETS

No 461—Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100.

No. 462—Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 464—Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 468—Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

INJECTABLE

No. 3265—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection. The pH is adjusted with citric acid Supplied as: 1 ml ampuls in boxes of 10

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Eosinophilic Leukemoid Reaction in Pulmonary Carcinoma

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Profound eosinophilia associated with neoplasms has been infrequently reported.[1-5] We report a case of bronchogenic carcinoma with an eosinophilic leukemoid reaction and review the literature.

Case report

A 71-year-old white male was admitted to Misericordia Hospital Medical Center with complaints of nonproductive cough, dyspnea, and orthopnea of one month duration. The patient had been a heavy smoker for many years. A chest x-ray taken a month prior to admission had shown infiltrate in the right upper lobe of the lung. There was no history of allergies, asthma, or skin diseases.

Patient was afebrile on admission and had a blood pressure of 150/80. A few lymph nodes in both anterior and posterior triangles of the neck were palpable. The anteroposterior diameter of the chest was increased. Moist rales could be heard at both bases of lungs. A grade III systolic murmur at the apex of the heart could be heard. Abdominal examination revealed an enlarged liver, which could be palpated up to 3 cm. below the right costal margin. Extremities showed a trace of pedal edema.

The routine blood count revealed a hemoglobin of 10.3 Gm. per deciliter. There were 60,000 white blood cells per cubic millimeter. The differential count showed 28 percent neutrophils, 4 percent lymphocytes, 20 percent band forms, and 48 percent eosinophils. Serial complete blood counts with the percentage of eosinophils are shown in Table I. Repeated stool examinations for parasites gave negative results.

TABLE I. Serial blood counts

Date	Hemoglobin Grams per Deciliter	White Blood Cells per Cubic Millimeter	Percent Eosinophils
February 16	10.3	60,000	48
February 18	12.3	140,000	46
February 21	11.8	150,000	47

The patient underwent a number of laboratory tests and procedures to determine the cause of eosinophilia, hepatomegaly, and the pulmonary infiltrate. Prothrombin and partial thromboplastin times were normal. The serum lactic dehydrogenase was consistently abnormal, ranging between 840 and 1,700 units per liter.

The serum iron was 55 micrograms per deciliter and iron-binding capacity 210 micrograms per deciliter. VDRL test gave negative results. Cytologic examination of the sputum revealed malignant cells and the sputum eosinophil count was 9 per 100 cells. Sputum cultures showed *Enterobacter cloacae*, *Pasteurella ureae*, and *Neisseria catarrhalis*. Chest x-ray film showed an additional infiltrate in left lower lobe, right hilar adenopathy, and plate-like atelectasis in right base. A liver and spleen scan showed marked hepatomegaly and no splenomegaly. There were multiple areas of decreased perfusion in liver parenchyma. Bone marrow biopsy showed normal marrow elements, but there were many tumor cells of a mucin-producing carcinoma, and an increased number of eosinophils was obvious (Fig. 1). The patient was treated with kanamycin sulfate for his gram-negative pneumonitis, but died of cardiovascular collapse while diagnostic work-up was going on. Postmortem examination revealed bronchogenic carcinoma of the anaplastic giant cell type with extensive metastases to the liver, lungs, pancreas, adrenals, lymph nodes, epicardium, pleurae, and chest wall (Fig. 2).

Comment

Eosinophilic leukemoid reactions are seen in parasitic, allergic, and drug reactions. However, eosinophilia associated with a carcinoma is an unusual occurrence.[1-5] Since Rheinbach in 1893[6] reported the first case of eosinophilia with a neoplasm, a number of reports have appeared in the literature.[1-5] Pulmonary carcinoma is rarely shown to have such an association.[1-5] In the case reported here, the total white blood-cell count, as well as the absolute eosinophil count, indicated an eosinophilic leukemoid reaction.

The mechanism for eosinophilia in any patient with a malignant tumor is not clear. It is attributed to necrosis of tumor tissue, the products of protein breakdown causing an eosinophilic response.[3] It has

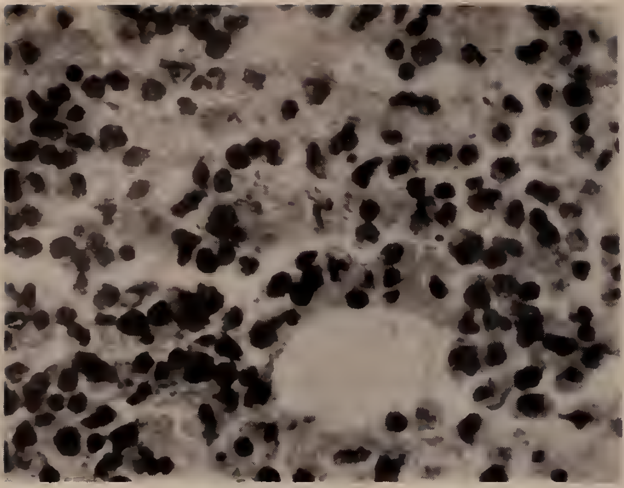

FIGURE 1. Bone marrow biopsy selection shows tumor cells and sheets of eosinophils (original magnification ×450).

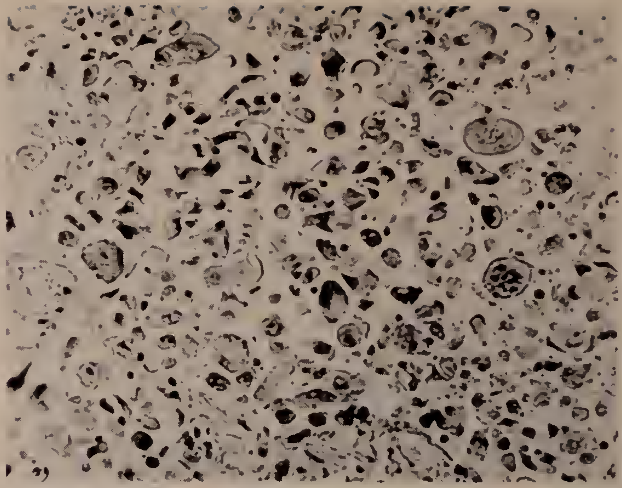

FIGURE 2. Postmortem histologic section of lung shows giant cell anaplastic cancer with eosinophils (original magnification ×250).

been suggested that hormonal factors similar to erythropoietin, as well as altered nucleic acids and their derivatives, increase leukocyte count.[7,8] Wasserman and associates[3] extracted a peptide of 500 in molecular weight from a large anaplastic carcinoma of the lung. This peptide was shown to be chemotactic for eosinophils and was indistinguishable from eosinophilic chemotactic factor of anaphylaxis.

The significance of an increased number of eosinophils in these reported cases is controversial. Prognosis is considered extremely poor in cases of malignant conditions with blood eosinophilia by some,[5] while there are other reports suggesting that tissue eosinophilia in carcinoma is a good prognostic sign and shows better than usual resistance to the advance of the neoplasm.[9] The peripheral eosinophilia usually disappears on removal of the primary tumor in patients with localized neoplasms.[1,4] The significance of an increased number of eosinophils in bone marrow smears, a finding noted in our case, has been discussed by Lanier,[10] who suggests that an increase in eosinophils in the absence of other causes of eosinophilia such as dermatitis, asthma, or other allergic disorders may indicate the presence of a malignant tumor that has metastasized. Although the association between eosinophilia and malignant tumors is not frequent, it is an interesting observation.

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Chylous Ascites and Chylothorax

Presenting manifestation of pancreatic carcinoma

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Chylous ascites, especially of nontraumatic origin, is rare. Pratt and McCready[1] found only 10 cases of chylous ascites recorded in English medical literature in a 15-year period. Chylous ascites has been reported as a complication of painless chronic pancreatitis,[2] chronic relapsing pancreatitis,[3] and pancreatic pseudocyst.[4] Kelly and Butt in 1960[5] reported 79 patients with chylous ascites observed at Mayo Clinic during a 30-year period and found eight cases of carcinoma of pancreas diagnosed at exploratory laparotomy. Since then there have been scattered case reports of chylous ascites due to pancreatic carcinoma, mostly in non-English medical literature.[6–9]

The purpose of this article is to report a case of chylous ascites and chylothorax as a presenting manifestation of carcinoma of the pancreas.

Case report

A 67-year-old white man was admitted to the hospital with a five-day history of epigastric discomfort and a three-day history of melena. He was well until about five days prior to admission, when he first noted dull epigastric discomfort, which was aggravated by eating. He treated himself with aspirin but then developed the melena three days prior to admission. He denied any dysphagia, nausea, vomiting, anorexia, hematemesis, or weight loss.

Significant past medical history included diabetes mellitus diagnosed three years before and well controlled on 1,500 calories diabetic diet, with a weight loss of 35 pounds in that period. Significant family history included diabetes in his mother and gastric carcinoma in his father.

On admission he was well developed, without acute distress. He had postural hypotension and his abdomen was soft with some tenderness in epigastrium. There was neither organomegaly nor masses. Bowel sounds were active. The stool was tarry and gave a strongly positive test result for occult blood. There was 2-plus pitting edema of both lower extremities. Nasogastric tube aspirate had coffee ground appearance and was strongly positive for blood.

Blood studies included hemoglobin 13.8 Gm. per deciliter, hematocrit 40.1, WBC (white blood cell) count 7,000 per cubic millimeter with normal differential and normocytic normochromic indices. The serum glucose level was 146 mg., triglycerides 56 mg., cholesterol 106 mg., total protein 5.9 Gm., albumin 3.5 Gm. (all per deciliter); alkaline phosphatase was 133 units per liter. Serum amylase, electrolytes, transaminases, LDH (lactic dehydrogenase), and prothrombin time were normal. Urinalysis and electrocardiogram also gave normal results. Chest x-ray film showed a right pleural effusion; heart size was normal.

On the next day the patient underwent fiberoptic esophagogastroduodenoscopy which revealed diffuse gastritis, more severe in the antral region. The patient was started on antacid therapy. Symptomatically, the patient felt better; his bleeding stopped and he did not have any further abdominal pain. A right pleural effusion was confirmed on right lateral decubitus films and a diagnostic thoracentesis revealed milky fluid with a specific gravity of 1,034, protein 8.9 Gm., triglycerides 1,300 mg., cholesterol 128 mg. per deciliter; amylase 30 units, WBC 18,700 per cubic millimeter with 100 percent lymphocytes, and RBC (red blood cells) 16,600 per cubic millimeter. While he was recovering from the upper gastrointestinal bleed he noted distention of the abdomen, and edema increased over both lower extremities. On sonography, abdominal distention was found to be due to ascites, and abdominal paracentesis was performed which also revealed milky fluid, with a specific gravity of 1,020, protein 3.5 Gm., triglycerides 825 mg., and cholesterol 104 mg. per deciliter; amylase 140 units, WBC 3,300 per cubic millimeter with 100 percent lymphocytes, RBC 510 per cubic millimeter, and LDH 53 units per liter. Results of pleural and ascitic fluid culture, smear and culture for acid-fast bacilli, and cytologic studies were negative. Tuberculin skin test with PPD (purified protein derivative) gave negative results.

A liver-spleen scan showed the liver to be normal in size and configuration, with mottled decrease uptake throughout the parenchyma. The spleen was slightly enlarged in size. Results of upper gas-

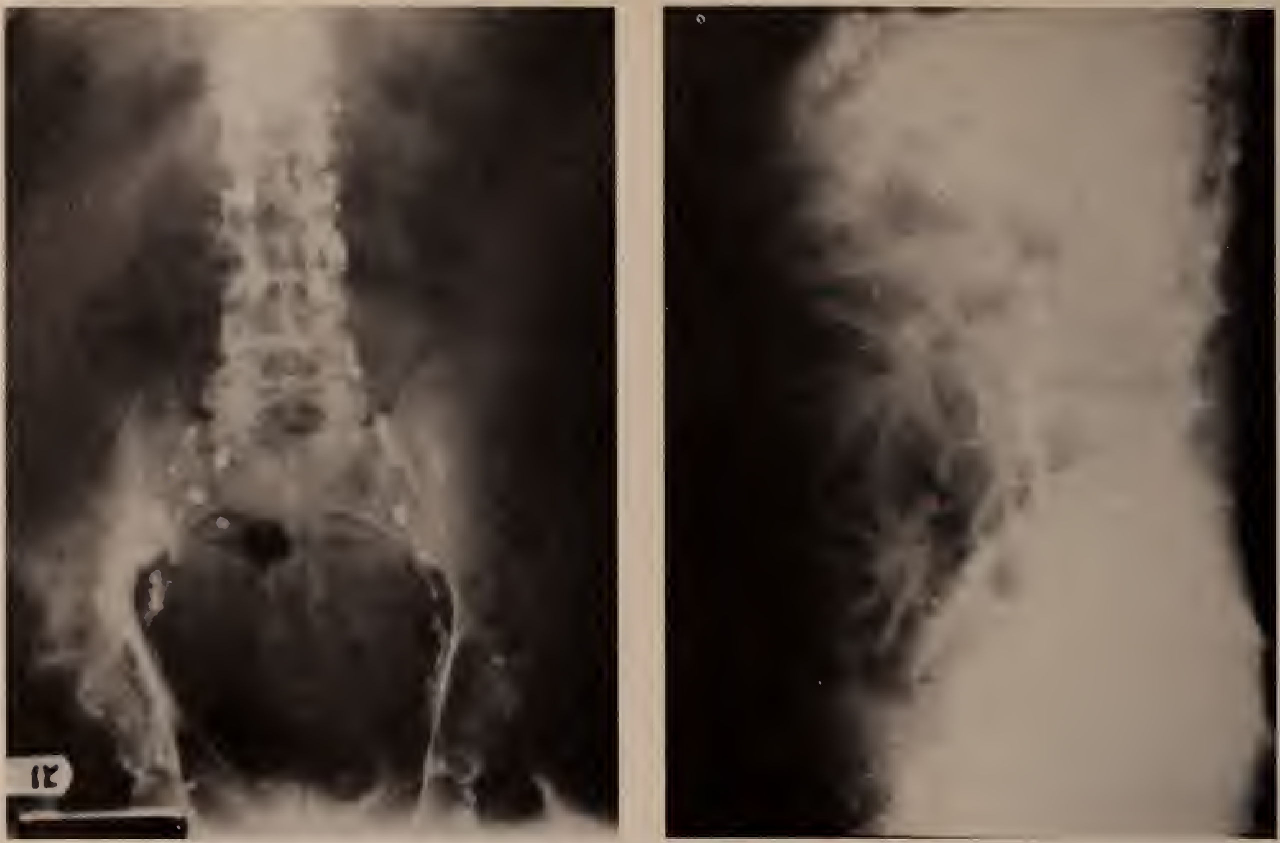

FIGURE 1. Lymphangiograms show lymphatic obstruction at lumbar first and second vertebrae. Opacified pelvic lymph nodes are normal in shape and size, without filling defects. Para-aortic lymph nodes are enlarged and irregular.

trointestinal series and barium enema were normal and a lymphangiogram showed obstruction of lymphatic flow at level of the first and second lumbar vertebrae (Fig. 1). Endoscopic retrograde cholangiopancreatography revealed a normal biliary system and failed to visualize the pancreatic duct. Celiac angiogram revealed a 2-cm. irregularity in the wall of the origin of the splenic artery, which was thought to be due to either tumor encasement or atherosclerosis. Results of bone marrow aspiration and biopsy were normal.

The patient underwent a laparotomy for a possible pancreatic lesion causing lymphatic obstruction. At surgery 8 L. of chylous fluid were removed. A hard mass was found extending from the retroperitoneum at the root of the mesentry, in the area of pancreas to the porta hepatis. The liver was studded with metastatic disease. Frozen sections and paraffin sections revealed adenocarcinoma of the pancreas.

Comment

Chylous ascites, although rare, has been recognized as a clinical problem since the seventeenth century.[10,11] The frequency with which chylous ascites occurs is difficult to ascertain, but it is noteworthy that only 9 cases were recognized among 1,688,760 general admissions to the Charity Hospital in New Orleans between 1936 and 1956.[12] A study from the University of Utah Hospitals reported an incidence of 1 case in 56,343 admissions.[13] Chylous ascites is generally recognized to be an unusual and nonspecific consequence of intrinsic or extrinsic obstruction to lymphatic drainage, and is most often the result of neoplastic and inflammatory processes in adults and predominantly due to congenital abnormalities in infants and children.[14] Among other reported causes are trauma, adhesive bands constricting the small bowel, compression of thoracic duct by aortic aneurysm, nephrotic syndrome, cirrhosis of liver, chronic painless and relapsing pancreatitis, pancreatic pseudocyst, and retroperitoneal lymphadenectomy. Some cases have been described in which the cause was never established and no obstruction was found either at surgical exploration or at autopsy.[5]

Our case is most unusual in that the patient appeared with upper gastrointestinal bleeding, a small right pleural effusion, and ascites without significant characteristic symptoms and signs of pancreatic carcinoma. Thoracentesis and abdominal paracentesis both revealed chylous fluid. Lymphangiography showed obstruction of lymph flow at lumbar first and second vertebrae and required extensive investigations including laparotomy to find the cause of the problem.

In the past few years, lymphangiography has assumed an important role in evaluation of the patient with chylous effusions.[15] Abdominal lymph-node architecture has been seen on x-ray film and, although not diagnostic, may be helpful in suggesting the underlying disease process. In addition, lymphangiography has been helpful in locating areas of lymphatic leakage into the peritoneal cavity.[16,17] In our patient it showed the site of the lymphatic obstruction but did not reveal the nature of the obstruction. Mechanical obstruction of the thoracic duct, cisterna chyli, or intestinal lymphatics due to invasion, compression, or occlusion by a malignant tumor leading to rupture of lymphatics causing internal lymph fistula and leakage of lymph is the usual common factor in the pathogenesis of chylous ascites.[6,18]

In chylous effusions, fluid appears milky due to the presence of large amounts of fat. The fat occurs primarily as triglycerides, usually with associated small amounts of cholesterol and phospholipids.[5,12] Although chylous ascites may exist independently, it is generally found in association with chylothorax.[1] The chylothorax may occur even though the cause of the chylous ascites is subdiaphragmatic. Apparently the chylous ascites fluid transverses the diaphragm by way of lymphatic channels and enters the pleural space. Stewart and Linner[19] injected Congo red dye intraperitoneally in a child with chylous ascites and right chylothorax. The dye stained the chylous pleural fluid.

Treatment of chylous ascites is obviously best directed to the underlying cause if it can be identified and localized. Vasko and Tapper[14] pointed out the potential diagnostic and therapeutic benefits of exploratory laparotomy when an etiologic factor cannot be demonstrated by other studies. The disease process is often established at laparotomy and, in a number of instances, proves to be surgically correctable. Elimination of long-chain triglycerides is probably indicated in all cases of chylous ascites. The patient can be placed on a salt-restricted diet of very low fat content, to which medium-chain triglycerides may be added.[20]

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Pneumocystis Carinii Pneumonia in Drug Addict

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***Pneumocystis carinii* pneumonia** is a well-recognized infection that occurs primarily in the immunosuppressed patient. The list of associated conditions in patients with confirmed *Pneumocystis* pneumonia continues to grow as does our knowledge of host defenses against this infection.

This report describes a case of *P. carinii* pneumonia in an intravenous drug user and illustrates the importance of confirming the etiology of diffuse interstitial lung disease in the addicted population.

Case report

A 40-year-old man with a long history of daily intravenous heroin abuse was admitted to Queens Hospital Center for increasing shortness of breath of two weeks duration. He complained of a nonproductive cough, loss of appetite, and a 20-pound weight loss during the previous two months. Physical examination revealed a well-developed, mildly ill male; respiratory rate was 30 per minute, temperature 102.8°F., and pulse was 120 per minute. Breath sounds were decreased bilaterally and end expiratory rales were heard over both lung fields. The remainder of the physical examination disclosed nothing remarkable. Laboratory data revealed a hemoglobin of 17 Gm. per deciliter, hematocrit of 50, and a white blood cell count of 5,000 per cubic millimeter (60 percent segmented neutrophils, 10 percent band forms, 30 percent lymphocytes). His arterial blood gas on room air showed a pH of 7.40, carbon dioxide pressure of 37 mm. Hg, and oxygen pressure of 41 mm. Hg. His chest x-ray film demonstrated bilateral interstitial nodules, a large right upper lobe bulla, and multiple left upper lobe apical bullae (Fig. 1). Pulmonary function tests revealed a moderately severe restrictive pattern with reduction in all lung volumes to 60 percent of normal and a reduction in the diffusion capacity for carbon monoxide to 20 percent of normal.

Investigation of this patient's lung disease found sputa negative for acid-fast bacilli and no bacterial growth in sputum and blood cultures. Skin testing showed no response to intradermal injections of mumps, *Candida*, and 5 tuberculin units of PPD (purified protein derivative). Serologic studies for collagen vascular disease showed a negative antinuclear antibody, rheumatoid factor, and normal serum C_3 and C_4 levels. Results of serum protein electrophoresis showed mildly elevated alpha-1, alpha-2, and gamma globulins and his quantitative immunoglobulin levels were: IgG 1,920 mg., IgA 835 mg., and IgM 278 mg. per 100 ml. Despite empiric penicillin therapy, the patient continued to be febrile and increasingly short of breath; an open lung biopsy was performed to establish a diagnosis. Postoperatively the patient's respiratory status rapidly deteriorated and chest x-ray film revealed dense bilateral infiltrations (Fig. 2). Despite intubation and mechanical ventilation, the patient developed worsening hypoxia and a respiratory acidosis. He was empirically treated with cephalothin sodium (Keflin) and oxacillin sodium, and sputum and blood cultures continued to have no growth.

Review of his open lung biopsy showed areas of organizing pneumonia with thickened septae infiltrated by plasma cells, lymphocytes, and histiocytes. Many alveoli contained a foamy exudate. Silver methenamine stain revealed numerous crescent-

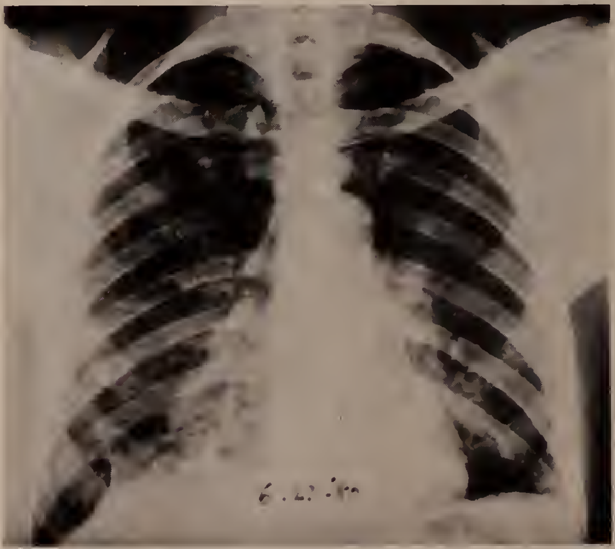

FIGURE 1. Admission chest roentgenogram shows bilateral lower lobe interstitial nodular pattern and bullae at right and left apex.

shaped organisms of *P. carinii* (Fig. 3).

Intravenous trimethoprim-sulfamethoxazole (Septra) was initiated at a dose of 15 mg. trimethoprim and 75 mg. sulfamethoxazole per kilogram body weight per day in four divided doses. Blood trimethoprim levels were monitored to maintain therapeutic levels.[1] The patient's condition improved rapidly on this medication and he became afebrile on day five of this regimen. He was extubated on day nine of medication and made a full recovery. His chest x-ray film showed progressive clearing with some later residual infiltrates (Fig. 4). No apparent underlying disease could be documented in this patient. However, he continued to show skin anergy to mumps, *Candida*, PPD, and streptokinase, and his serum immunoglobulin levels remained elevated. In addition, his lymphocytes showed a marked reduction in peak response to in vitro mitogen stimulation, ranging from 15 percent to 41 percent of normal (Table I). In standard H^3 thymidine uptake studies,[2] this patient's lymphocytes, although normal in number, showed impaired responsiveness to all three mitogens used as compared with normal control.

TABLE I. Comparison of lymphocyte response* to mitogen stimulation: patient versus normal control

Mitogen	Patient*	Control*	Patient/Control (Percent)
PHA	1,155	7,120	16.2
PWM	385	2,480	15.5
CON-A	1,031	2,502	41.2
Background	57	64	. . .

* Counts per minute H^3 thymidine determined on day four of lymphocyte culture.

Abbreviations: PHA–phytohemagglutinin; PWM–pokeweed mitogen; Con-A–Concanavalin A.

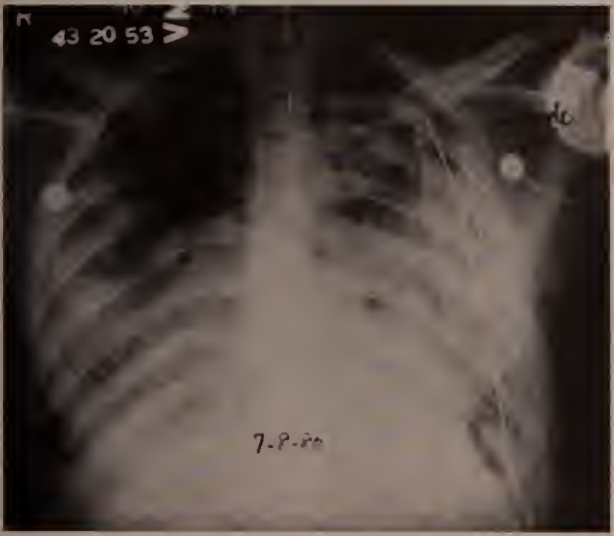

FIGURE 2. Portable chest roentgenogram after open left lung biopsy shows bilateral extensive alveolar shadows. Left chest tube and an endotracheal tube are also seen.

Comment

Interstitial pneumonia caused by the protozoan *Pneumocystis carinii* was unrecognized in the United States before 1956.[3] In the last 25 years there has been a rapid increase in the number of diagnosed cases, primarily in immunosuppressed patients. This group of patients represents a wide variety of disease processes including severe protein malnutrition, primary and secondary immune deficiency disorders, malignant conditions, and collagen vascular diseases. *P. carinii* pneumonia has also been reported in "apparently" normal patients.[4] However, in these few case reports there is no reported data describing their immune status.

Our case of *P. carinii* pneumonia is of interest in that it was diagnosed in a drug addict who had none

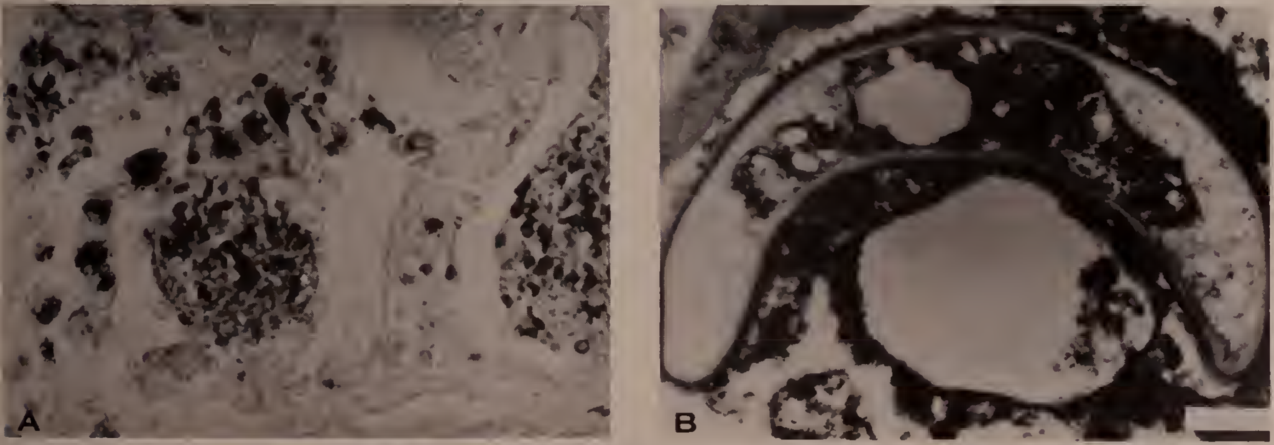

FIGURE 3. Open lung biopsy stained by modified silver methenamine (Grocott's stain) shows interstitial pneumonia and abundant intraalveolar exudate containing *P. carinii* organisms (original magnification ×250). (B) Electron microscopic picture of crescent-shaped organism showing multiple layers of outer cyst wall; complex of membranes and organelles can be seen inside cyst (original magnification ×20,000).

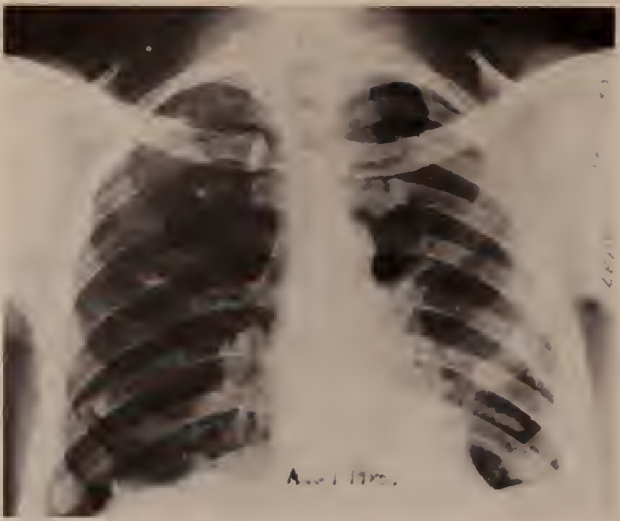

FIGURE 4. Chest roentgenogram after completion of therapy shows marked improvement with some residual infiltrates in lingula.

of the usual underlying conditions associated with this infection. However, we did document that he was not fully "normal" immunologically; he had skin anergy to multiple antigens, elevated immunoglobulins, and abnormal cellular immunity as measured by in vitro lymphocyte culture studies. Similar abnormalities in humoral and cell-mediated immunity have been reported in other groups of intravenous drug users who therefore may be at risk for unusual infections.[5] We have been unable to find any previous report of the association of drug addiction with *P. carinii* pneumonia. However, this infection may become an important cause of interstitial pneumonias in this population if the diagnosis is sought, particularly as we increase our understanding of the effect of chronic intravenous drug use on immunocompetency. In addition, this case illustrates the importance of confirming the etiology of diffuse interstitial lung disease. *Pneumocystis* infection was not an expected diagnosis in this reported patient since he did not have the usual underlying diseases, was not on steroids, and initially appeared only mildly ill. In addition, this patient's chest x-ray findings were not totally typical of *Pneumocystis* pneumonia because the large bullae distorted the pattern of his interstitial infiltrates so that they appeared less symmetrical and perihilar than is usually seen in this disease.[6] Open lung biopsy yielded a large specimen obtained under direct vision from the affected site and allowed for rapid, safe, and accurate diagnosis in this patient with bullous lung disease, in whom transbronchial lung biopsy may have been risky. In this manner, we were able to institute effective and specific therapy for a treatable disease.

Summary

In summary, this case illustrates two important points: (1) like other immunosuppressed patients, drug addicts may be at an increased risk for *Pneumocystis carinii* pneumonia; and (2) definitive diagnoses must be sought in patients with interstitial lung disease so that appropriate therapy can be given.

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Addendum

Since this paper was accepted for publication we have learned that this patient was admitted to another hospital with a documented cryptococcal meningitis. This further supports our position that this patient exhibits drug-related immunosuppression with resultant unusual infections. This topic has been recently described in three articles in *The New England Journal of Medicine*, **305:** 1425 (Dec. 10) 1981.

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poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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NUTRITION DISORDERS

Lipids in Human Nutrition: An Appraisal of Some Dietary Concepts. By Germain J. Brisson. Englewood, N.J., Jack K. Burgess, Inc., 1981. Illustrated, 175 pages. Cloth, $

An analysis of the current knowledge of some of the roles lipids play in human nutrition.

MYOCARDIAL REVASCULARIZATION

Myocardial Revascularization: Medical and Surgical Advances in Coronary Disease. Edited by Dean T. Mason, M.D., and John J. Collins, Jr., M.D. New York, Yorke Medical Books, 1981. Illustrated, 532 pages. Hardcover, $55.

A new text on the state of the art.

AGING

Hormones in Development and Aging. Edited by Antonia Vernadakis and Paola S. Timiras. New York, SP Medical and Scientific Books, 1982. Illustrated, 686 pages. Cloth, $75.

A comprehensive treatise on the endocrine system, viewed as an integral part of the nervous system.

* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

Myelin Basic Protein Elevation in Myelopathy Due to Systemic Lupus Erythematosus

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Myelopathy is a rather rare complication of SLE (systemic lupus erythematosus)[1]; its pathogenesis is apparently related to small-vessel involvement. An additional factor may be demyelination, which has been occasionally very extensive.[2] An index of active demyelination has been found to be the level of myelin basic protein in the CSF (cerebrospinal fluid).[3]

We recently studied a case of myelopathy due to SLE that showed elevated myelin basic protein in the CSF.

Case report

A 21-year-old black female was admitted to Lincoln Hospital with a two-week history of progressive paraparesis and urinary and fecal incontinence. Two years prior to admission she was diagnosed as having SLE, confirmed by kidney biopsy. Since then, she had been treated with varying doses of prednisone and azathioprine. Soon after the onset of her disease she developed a hemiparesis on the left side, from which she recovered completely. Evaluation at another hospital, including electroencephalogram, radionuclide brain scan, and computerized tomography, disclosed nothing remarkable. Two months prior to admission, she was admitted to Lincoln Hospital because of several episodes of "dizziness" and one syncopal attack. Cardiac neurologic evaluations did not disclose any significant abnormality and she was discharged on prednisone, 20 mg., and azathioprine, 50 mg., daily. Her family history revealed that her father and a maternal aunt also suffer from SLE.

On admission the patient's mental status was normal. Her blood pressure was 130/70 mm. Hg, pulse 130 per minute, and temperature 102°F. An infected ulcer was found in the left gluteal area. The remainder of the general physical examination revealed nothing remarkable. Neurologic examination determined symmetrical weakness of the lower extremities, which could be moved only after elimination of gravity. Tendon reflexes were symmetrically decreased in all extremities, and plantar responses were bilaterally extensor. Pain and touch perception was normal, but position sense was severely affected in the lower extremities with no appreciation at the ankles; vibratory sensation was lost up to the sixth thoracic vertebra level. Rectal examination revealed a flaccid sphincter, and the bladder was distended.

Abnormal laboratory data included: erythrocyte sedimentation rate 160 mm. per hour, lactic dehydrogenase 550 mU. per milliliter (normal: 60 to 200), creatinine phosphokinase 260 mU. per milliliter (normal: 0 to 225), a positive VDRL with normal FTA (fluorescent treponemal antibody) test findings, and a 4-plus proteinuria with several hyaline casts. A complete myelogram with metrizamide disclosed no abnormalities. Vitamin B_{12} and folate levels were normal. Examination of the CSF revealed no cells, a protein content of 7 mg., and glucose of 42 mg. per deciliter. Serum glucose level was 87 mg. per deciliter. Myelin basic protein was 11 ng. per milliliter (normal: 0 to 4). Conduction velocities of the left median, common perineal, and posterior tibial nerves were normal; however, the amplitudes of the latter two were diminished (50 and 100 microvolts, respectively) and the shapes of the responses were flattened. Electromyogram in the lower extremities showed occasional fibrillations and polyphasic potentials diffusely, but revealed nothing else remarkable.

Her maintenance dose of prednisone was increased from 20 to 100 mg. daily; over the next two weeks she showed slight improvement of her muscle power but never regained sphincter control.

Comment

The rarity of SLE myelopathy is reflected by the limited number of reported cases; Andrianakos et al.[1] have reviewed a total of 26 cases up to 1975, and only a few isolated cases have been published since then.[4-6] Two cases of SLE myelopathy were noted to have an elevated value[3,7]; however, no full report of SLE myelopathy with an elevated myelin basic protein has ever been reported.

The clinical presentation may be that of a complete or partial transverse myelopathy, and in only a few cases has improvement occurred. Pathologic reports emphasize abnormalities in the small vessels of the spinal cord, but occasionally severe demyelination of the posterior and lateral columns has been reported.[2]

Our case, as in previously reported ones, had evidence of involvement of other areas of the nervous system preceding the paraplegia. The examination revealed involvement of the posterior columns, pyramidal tracts, and anterior horn cells. The normal myelogram findings excluded a compressive lesion, and the normal FTA test findings excluded a syphilitic involvement of the spinal cord. The moderate elevation of myelin basic protein reflects a limited degree of demyelination in the spinal cord. However, if areas of the brain are involved in SLE the demyelination may be more extensive and, therefore, the increase of the myelin basic protein higher.

Further examination of myelin basic protein in the CSF of patients with SLE may show a relationship between the level of myelin basic protein and the extent of central nervous system involvement.

Summary

A case of myelopathy due to systemic lupus erythematosus is reported because of an elevated CSF (cerebrospinal fluid) myelin basic protein. Further measurements of CSF myelin basic protein are necessary to examine the possible relationship between the extent of the central nervous system involvement from the lupus and the level of myelin basic protein.

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Kidney transplants gain in life-prolonging value

Kidney transplants are becoming more effective in prolonging life.

One-year survival rate of transplant patients is now close to 90 percent, says a special communication from the Standards Committee of the American Society of Transplant Surgeons.

The Committee reports in the September 18 Journal of the American Medical Association on a study of present-day effectiveness of kidney transplants. Official record keeping was ended in 1974, when one-year survival ratio was around 72 percent.

Results of kidney transplants performed at seven centers in 1977 and 1978 were evaluated.

Improvement in survival rate has come despite the fact that more high-risk patients are now receiving donor kidneys. These include diabetic and older patients who once were considered poor risks for survival.

The Committee credited the improved survival ratio to sophisticated use of drugs and treatment to suppress the body's inclination to reject foreign organs and to prompt, accurate diagnosis and treatment of complications.

Multiple Hepatoma with Leukemoid Reaction

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A leukemoid reaction is an abnormality noted in the peripheral blood picture simulating a leukemia. Leukemoid reactions have been described in association with a multitude of diseases including infectious, oncogenic, and hemorrhagic ones. Although implicated as a paraneoplastic syndrome with many malignant tumors, it has only been described once in the publications in association with malignant hepatoma.* In the following case, a myelocytic leukemoid reaction was encountered with what was diagnosed at postmortem as a diffuse hepatoma. The rare association of this phenomenon with a primary liver tumor presented many difficulties in diagnosis, as will be noted.

Case report

A 50-year-old woman was seen on February 19, 1980, with the chief complaint of right upper quadrant abdominal pain of approximately three weeks duration, accompanied by fever that fluctuated between 99 and 104°F. The pain was colicky, localized to the right upper quadrant with minimal radiation to the right flank. The patient had no complaint of nausea or vomiting, but did have anorexia and an aversion to cigarettes. One week prior to admission she was seen by her physician who ordered an oral cholecystogram and started ampicillin per mouth. She subsequently developed diarrhea that did not abate. The movements were watery, accompanied by flatulence, frequent, not foul-smelling, and without blood or mucus. Following this episode hospitalization was advised for further work-up.

Significant past history included a previous hospital admission in 1978 for the treatment of thrombophlebitis with pulmonary embolism. She was treated with anticoagulants and subsequently discharged. She had no past history of hypertension, diabetes, heart disease, or gastrointestinal or genitourinary disorder. The patient was a nondrinker and had smoked one pack of cigarettes daily for 30 years. The patient had no allergies, and the family history was noncontributory. The only medication she had taken was the aforementioned ampicillin.

On examination, the patient was a 50-year-old white woman, well-nourished, obese, alert and cooperative, suffering from moderate abdominal distress. Her vital signs were: blood pressure 110/80 mm. Hg, pulse 100 per minute, respirations 18 per minute, and temperature 100.5°F. Pertinent physical findings were limited to a II/VI systolic ejection murmur at the left sternal border, nonradiating; a soft abdomen with moderate tenderness in the right upper quadrant, some guarding, and no rebound tenderness. A liver edge was palpable, and the spleen was not felt. Bowel sounds were hypoactive. A diffuse petechial rash was present over the upper trunk and the groin area. Palmar erythema was present bilaterally. The remainder of the examination was unremarkable.

Laboratory data on admission included the following: WBC (white blood cell) count 48,000 per cubic millimeter, hemoglobin 15.1 Gm. per deciliter, hematocrit 45.7 with normal indices; differential count was 41 polymorphonuclear cells, 33 stab cells, 11 lymphocytes, 2 monocytes, 8 eosinophils, 2 metamyelocytes, 3 myelocytes; adequate platelets were seen. Urinalysis revealed 2-plus albumin, and 20 to 25 WBCs per high power field. Blood chemistries were: glucose 126 mg. per deciliter, sodium 138 mEq., potassium 4.4 mEq., chloride 99 mEq., and carbon dioxide 28 mEq. per deciliter; and amylase 36 units per deciliter. SMA-24 (sequential multiple analysis) performed on admission revealed a total protein level of 5.9 Gm. and albumin 2.5 Gm. per deciliter; direct bilirubin 0.6 mg. per deciliter, alkaline phosphatase 393 I.U. per deciliter, SGOT (serum glutamic oxaloacetic transaminase) 5 units per liter, LDH (lactic dehydrogenase) 326 I.U. per liter, and CPK (creatinine phosphokinase) 77 I.U. per liter. The remainder of the study was within normal limits.

Repeat CBC (complete blood count) on day 1 showed a WBC count of 47,000 per cubic millimeter, hemoglobin 13.6 Gm. per deciliter, hematocrit 40.5; and a differential count of 20 polymorphonuclear cells, 54 stab cells, 4 lymphocytes, 1 monocyte, 10 eosinophils, 2 basophils, 5 metamyelocytes, 3 myelocytes, and 1 promyelocyte, with several nucleated red blood cells seen.

An oral cholecystogram on day 1 was negative for cholelithiasis. Abdominal sonogram followed shortly and revealed minimal enlargement of the left liver lobe. Chest x-ray films were unremarkable, and abdominal films showed only dilated bowel loops. PT/PTT (prothrombin time/partial thromboplastin time) was normal; ESR (erythrocyte sedimentation rate) was 50 mm. and 44 mm. per hour corrected. The patient was started on 1 Gm. ampicillin intravenously every six hours after three sets of blood cultures were obtained at hourly intervals, and her intake was limited to surgical fluids.

Surgical and gynecologic consultations were obtained, but proved noncontributory. By the third hospital day, the pain had diminished, with exacerbations treated with pentazocine 30 mg. intramuscularly. The diarrhea persisted, and four fresh stool specimens sent for ova and parasites were examined and reported as negative. CBC on day 4 showed a WBC count of 77,000 per cubic millimeter, hemoglobin 12.8 Gm. per deciliter, hematocrit 39 with differential count of 35 polymorphonuclear cells, 15 stab cells, 3 lymphocytes, 1 monocyte, 4 eosinophils, 21 metamyelocytes, 15 myelocytes, and 6 promyelocytes. Throughout her illness the patient maintained a low-grade fever of 101°F. that never fluctuated by more than one degree. Antibiotics were changed to tobramycin 60 mg. intramuscularly every 8 hours, carbenicillin 5 Gm. intravenously every 4 hours, and clindamycin 600 mg. intravenously every 6 hours. A liver scan was performed on day 4 and showed a diffuse nodular infiltrate throughout the hepatic parenchyma with splenic enlargement.

CBC on day 5 now revealed a WBC count of over 106,000 per cubic millimeter, hemoglobin 12 Gm. per deciliter, hematocrit 35.6, with a similar differential as previously. Three sets of aerobic/anaerobic blood cultures all showed no growth. Tuberculin skin test with purified protein derivative gave negative results, as did a lupus erythematosus test. SMA-24 on day 5 showed further elevations of LDH, alkaline phosphatase, direct and indirect bilirubin, as well as a lowering of the albumin and total protein values. On day 6 the CBC showed a WBC count of 131,000 per cubic millimeter, hemoglobin 13.1 Gm. per deciliter, hematocrit 41.2, 7 polymorphonuclear cells, 31 stab cells, 2 lymphocytes, 1 monocyte, 4 eosinophils, 1 basophil, 24 metamyelocytes, 12 myelocytes, 6 promyelocytes, and 2 myeloblasts. Platelets were 140,000. PT/PTT was now (control/patient) 11.3/21.9 and 30.6/41.1 seconds. Thrombin time was 5.0/4.0 seconds, and serum fibrinogen was 405 mg. per deciliter. On day 7 SMA-24 showed rising BUN and creatinine levels, uric acid 10.8 mg. per deciliter, albumin 1.8 Gm. per deciliter, direct bilirubin 1.2 mg. per deciliter, total bilirubin 1.7 mg. per deciliter, alkaline phosphatase 263 I.U. per deciliter, and LDH over 600 I.U. per deciliter.

A hematologic consultation was requested at this time. Bone marrow aspiration showed hypercellularity, and an 8:1 myeloid:erythroid ratio. No tumor cells were seen. Leukocyte alkaline phosphatase was within normal limits.

The patient's condition appeared improved by day 8 despite the persistent leukocytosis. The abdominal pain and diarrhea subsided. It must be pointed out that at no time did the patient appear toxic.

On day 9, the patient began to deteriorate. The abdominal pain and nausea increased despite adequate medication. She was scheduled for abdominal CT (computed tomography) and gallium scans. During scanning, she experienced hematemesis of approximately 50 cc. of blood. PT/PTT was now 11.2/19.8 and 31.2/45.6 seconds in spite of vitamin K given the preceding evening. Fibrin split products were elevated at this point. CBC revealed a WBC count of 140,000 per cubic millimeter, hemoglobin 11.9 Gm. per deciliter, and hematocrit 36.6. The gallium scan showed diffuse uptake in the entire liver with several focal areas of intense pick-up. The abdominal CT scan demonstrated an enlarged liver with multiple nodular, haloed defects.

The patient developed hepatorenal failure that evening, accompanied by disseminated intravascular coagulation and shock with death soon thereafter. Prior to her death, a liver biopsy was performed.

Comment

To summarize, a 50-year-old woman appeared with right upper quadrant abdominal pain of three weeks duration, fever, and diarrhea. She had a past history of thrombophlebitis with pulmonary embolism. The patient was a smoker, but denied alcoholism. Her hospital stay lasted for nine days. She had an initial leukocytosis which rose to leukemic levels, marked liver enzyme abnormalities, grossly abnormal liver-spleen, gallium, and abdominal CT scans, and a rapid downhill course ending in hepatorenal failure, shock, and death.

On admission, the primary diagnosis was that of gallbladder disease suggested by the patient's history and physical examination. However, cholecystitis and cholelithiasis were soon ruled out when the oral cholecystogram and abdominal sonogram failed to disclose any evidence of stones. Surgical consultants were requested to evaluate the abdomen, but did not consider it to be a surgical problem. The patient appeared very well except for the abdominal pain. What was distressing was the leukocytosis with significant shift to the left and no indication of anemia. Considerations at that time were pyophlebitis secondary to cholangitis, with septicemia, to account for the blood picture. This diagnosis was also ruled out in view of many reports of sterile blood cultures, negative stool cultures, and the ineffectiveness of multiple antibiotic regimens. The white blood cell counts continued to rise steadily, while the hemoglobin and hematocrit remained essentially unchanged. The patient maintained a sense of well-being at all times, despite her leukemoid picture. The possibility of chronic myelogenous leukemia was suggested at first, but appeared unlikely to the hematology consultant in view of the persistently normal hemoglobin and hematocrit, and a high normal leukocyte alkaline phosphatase. Chronic myelocytic leukemia does classically show very high granulocyte counts, but the trend is to gradually elevate to these proportions. In this case, the WBC count rose to a level of over 140,000 per cubic millimeter in a matter of nine days. It was only at this time that 2 percent of the differential count consisted of myeloblasts. If this were true chronic myelocytic leukemia heading for blast crisis, the patient most assuredly would have been more anemic, neutropenic, thrombocytopenic, and with a much higher population of blast cells in the peripheral smear and bone marrow aspirate. Although impossible to diagnose chronic myelocytic leukemia from bone marrow studies alone, the patient's marrow showed no signs of maturation arrest or blastic transformation. The hematologist was convinced this picture was that of a leukemoid reaction secondary to occult infection or neoplasm.

A gastroenterologist had suggested the diagnosis of hepatoma, but on review of the liver-spleen scan, the consensus was multiple liver abscesses or metastatic neoplasm. The abdominal CT scan confused the picture. The multiple defects in the liver, with the observed halo appearance of these lesions, suggested multiple liver abscesses more than metastatic nodules. Amebic abscess was also considered but proved unfounded in light of stools negative for amebic cysts and a negative titer on serologic test (Serameba).

The leukemoid reaction remained granulocytic at all times. The white blood cell counts rose daily from 44,000 to 141,000 per cubic millimeter prior to death. This phenomenon has been reported in conjunction with multiple tumors, but never to the degree shown in this case. Lymphocytic leukemoid reactions have been frequently cited, but a myelocytic picture of over 100,000 per cubic millimeter has not been reported to our knowledge in association with any malignant condition except chronic myelocytic leukemia.

The patient rapidly deteriorated near the end. She developed hepatorenal failure, disseminated intravascular coagulation, and shock. It was no until shortly before her death that we obtained a live biopsy. This procedure had not been performed earlier because of gross abnormalities in her coagulation profile. On pathologic examination, the diagnosis of multiple hepatomata was confirmed.

The authors believe this to be an unusual presentation for a primary hepatic tumor. A leukemoid reaction of this magnitude, as a paraneoplastic syndrome, has not been reported with this type of tumor. In the absence of any evidence of abscess or septicemia, we believe the leukemoid reaction a manifestation of this malignant disease.

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Hemolytic Anemia in Patient with Sarcoidosis

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Although the occurrence of autoimmune thrombocytopenia in patients with sarcoidosis is well known,[1,2] the association of hemolytic anemia with sarcoidosis is considerably more rare. Since the review of 11 cases in the world literature by Dacie in 1967,[3] several additional reports have appeared.[4–8] The clinical courses of these patients have been quite varied, as have been their ultimate prognoses. We describe a patient in whom manifestations of hemolytic anemia were among the first symptoms of sarcoidosis, before a diagnosis was made. The presentation of a sarcoidosis patient with severe, frank hemoglobulinuria has not been reported previously.

Case report

A 33-year-old-white man was well until he complained of pleuritic chest pain without fever, cough, or shortness of breath. On hospital admission, chest x-ray film findings disclosed abnormalities. He had been in good health, with no history of cardiopulmonary disease, and had not experienced night sweats, chills, or hemoptysis. He had had no industrial exposure, had never smoked, and was taking no medication. There was no family history of anemia or pulmonary disease; physical examination disclosed no abnormalities, with no enlargement of the liver or spleen.

X-ray film findings showed a diffuse nodular infiltrate throughout both lung fields, greatest in the lower lobe of the right lung. There was slight hilar lymph node enlargement without paratracheal involvement. There was no effusion. Hemoglobin value was 15.6 Gm. per deciliter, hematocrit level 44, and the white blood-cell and platelet counts, as well as the results of other blood tests, were normal. Results of sputum examinations, skin tests, and other x-ray film studies were unremarkable. Pulmonary function tests showed a normal vital capacity and normal expiratory flow rates but a moderately decreased diffusing capacity.

A few days after admission, the patient noticed dark urine: urinalysis at that time showed a 3-plus protein level without cells. Further analysis showed this protein to be hemoglobin, with no albumin or myoglobin present. It was found that the hematocrit had fallen to 29. The leukocyte count was 5,500 cells per cubic millimeter, with a normal differential, and the platelet count was 290,000 per cubic millimeter. Many spherocytes were seen in the peripheral smear. Serum haptoglobin was 0, bilirubin 2.6 mg. per deciliter, and serum lactic dehydrogenase 480 mg. per deciliter (normal: 100 to 225). Urine hemosiderin was 3-plus positive, and the reticulocyte count was 13.6 percent.

An extensive work-up to determine the cause of the patient's hemoglobinuria was performed. Bone marrow aspiration showed erythroid hyperplasia. Direct and indirect Coombs' test findings were normal on repeated testing, as were acid-hemolysis and sugar-water tests. Erythrocyte glucose 6-phosphate dehydrogenase activity was normal on repeated determinations, and the leukocyte alkaline phosphatase level was normal. Test findings for antinuclear antibody were normal, and complement fractions were within normal limits.

The patient remained asymptomatic and was observed without treatment. He continued to have dark urine for several days, which then began to clear. After seven days, the hemoglobinuria had disappeared entirely. Broncoscopy with transbronchial biopsy established the diagnosis of sarcoidosis.

The patient was discharged and has had no further episodes of hemoglobinuria since then. His hemoglobin has risen to and remained at a normal value, and spherocytosis is no longer present on the smear. Because of the abnormalities shown on the x-ray film, five months after discharge he was begun on a short course of 40 mg. of prednisone per day. The x-ray film findings became completely normal and have remained so since that time.

Comment

Patients with sarcoidosis may have a variety of unusual manifestations. Involvements of the eye, central nervous system, and heart are well described.[9,10] Mayock et al.[10] reviewed over 1,000 cases of sarcoidosis and found the incidence of anemia, thrombocytopenia, and eosinophilia to be greater than previously believed.[10] Because of the unusual clinical symptoms of our patient, and the recent descriptions of autoimmune thrombocytopenia in pa-

Table I. Characteristics of patients with hemolytic anemia and sarcoidosis

Case	Age/ Sex	Coombs' Test Findings	Spleen Enlargement	Course of Hemolytic Anemia	Other
1	46/F	–	Yes, 485 Gm.	Improvement after splenectomy, relapse 2 months later with death in hemolytic crisis	Marked spherocytosis
2	34/M	–	Yes, 450 Gm.	Unaffected by splenectomy, response to corticosteroids	Corticosteroid-dependent for 1 year
3	7½/F	–	Yes	Spontaneous remission after 3-month course	Had had severe hemolytic anemia without spherocytosis at 6 months of age
4	58/M	–	Yes	Improvement after splenectomy, relapse 8 months later	Slight increase of RBC fragility. Hyperglobulinemia
5	45/F	–	Yes, 500 Gm.	Improvement after splenectomy relapse 8 months later, 5½ years later clinically well	. . .
6	32/F	–	Yes, 530 Gm.	Improvement after splenectomy	
7	14/M	+	Unknown	Remission following treatment with corticosteroids	No long-term follow-up
8	29/M	–	Yes, 1,200 Gm.	No response to splenectomy or corticosteroids	. . .
9	23/F	+	Yes	Improvement after splenectomy, relapse 6 months later with positive Coombs' test findings and response to ACTH, died in septicemia	Sister had sarcoidosis, was treated with splenectomy
10	35/M	–	Yes, 630 Gm.	Remission following splenectomy	. . .
11	31/M	Weakly +	Yes, 430 Gm.	Improvement after splenectomy, later treated with corticosteroids	Calcium decreased after splenectomy
12	52/M	+	No	Remission following corticosteroid therapy	Continuous cortisone therapy required to prevent relapse
13	53/F	+	Yes	No response to corticosteroids	Died with cerebrovascular accident
14	22/F	–	Yes, 950 Gm.	Improvement after splenectomy, died 3 years later of disseminated tuberculosis	Severe hemolytic anemia
15	25/M	+	Unknown	Remission with corticosteroids	Associated thrombocytopenia, platelet antibodies weakly positive
16	41/F	+	Not palpable	Persistent low grade hemolysis over 4 years	Positive cold agglutinins
17	53/M	+	Yes, 1,250 Gm.	Improvement after splenectomy, relapse 1 year later with hemolytic crisis and death before treatment	. . .
18	33/M	–	No	Spontaneous remission	Episode of hemolysis severe enough to cause hemoglobinuria

– = Negative findings; + = positive findings.

tients with sarcoidosis,[1] we reviewed the association of hemolytic anemia with this disease. A total of 18 cases, including our own, have now been reported (Table I).[3–8]

The mechanism of hemolysis in patients with sarcoidosis is not known. Hypersplenism has been suggested as a possible factor in the hemolytic process, and three of the patients were cured by splenectomy. An enlarged spleen was noted in at least 13 of the 18 reported cases. However, in at least three patients, the anemia was unaffected by splenectomy and, in five others, relapse occurred within one year after removal of the spleen (Table I).

Evidence suggests that, as in patients with thrombocytopenia,[1,2] the anemia in patients with hemolytic anemia and sarcoidosis is antibody-mediated. Although positive Coombs' test findings showed up in only 8 of the 18 patients, both the recurrence of hemolysis after splenectomy and the clinical improvement of several of the Coombs'-test-negative patients after treatment with corticosteroids suggest that antibodies against the red cell may have been present in these cases, but were not detected. A report of Semple's,[5] on both Coombs'-test-positive hemolytic anemia and autoimmune thrombocytopenia in a patient with sarcoidosis, as well as reports of an increased incidence of false positive tests for syphilis in this disease,[10] should be noted. A variety of autoantibodies and antibodies to microorganisms has been detected in patients with sarcoidosis.[1] The significant hemoglobinuria and hemosiderinuria in our own patient implied that the process of hemolysis did occur intravascularly. In addition, the pattern of improvement after splenectomy, with later relapse and response to corticosteroids seen in a few of these patients, is not unlike that seen in other types of antibody-mediated anemia.

The prognosis in these patients is variable. Several showed no signs of improvement after either splenectomy or treatment with corticosteroids, and two patients died with hemolytic crisis. On the other hand, the hemolytic process in several of the patients, including our own, remitted spontaneously. Corticosteroid therapy proved useful in a number of cases, with definite responses seen in at least five of the patients.

Our case is unusual because of the sudden marked hemoglobinuria, a 6-Gm. decrease in hemoglobin within 48 hours, and spontaneous remission within seven days. Physicians must be aware that, as with thrombocytopenia,[1] hemoglobinuria or other signs of hemolysis may be the first manifestations in a patient with sarcoidosis. Treatment with corticosteroids may be lifesaving in patients in whom the hemolytic process does not remit spontaneously.

Summary

Rarely do patients with sarcoidosis show hemolytic anemia; only 17 cases of this association have been reported. These cases are reviewed and an additional patient is described. This patient had hemoglobinuria, hemosiderinuria, and spherocytosis, as well as abnormal chest x-ray film findings, and was later diagnosed as having sarcoidosis. The benign course without treatment in this patient is contrasted with that of previously reported patients with hemolytic anemia and sarcoidosis.

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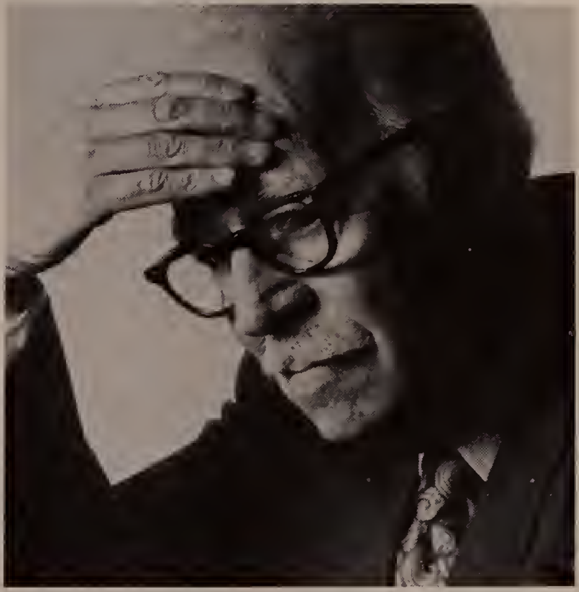

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M-Mode Echocardiography in Dehiscence of Porcine Xenograft in Mitral Position

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The echocardiographic features of functioning and malfunctioning prosthetic valves have been described.[1-4] In this case report we present a new M-mode echocardiographic finding that was associated with dehiscence of the sewing ring of a glutaraldehyde-treated porcine mitral bioprosthesis.

Case report

A 35-year-old man underwent mitral valve replacement with a Hancock porcine bioprosthesis in 1976 for severe mitral insufficiency due to prolapse of the mitral valve. He was well until February, 1977, when he developed left hemiparesis following a five-minute episode of dizziness and diplopia. Treatment with warfarin sodium (Coumadin) was started. However, the patient was lost to follow-up until December, 1978, when he came to Bellevue Hospital emergency room with palpitation and shortness of breath of several days duration.

Physical examination revealed a thin black male in mild respiratory distress. The blood pressure was 120/80 mm. Hg, respirations 18 per minute, pulse 150 per minute and regular. Jugular venous distension was present. Examination of the chest revealed bilateral basilar rales. The heart sounds were normal. An S_3 gallop was present. A grade II/VI holosystolic murmur was heard at the apex and radiated to the axilla. A grade I/VI diastolic rumble was present at the apex. No organomegaly was noted. The electrocardiogram revealed atrial tachycardia, left ventricular hypertrophy, and nonspecific S-T and T wave changes. Chest roentgenogram showed an enlarged heart with pulmonary venous engorgement. An echocardiogram showed two parallel echoes at the mitral position which probably represent the sewing ring. These echoes moved anteriorly in the beginning of diastole and posteriorly at the onset of systole (Fig. 1). During ventricular systole, those echoes appeared in the left atrial cavity below the aorta. Multiple echoes were noted from the mitral apparatus. No cusp could be identified. The left ventricle was dilated (58 mm. at end diastole), as was the left atrium (46 mm.). Left ventricular posterior wall motion was normal. The echocardiogram was interpreted as highly suggestive of mitral valve dehiscence with the prosthesis moving into the left atrium during systole and back into the left ventricular inflow area in diastole. Two-dimensional echocardiography was not available.

Cardiac catheterization showed severe mitral regurgitation. Fluoroscopy demonstrated exaggerated motion of the bioprosthesis. To analyze the motion of the valve, the patient held his breath and a cine recording was made simultaneously with the electrocardiogram while two intracardiac catheters and the spine served as reference points. Frame-to-frame analysis was then performed to evaluate ring motion. Figure 2A shows the end diastolic position of the ring while the end systolic position is portrayed in Figure 2B. Superimposition of the two pictures (Fig. 2C) indicated displacement of the valve toward the left atrium with each systole. This motion is the opposite of normal mitral ring motion. The extent of the valve's excursion was calculated as 20 mm. The patient underwent a second mitral valve replacement with a Hancock porcine bioprosthesis. At surgery, dehiscence of the mitral valve was found. It could easily be pulled from its proper location back into the left atrium. Histologic examination of the valve revealed fibrous overgrowth on the perivalvular surface and chronic inflammation with a palisading granuloma and foreign body reaction. No organisms could be detected. Echocardiography postoperatively showed a normally functioning porcine mitral valve, the stent of which moved anteriorly with systole and posteriorly with diastole (Fig. 3). The maximal leaflet excursion was 1.5 cm. The patient's postoperative hospital course was uneventful.

Comment

Glutaraldehyde-treated porcine heterografts have been found to have a lower incidence of thromboembolic phenomena and valve failure rate than

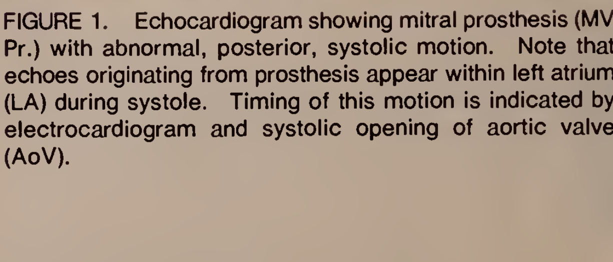

FIGURE 1. Echocardiogram showing mitral prosthesis (MV Pr.) with abnormal, posterior, systolic motion. Note that echoes originating from prosthesis appear within left atrium (LA) during systole. Timing of this motion is indicated by electrocardiogram and systolic opening of aortic valve (AoV).

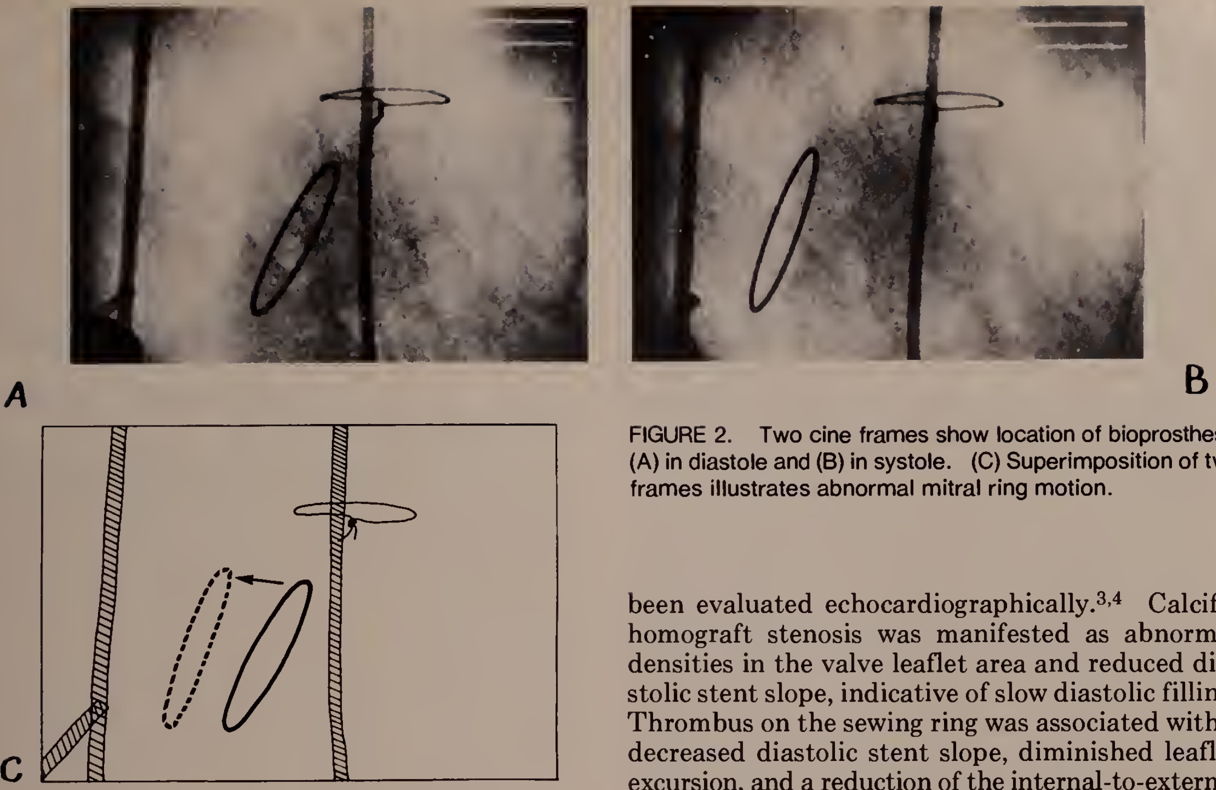

FIGURE 2. Two cine frames show location of bioprosthesis (A) in diastole and (B) in systole. (C) Superimposition of two frames illustrates abnormal mitral ring motion.

nonbiologic prostheses.[5] Accordingly, they are being inserted with increasing frequency. Although the long-term hemodynamic function of these porcine valves has not yet been determined, clinical experience indicates an annual valve failure rate of 2.5 to 5 percent.[5–6] Echocardiographic evaluation of the porcine valve may be very useful in determining early valve failure. Horowitz et al. in 1976[2] reported the echocardiographic findings of 20 normally functioning porcine aortic bioprostheses in the mitral position. The mounted stent was seen to move anteriorly in systole and posteriorly in diastole. Within the stents the valve leaflets could be visualized. The maximal leaflet excursion averaged 1.5 plus or minus 0.5 cm. per second with a range of 1.9 to 3.3 cm. per second.

The malfunctioning mitral bioprosthesis has also been evaluated echocardiographically.[3,4] Calcific homograft stenosis was manifested as abnormal densities in the valve leaflet area and reduced diastolic stent slope, indicative of slow diastolic filling. Thrombus on the sewing ring was associated with a decreased diastolic stent slope, diminished leaflet excursion, and a reduction of the internal-to-external stent diameter. Perivalvular and valvular insufficiency were characterized by excessive initial diastolic stent slopes.

The echocardiographic pattern described in this case report should suggest severe prosthetic valve dehiscence. The mitral valve was seen to move back into the left atrium in systole. Therefore, the echocardiographic findings were early systolic posterior motion and diastolic anterior motion. The overall pattern is somewhat reminiscent of mitral stenosis, but the presence of the valve echoes in the left atrium in systole does not occur in mitral stenosis. Early recognition of prosthetic valve dehiscence and its confirmation by echocardiography may be lifesaving.

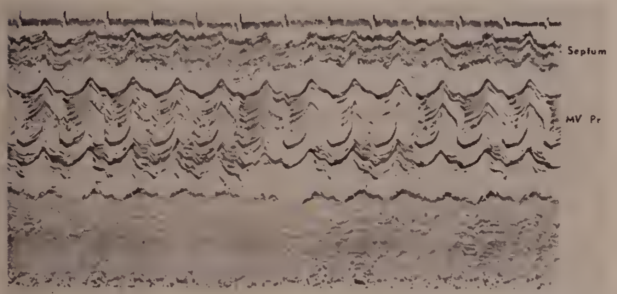

FIGURE 3. Postoperative echocardiogram showing normally functioning mitral bioprosthesis. Note sewing ring now moves anteriorly in systole.

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Baby powder on infants can be hazardous, researchers say

The baby powder many mothers use on infants and young children in an effort to prevent diaper rash poses a potential danger because young children may inhale the powder. Possible side effects range from coughing to vomiting or even pneumonia, according to a report in the August issue of *Pediatrics*.

The article reports results of a six-month study designed to determine the incidence and severity of baby powder inhalation. The research was done at the Poison Control Center, Nassau County Medical Center, East Meadow, N.Y., by a health care team headed by Howard C. Mofenson, M.D., FAAP, and Joseph Greensher, M.D., FAAP. *Pediatrics* is the official journal of the American Academy of Pediatrics.

The authors described 34 cases of baby powder inhalation reported to the center during the first half of 1980. In 14 cases, a cough was the only sign of the inhalation, and in five cases sneezing was reported. Twelve cases reported more serious problems, including difficult breathing in five cases; vomiting in six; and cyanosis in one case. A chest x-ray revealed that one of the children had pneumonia caused by inhaling the baby powder.

The researchers point out that although only a few of the patients studied needed hospitalization, the symptoms caused by inhaling baby powder "are unnecessary consequences in light of the fact that there appears to be no medical indication for the use of these powders." The study team also speculates on the possible presence of asbestos, a "powerful carcinogen," in the powders. Talc, an ingredient of many powders, is closely related to asbestos.

Of particular interest to the researchers is the fact that 27 children in the study were bottle-fed, with only one breast-fed child in the study. Pointing to the resemblance of the powder containers to feeding bottles, the scientists suggest that "because of this similarity, talc containers often become favorite playthings of small children and are handled and placed in the mouth."

"To merely have a negative attitude toward these products is insufficient," conclude the researchers. The study team states that baby powder use on infants should be considered potentially harmful by parents and physicians.

Actions suggestesd by the researchers in order to minimize the hazard of baby powder use include changing the appearance of powder containers so that they aren't similar to feeding bottles; installing a safety device on the containers' caps which msut be opened and which will close automatically to dispense powder from the container; and including a warning on containers that the ingredients may be hazardous if inhaled.

Home visits urged in child health care

House calls, particularly for child patients, are better medical care.

Visits to children's homes can be a valuable tool to assess the child's environment, observe the child in his or her own world, establish rapport with families, and learn about how the family functions, says Lawrence R. Berger, M.D., a pediatrician with the University of New Mexico School of Medicine, Albuquerque.

The value of house calls in provision of care to children has been neglected, says Dr. Berger. The report is in an American Medical Association publication.

Since World War II, home visits by physicians have become unusual, the New Mexico physician points out.

"One reason is that more patients can be seen efficiently in an office-based practice. In addition, both patients and physicians have become accustomed to the convenience of x-rays and laboratory studies that are not available in patients' homes."

But, writes Dr. Berger, "We believe that home visits offer certain other opportunities for care and insights into family function that cannot be provided in the office or clinic."

Environmental assessment

There is the case of Susan, a 9-year-old girl with asthma. Despite medications and conferences with the parents regarding allergens in the environment that could trigger asthma attacks, Susan continued to wheeze.

A visit to Susan's home uncovered some of the problems. Several collections of peacock-feather souvenirs dotted Susan's bedroom. A line of dusty unused shoes stood beneath the girl's bed. Several decorative throw rugs hung on the walls. Two gerbils played in a cage next to her bed.

Removal of the offending objects and pets helped control Susan's asthma.

Environmental influences play a large role not only in allergic disorders but also in such conditions as obesity, recurrent injuries, and recurrent infections, Dr. Berger points out.

One child was able to discontinue taking medicine for asthma when a home visit disclosed a broken window in his room overlooking an incinerator stack. Repair of the window ended the asthma.

Part of the reason for an unsuccessful weight reduction program was uncovered during a home visit. Hoards of high-calorie snacks were found in the refrigerator, the TV room and the parents' bedroom.

Child in his own world

Billy, age 6½, was hyperactive, his mother said. At home he would rarely sit still and play, preferring to open kitchen cabinets, fight with his brother, climb on furniture, and handle forbidden objects.

A home visit showed Billy's "world" consisted of a small, sparsely furnished apartment providing little place or privacy for any of the family members. No toys were found. The mother explained the toys were "in storage" in another state. Billy was not permitted to play in the well-equipped playground across the street.

As the visit progressed, Billy became increasingly restless. He asked for, and was denied, a snack. He went about the kitchen opening cabinets. But, given crayons and paper and asked to draw pictures for his mother, he sat quietly for 20 minutes drawing.

Explains Dr. Berger:

"If a child's world provides few outlets for play due to either impoverished parents or parental restrictions, his 'hyperactive' behavior is understood more easily. An immaculately kept home laden with untouchable objects may point to one cause of discipline problems in a toddler.

continued on page 395

Rectal Adenocarcinoma Treated With Intra-Arterial 5-fluorouracil

Prolonged remission

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[c] Attending Surgeon.

A woman with adenocarcinoma of the rectum metastatic to liver and gall bladder was converted from an inoperable to an operable state by intra-arterial 5-FU (fluorouracil) chemotherapy; she underwent partial hepatectomy, and has survived, apparently with minimal or no evidence of disease, 15 years after the initial surgery.

Case report

A 57-year-old white woman underwent an abdominoperineal resection for adenocarcinoma of the rectum on July 14, 1966. There was no gross evidence of liver involvement, but histologic sections revealed extension of the tumor to the serosa with regional lymph node metastases.

On July 2, 1969, a local metastasis to the rectovaginal wall was excised. On June 9, 1970, a prolapse of the bladder through the perineal wound was repaired.

On January 17, 1974, an exploratory laparotomy was performed for malaise, abdominal pain, nausea, and vomiting. A large metastasis in the right lobe of the liver, hanging down from the inferior margin and adherent to the hepatic flexure and the abdominal wall, was found and deemed unresectable. A biopsy revealed mucus-secreting adenocarcinoma consistent with colonic origin.

Beginning on January 3, 1974, the patient received, through continuous I.V. (intravenous) infusion, 5-FU, 1,000 mg. every 24 hours for 10 days. Following completion of therapy, there was no change in the liver size of 11 cm. from the right costal margin in the midaxillary line.

For the ensuing nine months, the patient received by I.V. bolus 5-FU, 500 to 1,000 mg. per week, with moderate improvement of symptoms, but no change in liver size. At no time was the alkaline phosphatase level elevated.

Because of lack of response to weekly intravenous 5-FU, the patient was admitted to Lenox Hill Hospital from November 27 through December 23, 1974, for intrahepatic arterial infusion chemotherapy. A catheter was inserted into the hepatic artery through the femoral route. Arteriography revealed a large neoplasm in the inferior aspect of the right lobe of the liver measuring 12 cm. in diameter (Fig. 1). CEA (carcinoembryonic antigen) on December 4, 1974, was 138 ng. per milliliter. From December 3 to 18, 1974, the patient received, through the intrahepatic arterial catheter, a total of 7 Gm. 5-FU. This resulted in a 5-cm. shrinkage of the liver in the vertical diameter, as well as in dramatic relief of the patient's malaise, anorexia, and right upper quadrant pain.

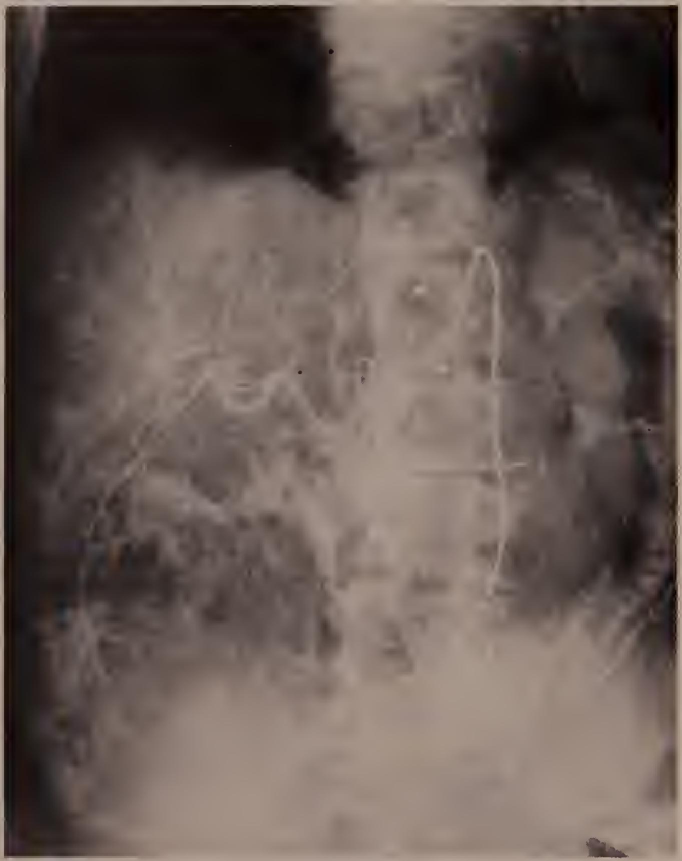

FIGURE 1. Hepatic arteriogram, December 3, 1974. Note neovasculature in tumor mass in right lobe of liver.

On December 30, 1974, the skin overlying the liver became hyperemic and diffusely tender. This was judged to be skin effect from the 5-FU infusion.

Weekly 5-FU by I.V. injection was resumed.

Over the next two months, the liver gradually enlarged to its pretreatment size of 11 cm. Accordingly, the patient was readmitted to Lenox Hill Hospital from March 1 to 28, 1975, for a second course of intra-arterial 5-FU. The preinfusion hepatic arteriogram on March 3, 1975, as compared with the initial study of December 3, 1974, revealed a slight but definite decrease in size of the neoplasm, from 12 to 10 cm. in diameter. From March 3 to 21, 1975, the patient received 12 Gm. 5-FU through the hepatic artery. The postinfusion arteriogram on March 21, 1975, showed "a decrease in liver size. The distance between the main descending branch of the right hepatic artery and the gastroduodenal artery is reduced from 11 to 7.5 cm., a two-thirds reduction in size." Clinically, there was a 4-cm. shrinkage of the liver in the vertical diameter. Over the next three months, while receiving 5-FU, 500 to 1,000 mg. by I.V. bolus weekly, the liver gradually enlarged and the patient again became symptomatic.

On June 23, 1975, the patient was admitted to the French Hospital for operative insertion of a permanent catheter into the hepatic artery. On opening the abdomen, the previously inoperable liver metastasis was found to be resectable, and, accordingly, a partial right lobectomy was performed. The resected tumor measured 12 by 8 by 5 cm. and involved the serosal surface of the gall bladder (Fig. 2). On histologic section, this was found to be the same adenocarcinoma, although now there were discrete lymphoid infiltrates.

From July 6, 1975, to January 3, 1977, the patient was clinically free of disease and was able to work at a part-time job. However, because of the strong presumption of the continued presence of residual micrometastases, it was elected to continue treatment with weekly 5-FU by I.V. bolus.

From January 3 to 11, 1977, she was readmitted to Lenox Hill Hospital for thrombophlebitis. Work-up revealed no gross evidence of disease. During this admission, she received a four-day I.V. infusion of 5-FU, 1,000 mg., per day. This was undertaken as part of a protocol to attempt to achieve tumor cell synchronization with bleomycin at the S:G2 interface.

For the next two and one-half years, she remained clinically well and free of disease while continuing to receive 5-FU by I.V. bolus weekly, and working at her part-time job.

On July 19, 1979, a repeat liver scan revealed multiple areas of decreased uptake. She was readmitted to Lenox Hill Hospital on July 25, 1979, for evaluation. A hepatic arteriogram on July 26, 1979, revealed several small areas of neovascularity in the remaining portion of the right lobe (Fig. 3). At laparotomy on July 27, 1979, for cannulation of the hepatic artery, the liver and peritoneal cavity were found to be grossly free of disease. A biopsy revealed periportal fibrosis. The hepatic artery was cannulated and intra-arterial 5-FU infused over the next 10 days for a total dose of 10 Gm. A postinfusion arteriogram on August 3, 1979, revealed no radiographic evidence of residual neoplasm.

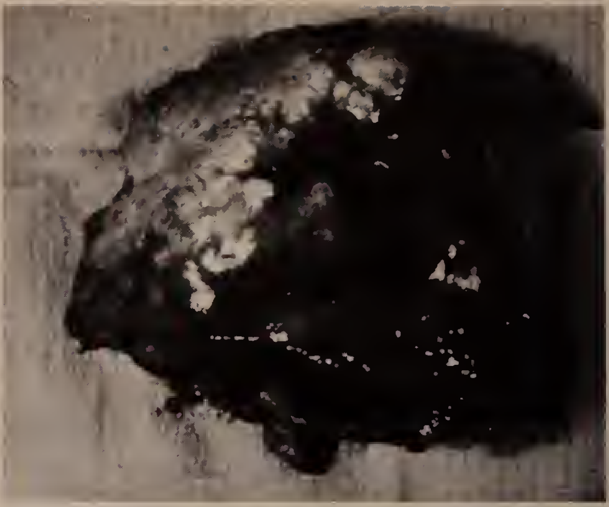

FIGURE 2. Resected tumor measuring 18 by 8 by 5 cm.

From the time of discharge on August 4, 1979, until November 18, 1979, the patient received 5-FU, 500 mg. weekly, injected by bolus in the catheter followed by heparin irrigation. On November 18, 1979, the patient accidentally cut the catheter. This was removed the following day.

From then on, the patient has continued to receive weekly I.V. 5-FU, 500 mg., by bolus, and continues to be free of symptoms. A complete examination, including pelvic examination, liver and pelvic sonograms, and a colonoscopy in March, 1981, disclosed no abnormalities. The CEA was 0.5 ng. per milliliter.

From September 20 to 26, 1981, the patient was readmitted to Lenox Hill Hospital for total teeth extraction. A hepatic arteriogram revealed no evidence of disease.

A CEA on December 7, 1981, was 0.5 ng. per milliliter.

Comment

Several points in this case are worthy of emphasis.

The seven and one-half-year period between the abdominoperineal resection and the documentation of liver metastases by laparotomy is relatively long, and implies either a low degree of cancer, or good host resistance, or both (Fig. 4). The appearance of discrete lymphoid infiltrates in the tumor resected in 1975, after two courses of intrahepatic arterial chemotherapy with 5-FU, leads us to speculate that immune mechanisms may, in part, have contributed to the marked tumor shrinkage.

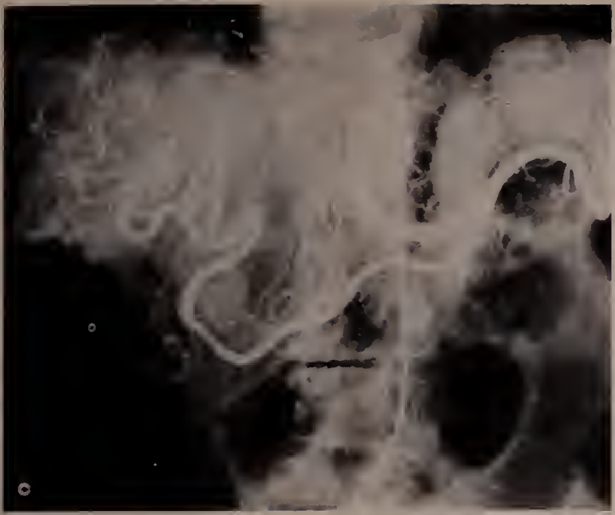

FIGURE 3. Hepatic arteriogram, July 26, 1979. Note absence of tumor mass and presence of several small areas of neovascularity in remaining portion of right lobe of liver.

At no time in the course of her disease was the alkaline phosphatase level elevated. This is most unusual, and we are unable to advance a reasonable explanation. Its significance lies in the lesson that liver metastases, even of massive proportions, are not necessarily associated with elevation of the alkaline phosphatase level.

The periportal fibrosis found during the laparotomy in 1979 may have resulted from direct hepatic toxicity from the two courses of intrahepatic arterial 5-FU. The fibrosis may be responsible for the decreased areas of uptake in the liver scan, and the equivocal findings in the arteriogram of July 26, 1979 (Fig. 3). The lesson here is that liver scans and arteriography do not provide direct, unequivocal evidence of tumor.

I.V. bolus 5-FU was singularly ineffective in this case, whereas 5-FU by intra-arterial infusion was markedly effective, as evidenced by conversion of a nonresectable lesion into a resectable one, liver shrinkage, confirmed by arteriography, fall of CEA from 138 to 3.3 ng. per milliliter, and survival of the patient to the present, over eight years from the time of documentation of massive liver metastases.

The role of aggressive chemotherapy and surgery must be emphasized. It is doubtful that the patient would have survived this long without, first, the cytoreduction achieved by intra-arterial chemotherapy and followed by, second, the surgery to remove the residual tumor mass.

Should the patient continue to receive chemotherapy or not? We believe it is possible to make a good argument for either case. On the one hand, she has no gross evidence of disease. Her history demonstrates the ineffectiveness of I.V. bolus 5-FU.

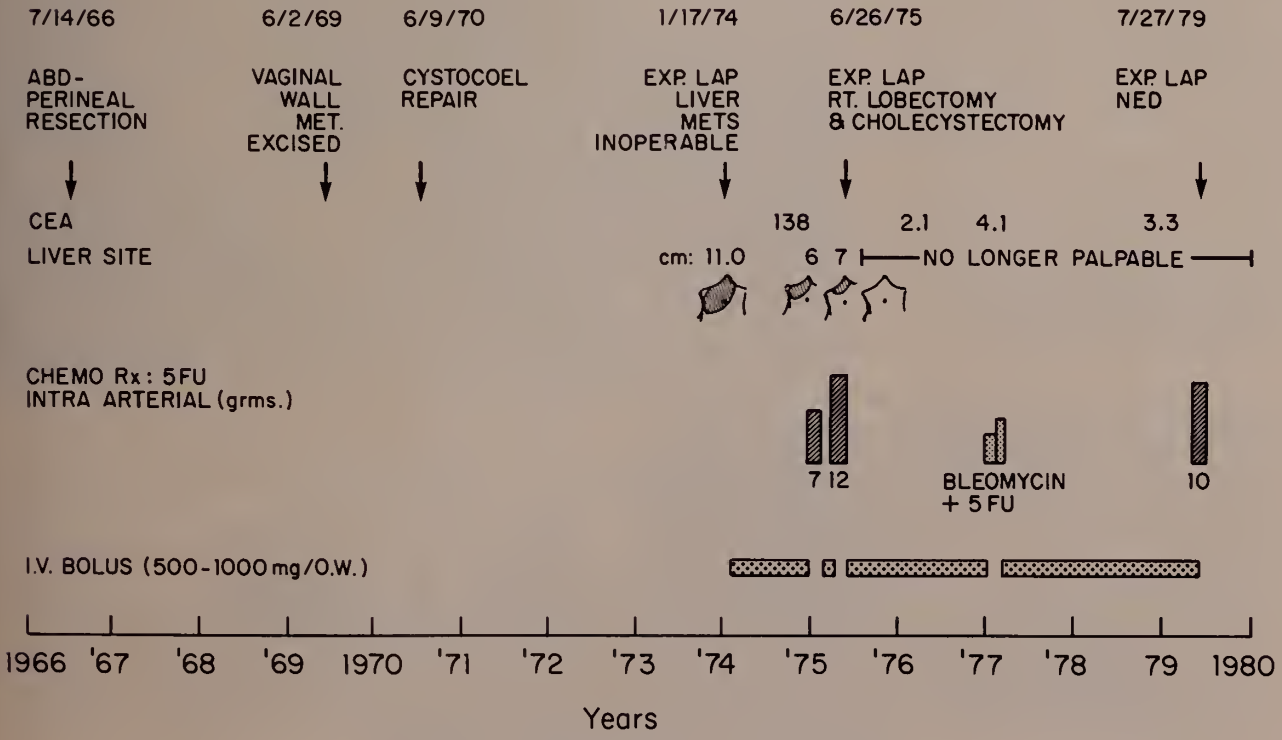

FIGURE 4. Course of disease from 1966 to 1980.

Moreover, what are the long-term effects of 5-FU? Unlike the alkylating agents, there is a dearth of data on mitogenicity of 5-FU used over a long period. On the other hand, one's clinical instincts point to the continued presence of microscopic disease. We are able to minimize the hematologic and gastrointestinal side-effects through dosage adjustment. The patient is past the age of reproduction, and has done well for over eight years.

Although there is no black and white answer to this dilemma, in the final analysis we have fallen back on the dictum of Robert Loeb, M.D.: "When something is not working, change it; when something is working, don't change it".

Summary

A 57-year-old woman underwent abdominol perineal resection for an adenocarcinoma of the rectum. Serosal and regional lymph node involvement was present.

Three years later, a vaginal wall metastasis was excised.

Eight years later, an inoperable liver metastasis was found. Intravenous 5-FU failed. Intra-arterial 5-FU, however, shrank the hepatic metastasis to such an extent that it became resectable. Since this procedure was performed, the patient has survived free of gross disease for over 15 years since the abdominol perineal resection and for over eight years since the liver metastasis was discovered.

We attribute the long survival to aggressive chemotherapy and surgery.

170 East 77 Street
New York, New York 10021
DR. CHOY

New pain relief drug called important finding

Medical science has long sought to find an effective strong pain reliever that does not have the danger of making the patient a drug addict.

An important new product in that search is zomepirac sodium, marketed under the trade name of Zomax, says a report in the July 24/31 Journal of the American Medical Association.

Writes John R. Lewis, Ph.D., senior scientist in the AMA's Division of Drugs:

"The discovery of zomepirac sodium is an important achievement in the long search for a nonaddicting analgesic that is more effective than aspirin."

Zomax is more effective than aspirin or codeine alone, Dr. Lewis says.

Given in pill form, zomepirac provides pain relief comparable to hypodermic injections of morphine in postoperative pain, he says. With long-term use, neither tolerance to its pain-relieving qualities nor psychic or physical dependence has been found.

Drugs, such as codeine and morphine, must be used in increasing large doses as the patient develops tolerance. And they can bring about a drug dependence, with severe withdrawal pangs.

Like aspirin, says Dr. Lewis, zomepirac helps in the pain of arthritic joints and also reduces fever. It is well tolerated with both short-term and long-term use. Stomach upsets are the most frequently occurring side-effects.

If patients obtain satisfactory relief with aspirin or acetaminophen (the popular aspirin substitute), zomepirac is not needed, he points out. If pain is not controlled with these older drugs, or if they are not tolerated, zomepirac may be tried.

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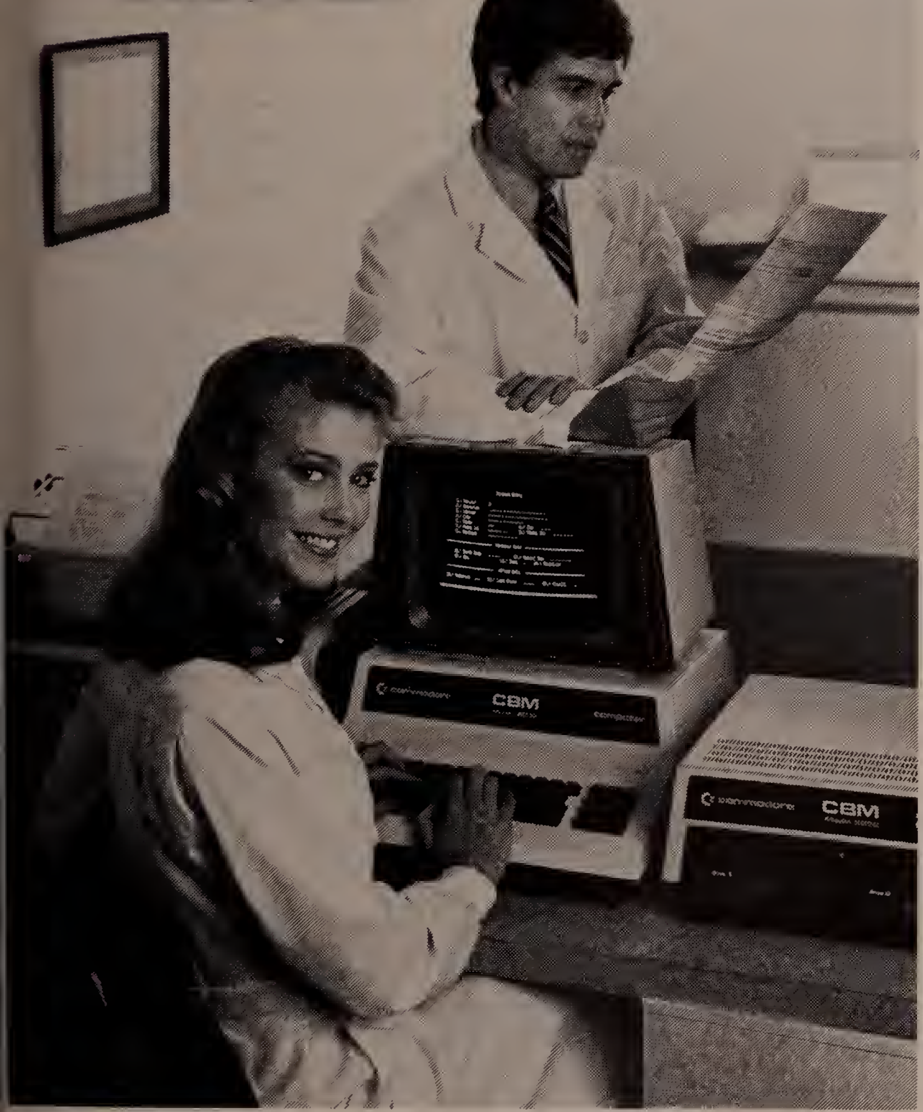
—WILLIAM SHATNER



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Hypothermia Detection in Emergency Departments

*How low does your thermometer go?**

FREDRICK T. SHERMAN, M.D.[a]
New York City
MENACHEM DAUM, Ph.D.[b]
New York City

[a] Chief, Division of Geriatric Medicine, Department of Medicine, Mount Sinai Hospital; Assistant Professor of Clinical Medicine, The Mount Sinai School of Medicine of the City University of New York; and Clinical Director of the Brookdale Social Health Center for the Aging.
[b] Director of Research, Brookdale Center on Aging of Hunter College.

The signs and symptoms of AH (accidental hypothermia), defined as a rectal temperature below 95°F., are nonspecific and may go unnoticed. Among conscious elderly hypothermic patients, the sensation of cold may be absent and the patient may fail to shiver. Bronchopneumonia, delirium, coma, and/or cardiac arrhythmias may draw attention away from the underlying hypothermic state.[1,2] The only accurate method to diagnose AH is by measuring the rectal temperature or the temperature of freshly voided urine.[3] Diagnosis of all but the mildest cases of accidental hypothermia requires special low-reading thermometers, capable of readings to 75°F. Low-reading thermometers are also needed to monitor the rate of temperature rise during rewarming, regardless of the treatment used. The choice of treatment, either slow spontaneous rewarming or rapid active rewarming, should be based on the extent of the hypothermia, other complicating conditions, and the patient's age.[4,5]

The low reading points on routinely used clinical thermometers and on special low-reading thermometers in hospital emergency departments, where AH is most likely to be encountered, are not known. This study was undertaken: (1) to identify the various types and low reading points of routinely used clinical thermometers and (2) to determine the availability and lowest reading points of special low-reading thermometers in hospital emergency departments.

Methods

All hospitals in New York State with emergency departments were identified from the *Guide to the Health Care Field.*[6] A confidential questionnaire was sent to the chief nurse of each of 257 hospital emergency departments during the months of June and July, 1980. Nonresponders were sent up to two additional letters and subsequently received a follow-up telephone call. The questionnaire requested information about: (1) the temperature-taking method routinely used in conscious middle-aged adults under age 65, in conscious elderly adults over age 65, in confused and/or comatose adults, and in infants, (2) the lowest reading on each type of routinely used thermometer, (3) whether a special low-reading thermometer or thermocouple with a rectal probe was available in the hospital's emergency department, and, if so, what was its lowest reading point, and (4) whether or not a special low-reading thermometer was available in another part of the hospital if there was none in the emergency department. A definition of what was meant by "special low-reading" was not provided. Instead, respondents were asked to indicate the lowest reading on the thermometers they felt belonged in this category. The results for all the responding hospitals were examined; selected hospital characteristics, including accreditations, affiliations, facilities, services, and personnel, were noted. Demographic characteristics of the community in which each hospital was located were obtained from 1970 census data.

---

* This work was supported by Grant 90-AR-0010 of the Department of Health and Human Services, Administration on Aging, to the Brookdale Center on Aging of Hunter College.

Presented in part at the 33rd Annual Scientific Meeting of the Gerontological Society of America, San Diego, California, November, 1980.

Table I. Distribution of lowest reading on thermometers routinely used by hospital emergency department personnel*

Lowest Reading† (°F.)	Type of Thermometer							
	Oral Glass		Rectal Glass		Oral/Rectal Electronic		Other	
	Number	(percentage)	Number	(percentage)	Number	(percentage)	Number	(percentage)
Under 80	0	(0)	0	(0)	5	(4)	1	(5)
80 to 84	0	(0)	0	(0)	3	(2)	1	(5)
85 to 89	0	(0)	2	(2)	2	(2)	1	(5)
90 to 91	4	(4)	5	(4)	6	(5)	3	(16)
92 to 93	8	(7)	10	(8)	11	(9)	0	(0)
94 to 95	74	(70)	77	(64)	87	(70)	2	(11)
96 plus	20	(19)	26	(22)	10	(8)	11	(58)
TOTALS	106	(100)	120	(100)	124	(100)	19	(100)

* Percentages based on emergency departments reporting routine use of each type of thermometer.

† Lowest readings were rounded to the next highest degree if 0.5°F. or over.

Results

There were 243 questionnaires completed, resulting in a 95-percent response rate. The low reading point on the majority of routinely used thermometers, whether glass or electronic, was 95°F. or lower (Table I). Approximately 1 in 5 glass thermometers and one in 10 electronic thermometers, however, did not read below 95°F.; over half the "other" types of thermometers used (generally disposable) did not read below 95°F. Two percent of routinely used rectal glass thermometers and 8 percent of routinely used electronic thermometers read below 90°F. Overall, 11 percent of emergency departments routinely used clinical thermometers that did not read below 95°F.

Only 20 percent of hospitals surveyed reported having special low-reading thermometers located in their emergency departments (Fig. 1). The mean and median of the low reading points of these instruments was 82.4° and 84.4°F., respectively. Some respondents considered thermometers with low reading points above 90°F. as falling in the special low-reading category. If these were excluded, only one in six hospital emergency departments had thermometers that could detect temperatures of 90°F. or below. Only 1 in 20 emergency departments had low-reading thermometers that read to 75°F.

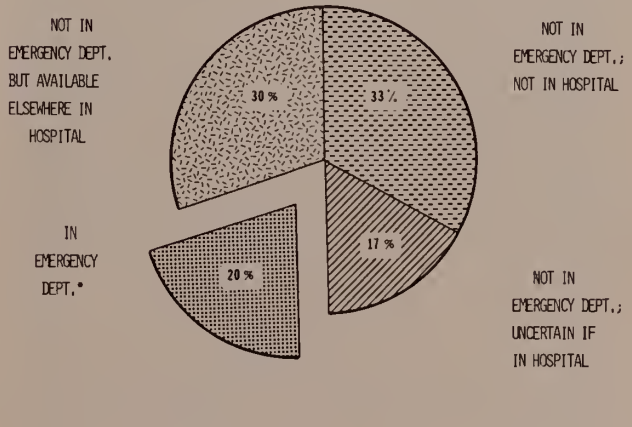
Of those emergency departments that were routinely using clinical thermometers with low reading points below 95°F., only 23 percent claimed to have special low-reading thermometers. Of those who were routinely using clinical thermometers with low reading points of 96°F. or above, only 10 percent had special low-reading thermometers.

The availability of low-reading thermometers was significantly greater (P less than 0.05) in those hospitals with approved residency programs, medical school affiliations, intensive care units, hemodialysis inpatients units, and home-care departments. The availability of low-reading thermometers increased with hospital size, community size, and percentage of the local population age 65 or over.

Comment and recommendations

The results show that the majority of clinical thermometers used in hospital emergency departments in New York State could detect only the presence or absence of AH, not the severity. One fifth of glass thermometers, one tenth of electronic thermometers, and over half the disposable thermometers used routinely did not read below 95°F. A minority of emergency departments (11 percent) routinely use thermometers that are not capable of diagnosing AH. Based on these results, it is recommended that all emergency departments should acquire thermometers capable of reading to below 95°F., and should use them on a routine basis.

This study documents a serious lack of low-reading thermometers available in emergency departments. At best, no more than 1 in 6 emergency departments had thermometers that could detect a temperature below 90°F. and only 1 in 20 had thermometers that could detect a temperature to 75°F. To correct these



* Only 16% of emergency departments actually had thermometers that read below 90°F.

FIGURE 1. Reported availability of "special low-reading thermometers" in emergency departments.

deficiencies, each emergency department should obtain a thermocouple with rectal probe or a mercury-in-glass thermometer with a low reading point to 75°F. so that even the most severe case of hypothermia can be detected and treated.

Emergency department studies should be undertaken to determine the incidence and prevalence of accidental hypothermia, especially among the elderly, as well as medical, demographic, social, economic, and climatic factors that are associated with it. Acquiring proper low-reading clinical thermometers is the first step.

Summary

The detection of AH (accidental hypothermia) and the determination of its severity are dependent on the availability of clinical thermometers that read below 95°F. This survey of New York State hospital emergency departments shows that 90 percent of departments routinely use thermometers that can detect AH, but only 16 percent have low-reading thermometers capable of detecting temperatures of 90°F. or below, and only 5 percent have low-reading thermometers that read to 75°F. Diagnosis and treatment of AH and future studies to determine the incidence and prevalence of AH, especially among the elderly, are severely limited by this lack of low-reading thermometers in emergency departments.

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"Guidelines for the determination of death" published in JAMA

"Guidelines for the Determination of Death," part of a report from the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, has been published in the Journal of the American Medical Association (November 13).

The document is a summary of currently accepted medical practices for the determination of death, both cardiorespiratory and neurological (brain death).

The criteria were developed by more than 50 physicians from the fields of neurology, neurosurgery, electroencephalography, critical care medicine, anesthesiology, and legal medicine. Taking into consideration new technologies in the laboratory confirmation of the diagnosis of death, they are the first update of standards for brain death since 1968.

The criteria are divided into two sections:

A. An individual with irreversible cessation of circulatory and respiratory functions is dead.

B. An individual with irreversible cessation of all functions of the entire brain, including the brainstem, is dead.

Each section is supplemented by an explanation of medical practices which may be used in determining cessation of functions and irreversibility, both of which must be demonstrated for a diagnosis of death. An individual presenting the findings in *either* section A *or* B is dead.

Of particular interest in the report is a discussion of medical conditions which can complicate the application of the neurological criteria. For example, drug intoxication, total paralysis, and certain comatose states can simulate death both in appearance and on some diagnostic tests.

In addition, the neurological criteria may not be reliable in cases involving hypothermia (body temperature less than 90° F.). Hypothermia can mimic death while protecting the body against neurological damage by enabling the brain to survive with less oxygen.

The report also warns physicians to be cautious in applying the neurological criteria in the presence of shock and in children younger than 5 years.

The "Guidelines for the Determination of Death" were developed to help implement the Uniform Determination of Death Act, a model statute intended to end the confusion caused by laws differing from state to state. The statute was drafted by the American Bar Association, the American Medical Association, the National Conference of Commissioners on Uniform State Laws, and the President's Commission. To date, four states have adopted the statute: Vermont, Mississippi, Idaho, and Colorado. At this time, the statute awaits signature by the Mayor of the District of Columbia.

Medical Director and Administrator

Nursing home facilities

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Medical Director, Loretto Geriatric Center

In 1973, a United States Senate Committee called medical care in nursing homes the "neglected responsibility." As a result, a federal requirement that skilled nursing facilities have a medical director was implemented in 1976. Uncertainty occurred as many facilities resisted carrying out the requirement and others offered only paper compliance. Today that period is over, the system is established, and evaluation is in order. Experience with this new position is as yet little reported in the literature. Reports to date express careful praise and optimism.

This article discusses one aspect of medical direction—the relationship between the established function of the administrator and the still-developing role of the medical director. According to federal and state regulations, authority rests with the operator, either an individual or a group, who holds the license and determines the mission and policies of the facility. The administrator is the agent of the operator and is charged by the operator with carrying out the mission and the policies, as well as the day-by-day management of the facility. All employees, including the medical director, report to the administrator. By the same regulations, the medical director is responsible for a system and process to implement medical policies, ensure the quality of medical standards, maintain continuing medical surveillance, and ensure the health supervision of employees. It can be difficult to separate authority and responsibilities.

Professional identity

Today's administrator is often college-trained, with graduate work in the management of health institutions, as well as several years of experience in the field. The medical director has completed the requirements for his degree and license and usually has had years of practice. Neither is aware in any depth of the training and experience of the other in this increasingly complex field. The administrator may need to relate to an organizational pattern with one physician in charge or with multiple physicians who can become "walk-in managers." In his "Director of Professional Services" role. the medical director is answerable for the quality of care in the facility. He is aware that 80 percent of the admissions to all long-term care facilities are for health reasons. The administrator, without either training or expertise in patient care, has a similar accountability and is influenced by forces he cannot control, such as the extent of participation of the operator, the rules determined by multiple government agencies, and the demands of patient advocacy groups.

Because their responsibilities overlap, coordination and cooperation between the administrator and the medical director are essential for carrying out their mutual charge. They have a responsibility to provide direction to the staff; in operation, shared leadership is vital in achieving a staff that works together. An institution will develop a pattern of cooperation if it is exemplified by the leadership.

Outside the facility the administrator and the medical director have significant duties. As professionals, they need to relate developments in long-term care to the total health field as well as to their colleagues. They have a duty to project an image of the institution both locally and to the large community beyond.

Role understanding

The broad range of in-house concerns facing the administrator ties him closely to the facility. This is not the case with the medical director who can feel more independent, since his patient-care duties are similar in all facilities.

The administrator–manager role is more subject to change than is that of the medical director. Care of the patient is more constant than is the task of planning, constructing, and operating a facility. Administrative adjustments are required more frequently. Problems confronting the management vary from one year to the next, calling for different skills. Both the administrator and the medical director need to be able to make decisions. The nature of medical practice forces the medical man to act promptly and to alter plans as he deals with rapidly changing situations. This type of challenge is more foreign to the administrator because the more fixed nature of his work allows the luxury of deliberation in making decisions. The administrator's aim is to maintain an efficient, financially solvent facility, one that meets standards and regulations. The goal of the medical director is to help each resident achieve his highest possible level of function by assuring the quality and appropriateness of his care.

Cost is a constant concern of the administrator, and less prominent in the thinking of the medical director. Increasing the quality of the medical operation often raises costs and is imitated by other care providers in the facility. Rising costs are a problem to the administrator whose motto has to be "within available resources."

The medical director's role includes problem seeking. In this area, the administrator may feel that problems are self-evident, and that seeking them is unnecessary. This can result in a conflict between the administrator's authority and the medical director's concept of his role. In some facilities this leads to a situation in which each considers the other the number one problem. Relationships deteriorate and this can lead to hostility.

Management style

The style of these key individuals affects the whole facility. The day-by-day operational activities of the administrator and the medical director have wide influence. Their different attitudes toward cost-containment can be as disruptive as money problems sometimes are in a marriage; the pattern that evolves from their personal limitations, their reaction to supervision, and their decision-making skills influences other staff members. The physician does not like to be supervised, especially by a nonpeer, and such supervision requires tact and patience on the part of the administrator. On the other hand, the administrator does not relish being told how to operate his facility. Therefore, the medical director's recommendations must be phrased carefully.

When the leaders differ in their approach to problems, staff confusion will occur. Leaders are tempted to seek support for their position instead of working out the problem, which can create an uncomfortable climate among staff. Authority must be handled carefully, particularly in a human-service field, since the successful institution lives on cooperation.

Personality is a trait, beyond skills or style; it is the individual himself, a product of his life to date. It includes his character, motivation, habits, and manner of expression, as well as his basic attitude toward his colleagues. Personality, on which administrative aptitude depends, determines one's pattern of communication. The degree of flexibility comes from years of relating in many climates, and only experience affects the choice of individuals with whom one is comfortable. Each of us has to care about someone or something; the nature of that caring affects the person, the staff, and the facility.

Leadership

If a single word were used to describe the successful administrator or medical director it would be leadership, wisely defined as "one others follow." Both persons should have the ability to obtain satisfactory work performance from others—the administrator from a large and varied staff, and the medical director from a smaller, professionally oriented group. The administrator's systems approach and the medical director's care-oriented concept require the same operational expertise. Often they are unaware of the problems the other faces.

Communication

If capable, trained professionals cannot open the channels of communication among themselves, the institution has a "cancer" and should watch for "metastases." To establish communication is the inherent responsibility of both the administrator and the medical director. Too often their training and expertise are inadequate, and do more harm than good in handling this basic need. As medical directors, physicians without organizational or management skills will fail, despite excellence in areas of patient care, education, or research. Access to clinical skills is essential to his role, but a successful directorship is based on abilities not developed in today's medical training. Similarly, an understanding of patient care is essential for the administrator. The lack of expertise in each other's field creates the necessity for collaboration. To work together successfully, each must recognize his limitations and his dependency on the other.

Technique in handling conflicts is first apparent in resolving the basic problem of communication; personal compatibility and the progress of the facility will be tested in this area. Here, style and personality are often more important than position or skill. Together, they can carry out the mission; apart, their separate goals will threaten the institution. A simple test can be helpful: When things go wrong, do they analyze, or do they blame? Do they work together or separately?

Some day the training of the leaders we are discussing may overcome many of these problems. For now, they should be aware of each other's needs and seek to understand and respect each other. Agreement on the mission of the facility is essential; with this established, goals can be determined. Effective communication means reaching out and understanding, a most difficult type of one-to-one work, but also the most rewarding. Simply knowing the right thing is not enough; understanding and then action based on that understanding must follow.

Comment

The field of long-term health care is exciting and growing. Many fine professionals are finding challenge and opportunity there. Getting the fundamentals right is the challenge for our time. Solving the relationship of the administrator and the medical director belongs to today.

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Concurrent Care

*Guidelines and Medicare regulations**

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Chairman, Peer Review Committee, Medical Society County of Kings

For reimbursement purposes, BC/BS GNY (Blue Cross and Blue Shield of Greater New York) defines concurrent medical care as care rendered to a patient during the same period of time by more than one physician. Such services are usually but not necessarily rendered in a hospital setting.

Although most of the corporation's surgical-medical contracts provide reimbursement for the first surgical-medical claim submitted by a physician for medically necessary services that he or she renders, claims for other physician's services during the same period are often denied. The reason is that most surgical-medical contracts exclude payment for concurrent care.

Criteria

On the other hand, Medicare provides coverage for more than one physician's services if the following criteria are met:

> The medical necessity for the additional specialized services must be documented, more specifically, that the services cannot be rendered by the primary physician.
>
> Whether it is the primary physician or the consulting physician rendering concurrent care, every physician must sign his or her orders and progress notes. Physicians should avoid statements such as "doing well," "no charge," "status quo," or similar phrases, which are not acceptable because they lack specific details about the nature of the services.

Medicare reimbursement is provided for an unlimited number of specialties. But, there must be documentation of medical necessity.

The services will not be reimbursable merely because a request has been made for specialized ongoing services by the primary physician, or the patient's family, or as a requirement of the institution.

The need for concurrent care can be established when a surgeon performs surgery on a patient with unstable heart disease or unstable diabetes. The services of the internist and/or cardiologist and/or diabetologist would be covered during the time that active, necessary specialized care is being rendered.

However, when the patient receives concurrent care for a single condition, Medicare usually will pay only for one physician's services. The primary physician must determine whether or not the specialist's services are needed for more than a consultation. Again the criterion for adjudication is the documentation of medical necessity. If the problem is resolved, then the physician whose services are no longer needed should sign off the case. If there is disagreement as to whose services are most germane, reimbursement decisions by the staff of BC/BS GNY will be made on the basis of documentation.

Under the Medicare program, a consultant may see the patient up to two more times, when medically necessary, during the 60-day period following his consultation. The services will then be reimbursed as consultation, plus the subsequent medical visits of up to a maximum of two.

The primary physician may require another specialist to provide treatment simultaneously; for example, an internist and neurologist may provide concurrent care to a stroke victim. The neurologist's care would only be covered as long as the patient's condition is neurologically unstable and specialized neurologic advice and procedures are necessary. When the primary physician can provide the same services, the neurologist should sign off the case. The matter should be documented fully so that any reimbursement issue may be adjudicated by the staff of BC/BS GNY.

When claims for concurrent care are submitted, the diagnosis requiring each physician's services should reflect the condition for which that physician treated the patient. The diagnosis may, of course, be different from that for which the patient was hospitalized.

Peer review evaluation

The committee on peer review frequently evaluates problems of concurrent care. To avoid these problems, the following is suggested:

> Primary physicians should use a specialist's services only as long as necessary.
>
> When the primary physicians can perform the same services, they should inform the specialist that his or her services are no longer needed, and then should document the chart accordingly.

If problems, which have not been mentioned in this report, arise in concurrent care, ask advice of the peer review committee, or contact the BC/BS GNY professional relations representative who serves your area.

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Acknowledgment. The committee on peer review extends its thanks for the assistance of Mordecai A. Berkun, M.D., Medical Director, Blue Cross/Blue Shield of Greater New York, in preparing this report.

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[1] *Promoting Health/Preventing Disease Objectives for the Nation* U S Department of Health and Human Services, November 1980
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Trial of Daniel M'Naghten

*Insanity defense, and its well-kept secret**

MATTHEW BRODY, M.D.
Brooklyn, New York

Acting Chief, Psychiatry, Brooklyn Jewish Hospital and Medical Center; Attending, Psychiatry, Beth Israel Medical Center; and Attending, Neuropsychiatry, Gracie Square Hospital. Formerly Chairman, Committee on Mental Health, Medical Society of the State of New York

> *He who knoweth the law and knoweth not the reason thereof—soon forgetteth his superfluous knowledge*—**Sir William Blackstone**

The insanity defense has come under attack from all quarters. Theodore Szasz, M.D., said of the trial of Dan White, in 1979 for the killing of Mayor George Moscone and Supervisor Harvey Milk of San Francisco, that because of the contradictory testimony of four psychiatrists, Dan White was permitted "to get away with murder."[1]

In 1963, two Yale scholars suggested the elimination of the insanity plea, since it was "only a device for triggering indeterminate restraint," implying that this was evil rather than medically necessary.[2]

In 1973, President Richard M. Nixon, as part of a proposal to revise federal law, recommended that the insanity defense be eliminated. His proposal was rejected and, at the present time, every state has some form of insanity defense, usually based on the M'Naghten Rule. The insanity defense has come under legislative attack in at least three states. In Massachusetts, this fight has been led by a radio announcer for Channel 13 in Worcester.[1] In 1978, the State of New York Department of Mental Hygiene, in a 157-page report[3] to Gov. Hugh L. Carey on the insanity defense, recommended its abolishment; this was supported by two commissioners of mental hygiene. The governor then appointed a special commission to study and report on this problem. This commission advised the retention of the insanity defense for moral and constitutional reasons and pointed out that the number of cases in which this defense was used was statistically insignificant. It did introduce the concept of a "dangerous mental disorder"; this has been enacted into law and persons suffering from such a condition can be discharged from a mental hospital only with the concurrent agreement of a court. However, these well-thought-out comments have done little to arrest the campaign for abolishment of the insanity defense and the return of capital punishment.

In 1965 a joint legislative commission on the revision of the penal law and criminal code, with Assemblyman Richard J. Bartlett as chairman, and Prof. Herbert Wechsler as director, recommended some alteration of the M'Naghten Rule. This author testified before that commission on behalf of the Medical Society of the State of New York and was flattered by the suggestion of some of the participants who mentioned that my extemporaneous remarks at that time might still be timely and that I should prepare an article on the subject for the *New York State Journal of Medicine*. Briefly, I described the crime of Daniel M'Naghten, who had shot Edward Drummond, secretary to Prime Minister Sir Robert Peel, in the back, in the mistaken belief that he was assassinating the Prime Minister. I gave a brief description of his mental disorder and of the chief judge's charge to the jury (which was practically identical to the rules laid down later by the Law Lords and are now known as M'Naghten's Rule), on which the jury found him not guilty by virtue of insanity. I then made the point that had M'Naghten been tried under M'Naghten's Rules in any American court, there would have been a battle of the "experts" and M'Naghten would surely have been found legally sane and would have been found guilty as charged. It is my understanding that since then every Columbia University School of Law freshman has been taught that. I made the point that since M'Naghten was declared insane, no British prime minister had ever been assassinated. In this country every presidential assassin paid for this crime with his life, yet assassinations continue. I described two psychotic murderers (one of them an epileptic man), both of whom would have rather have had the electric chair than admit that they were psychotic and/or epileptic. I felt that capital punishment was not a deterrent, but rather the opposite for such persons. I expressed great pessimism about being able to write any insanity rule that would work in our courts and suggested that the commission recommend the abolishment of capital punishment. The legislature, in its wisdom, did away with capital punishment, except for the murder of police officers and prison guards on duty. No one apparently saw the innate contradiction in such a stand, and perhaps this law was what contributed to the increase in attacks on police officers and to the Attica Prison riots. Some 30 or 40 years ago, there was a motion picture (possibly *Dirty Faces*, starring James Cagney) in which a policeman, who is chatting with a local resident on the street, states that "The surest way of getting the electric chair in this state is to kill a cop, but I would hate to be the cop killed by some screwball looking for the chair." As it turned out, the court of appeals ruled that capital punishment was unconstitutional. My sources 18 years ago were various texts and articles written by psychiatric experts in the field. In writing this, I have gone to original sources and have depended chiefly on two journals: *Annual Register, 1843, Law Cases & c*, p. 345 and *Fraser's Magazine for Town and Country*, vol. XXVII, April, 1843, number CLX, p. 444. In both, M'Naghten's name is spelled in a variety of different ways even on the same page. Either proof-reading seems to have been a neglected art, or spelling was unimportant.

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* The views expressed by the author do not necessarily reflect those of the Medical Society of the State of New York.

The crime

Shortly before 4:00 P.M., on January 20, 1843, in Whitehall, toward Charing Cross, adjacent to the home of the prime minister, and in broad daylight, M'Naghten shot Edward Drummond in the back at a distance of a few paces. He took out a second pistol, and had cocked and aimed it, when his arm was deflected upward by Police Constable James Silver who, after a violent struggle, overpowered the assassin. The prisoner had seen Drummond come and go from the home of the prime minister, and ride in his carriage as well, and therefore assumed that he was Sir Robert Peel. Drummond staggered, but was able to get to his brother's house, where the bullet was removed low in his abdomen. Drummond died "peacefully" five days later of bleeding in the left side of the thorax and in the abdomen.

Public reaction to the crime

When word spread that M'Naghten had intended the murder of the Queen's first minister and would probably plead insanity, the press of the time was incensed. M'Naghten, a Scottish woodturner, had not worked in two years, yet had upward of £750, a princely sum at that time. To give some idea as to how much this sum meant—his room rent was only 2 shillings, 6 pence per week. There was at the time considerably agitation about the Anti-Corn law.[4] "Corn" in England is what we call "wheat"; what we call "corn" is known in England as "maize." Sir Robert Peel, although himself a wealthy landowner, felt that it was wrong to put import duties on corn and believed, further, that the English farmer was efficient enough to compete with all foreign corn growers; therefore, he suggested gradual reduction and eventual elimination of import duties on corn. (In this day and age, just imagine the president of General Motors advocating free trade in foreign automobiles!) Sir Robert was vigorously opposed by the Whigs. There was a feeling in some places that the killing of Drummond was the result of a conspiracy in whose pay M'Naghten was. Street pamphlets even suggested that Drummond had not been properly treated.[5] It is this author's understanding that a book alleging that a conspiracy did exist will soon be published.

History of the assassin

Little is known about M'Naghten's early life, except that his birth was illegitimate; the lack of a father seems to have statistical significance in assassins.[6]* He was the son of a poor farmer's daughter, whose farm was on the river Clyde. No birth certificate has been found and it is probable that he was born between 1810 and 1816.[7] Whether or not there was enough to eat and what his mother and childhood were like are not known. He was acknowledged by his natural father, Daniel M'Naghten, a woodturner from Glasgow, who testified that his son had been apprenticed to him 15 or 16 years before, had remained with him in that capacity for four and one-half years, and was then a journeyman for three years longer. He was very steady, industrious, and temperate. The son had wanted a partnership with his father, who could not agree to it for fear that it would disinherit his young children. He then set up in business for himself in Stockwell Street and remained there for nearly five years. The son felt that the father was angry with him because he had taken some of his business away, which the father denied. After leaving his father's house and employ he seemed more distant in his manner and would frequently pass the father in the street without acknowledging him. At the trial, Police Inspector John Matthew Tierney testified that when the prisoner was asked about the large sum of money in his possession, he replied that he had worked hard for it and that he generally did the work of three ordinary men daily. Now, if M'Naghten had been a workaholic while in the employ of his father and was not rewarded with a partnership, this must have been a terrible disappointment. In 1834 he had typhus fever and began to be restless and sleepless at night. In 1837, his manners were so strange that he was asked to leave his rooming house. He then went to live in his workshop; his disorder became more marked and for whole days he would sit in his shop with racking pains in the head, and would run out to the running Clyde River where he would bathe his burning brow and even plunge into the river to obtain relief from the burning fever. In 1841 he endeavored to get rid of his business because of his growing feelings of persecution. In his fantasy, he felt continuously harried and tormented by a consortium of the

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* John Wilkes Booth was born illegitimately; Lee Harvey Oswald's father was born shortly before or just after his father died.

Catholic Church, the Jesuits, and the Tories, who followed him wherever he went, dressed in Scottish attire, and would call him "murderer." They would throw straw at him, indicating their desire to impoverish him. He fled to France, but they followed him there as well. They did not permit him to sleep. They would never appear if anyone was with him. He felt that it was within the power of Sir Robert Peel to stop this torment, but he did nothing about it. When he went to the authorities, they ignored him, and Sherriff Bell even called him mad; this so infuriated him that had he had a gun on him he probably would have shot him dead in the courthouse. He went to his father for help and his father's advice was to banish such thoughts from his mind and take lessons in writing and arithmetic.

Regina versus Daniel M'Naghten

The trial of Daniel M'Naghten for the murder of Edward Drummond commenced on Friday, March 3, 1843, at the Central Criminal Court (Old Bailey) before Lord Chief Justice of Common Pleas, Sir Nicholas Conyngham Tindal, assisted by Justices Williams and Coleridge. The solicitor general was Sir William Webb Follett who was assisted by Mr. Waddington and Mr. Russell Gurney. For the defense appeared Mr. Alexander Cockburn, Queens Counsel, Mr. Clarkson, Mr. Bodkin, and Mr. Monteith. The audience included the high and mighty of the realm, including the Prince Consort.

The prisoner in a tolerably firm voice pleaded "Not guilty."

The solicitor general addressed the jury on behalf of the Crown. He briefly, but clearly, related the circumstances attending the attack on Mr. Drummond, continuing the narrative up to the death of that gentleman on January 20 (sic, January 25). He said that he should be able to show the jury that it was the life of Sir Robert Peel the prisoner had intended to take, and that he mistook Mr. Drummond for that person. This, of course, would not, in any respect, alter the legal complexion or consequences of his act. There was no doubt of these facts, and he could not be unaware that it was intended to rest the defense of the prisoner on the plea of insanity; it would be the duty of the jury to decide whether the prisoner, at the time he committed the act, was, or was not, a responsible agent. The solicitor general believed, indeed, that there were few crimes committed, and especially crimes of an atrocious nature, such as this one, in which the agent was not, at the time, labouring under some affection of mind, and it was difficult for well-regulated minds to understand the motives by which persons labouring under such morbid influences were actuated.

Sir William Follett then referred to the several attempts that had been made on the life of the monarch of the French people, crimes for which it was difficult to assign any motive, but that of an ill-regulated mind, worked on by political feeling.

It was not, therefore, the absence of any adequate and assignable motive that was in itself to be taken as a proof of want of reason in the perpetrator. It would be necessary, for the present purpose, to refer to some of the established authorities of English law on the subject of criminal responsibility in persons of unsound mind and to refer to Hale's Pleas of the Crown.

Sir Matthew Hale (1609 to 1676) was lord chief justice of England. *Fraser's Magazine* held him in contempt, since Hale believed in witches and was guilty of an even more heinous act in that in his later years he so forgot his place and station as to marry one of his servant girls. Hale's biography mentions that when he had learned that a soldier whom he had condemned might be pardoned, he hastened the execution so that justice (Lord Hale's justice) would be done. On the question of legal insanity, Lord Hale pontificated:

> The moon hath a great influence on all diseases of the brain, especially in this kind of dementia: such persons, commonly in the full and change of the moon, especially about the equinoxes and summer soltices, are usually at the height of their distemper . . . . But such persons as have their lucid intervals (which ordinarily happens between the full and change of the moon) in such intervals have usually a competent use of reason.

This principle of Lord Hale's is still prevalent in present-day criminal law; it is known as partial or temporary insanity, a concept devoid of any medicopsychologic foundation. (The term "partial insanity" makes as much sense as would a statement that a girl is only a "little pregnant.") Lord Hale's insistence on total insanity as the only condition relieving a criminal from legal responsibility was but a reassertion of the law as it governed the innumerable trials of witches and sorcerers. Zilboorg[8] put it aptly that Hale's ignorance of psychiatry was as great as was his authority in the law.

To continue with Sir William Follett's presentation, he adverted to the case of Earl Ferrers, who was tried and executed for the murder of his servant, and read to the jury part of the speech of the solicitor-general (the Hon. Charles Yorke) on that occasion. He alluded to the trial of Arnold, who was tried for the murder of Lord Onslow; the case of Thomas Bowler, who was executed in 1812 after a defense set up on the ground of insanity, and to the trial of Hatfield for shooting at George III in 1800.

Hatfield (or Hadfield) was a soldier who had developed a delusion that it was his duty to be sacrificed for the salvation of mankind, whereupon he fired a shot at King George III, hoping to be executed for the benefit of mankind. He was declared not guilty by reason of insanity; however, the case set no precedent since it was considered a fluke due to the eloquence of Lord Erskine (and the shot missed).[8]

Follett continued with the case of Bellingham for the murder of Mr. Perceval, and he deduced from these cases what was the established rule of English law and expressed the conclusion to the jury in these terms.

> The whole question will turn upon this—if you believe the prisoner at the bar at the time he committed this act was not a responsible agent—if you believe that when he fired the pistol he was incapable of distinguishing between right and wrong—if you believe that he was under the influence and control of some disease of the mind, which prevented him from being conscious that he was committing a crime—if you believe that he did not know he was violating the law of both God and man, then, undoubtedly, he is entitled to your acquittal. But it is my duty, subject to the correction of my lord, and to the observations of my learned friend, to tell you that nothing short of that excuse can excuse him upon the principle of English law. To excuse him it will not be sufficient that he laboured at the time under partial insanity, that he had a morbid disposition of mind, which would not exist in a sane person; that is not enough, if he had that degree of intellect to enable him to know and distinguish right from wrong; if he knew what would be the effects of his crime, and consciously committed it, and if with that consciousness he wilfully committed it.

He did not ask for the death penalty and stated that the verdict of the jury would be that of justice between the prisoner and the public.

The prosecution's first witness was Police Constable James Silver who had deflected M'Naghten's second shot, overpowered him, and conveyed him to the station house, where he relieved him of his pistols, 10 percussion caps, two £5 notes, a bankbook showing £750, change, a knife, and a key. He gave his name and address without hesitation. The witness further pronounced a leaden bullet that he had received from Colonel Drummond, the brother of the deceased. An eye witness confirmed what had been said and added that the shots were deliberate. A surgeon, Mr. George James Guthrie, testified that the bullet was found in the front, and that death was due to the bullet wound. A policeman, George Shaw, searched the prisoner's lodging and found a powder-flask, five bullets, and a pistol key.

Inspector John Matthew Tierney stated that he had given the prisoner the caution. The prisoner explained the large sum of money in his possession by stating that he had worked hard for it. He knew the names of ships that plied from Glasgow. He also knew the rail fares from Glasgow to Edinburgh, and that Paisley was noted for its weavers. He knew that Drummond was the family name of the Earl of Perth and that the title had become extinct. The next morning he told the inspector that he had been persecuted by the Tories, and that they followed him from place to place with their persecution. When asked whom he had shot, he replied "It is Sir Robert Peel, is it not?" The witness was severely criticized by Mr. Cockburn for having wormed himself into the confidence of the prisoner. Other witnesses told of having seen the prisoner loitering in the vicinity of the Treasury for several days before January 20.

Jane Drummond Paterson, with whom he had lodged two years before, described him as strange; she had grown afraid of him and had expressed a wish that he leave. On one occasion she had found some pistols in his room and asked "What, in the name of God are you doing with pistols there?" He replied that he was going to shoot birds with them. He left the end of the week, with only the clothes on his back.

Another landlady with whom he had resided the year before had seen nothing about his conduct to lead her to think that he was insane.

A magistrate of Gorbals, the curator of the Glasgow Mechanics' Institution, and Mr. James Douglas, a surgeon and lecturer at the institution, all testified that M'Naghten was shrewd and intelligent. On the other hand, Mr. Swanston observed from time to time a glare in the prisoner's eyes.

A clerk at the London Joint Stock Bank reported that the prisoner had wanted to withdraw £5, which was not permissible, whereupon the prisoner withdrew £750 and redeposited £745.

The evidence for the prosecution took up the entire day. On the following day, Mr. Cockburn addressed the jury at great length. He commented on the insanity rule as laid down by Lord Hale, and on the cases of Lord Ferrers, Hatfield, Bellingam, and others, contending that modern science had thrown so much light on the organization of the brain, that the doctrine of the bench of earlier times had to be received with caution. If he had made any comments about the would-be regicides of the French monarch, it has not been available to me. With regard to Bellingam, who had been tried and executed a week later, the application of his counsel for postponement was denied, when he could have had witnesses ready to come forward to make out a case of insanity. As for Bowler, he had been subject to epileptic fits and manifested all the indications of insanity, yet he was executed.

Mr. Cockburn gave an elaborate digest of the evidence he was about to give. From the first, the defendant's habits were gloomy: he was given to abstruse studies, he was disappointed that his father did not take him into partnership, and he was a natural child and possibly did not receive the same measure of kindness as the other children. He was inoffensive, fond of children, and humane to animals. In 1834 he had had typhus fever and began to be restless and sleepless. In 1837, the person with whom he lodged asked him to leave because of his strange behavior; following that he slept in his workshop. His disorder became more marked, with racking pains in the head. In 1841 he tried to dispose of his business because of his growing suspicions. Although critical of Inspector Tierney's behavior, who had sought to worm himself in the prisoner's confidence, he confirmed the presence of the patient's delusions.

Mr. A. Johnson, M.P., proved that he had written to the prisoner, in reply to a communication received from him, "that he was labouring under an aberration of the mind." The provost of Glasgow, the Reverend A. Turner, and Mr. H. Wilson, commissioner of police, detailed to the court and the jury the delusions under which the prisoner labored. To Wilson he stated that as soon as he had landed in Boulogne "he saw one of the spies, who were following him, peep from behind the sentry box."

Mr. Cockburn had previously mentioned that the prosecutor had in court medical men who had examined the prisoner, but whom he had not dared to call for testimony because he knew what their testimony would be.

E. I. Monro, M.D., a physician who had devoted himself for 30 years to the subject of lunacy, said that he had met Sir Alexander Morrison, Mr. M'Clure, and other medical gentlemen, two of whom had been deputed by government, in the prisoner's cell in Newgate, on February 18, and on other occasions. M'Naghten then complained that he was persecuted by "a system or crew" at Glasgow, Edinburgh, Liverpool, London, and Boulogne: "He had no peace of mind," he was "sure it would kill him," it was "a grinding of the mind," he was "tossed like a cork on the sea." At Glasgow people pointed at him, and said "That is the man—he is a murderer, and the worst of characters." His complaints had been sneered at and scouted at by Sheriff Bell, who had it in his power to put a stop to the persecution, if he had liked. If he had had a pistol in his possession he would have shot Sheriff Bell dead as he sat in the courthouse. Mr. Salmond, the procurator-fiscal, Sheriff Bell, Sheriff Alison, and Sir Robert Peel, he said, might have put a stop to this system of persecution, if they would. He said that persons dogged him to Boulogne: they would never allow him to learn French, and wanted to murder him. He could not go out after dark for fear of assassination. He imagined the person whom he had shot at Charing Cross to be one of the crew, a part of the system that was destroying his health. Dr. Monro had not a shadow of a doubt that the delusions were real. He considered the act of the prisoner in killing Mr. Drummond to have been committed while under a delusion; that the act itself he looked on as the crowning act of the whole matter—as the climax—as a carrying out of the preexisting idea that had haunted him for years.

Sir Alexander Morrison, who had studied insanity for over half a century, entirely concurred with Dr. Monro. Other alienists, Mr. M'Clure, W. Hutchinson, M.D., J. Crauford, M.D., Mr. M'Murdo, Mr. Aston Key, and Mr. Winslow had all testified to the effect that the prisoner labored under a morbid delusion; in his fancying, he felt he was subject to a system of persecution, that this delusion deprived him of all restraint or control over his actions, that the actions were the result of the delusion, and that the delusion itself was, to use the words of Dr. Hutchinson, irresistible.

B. Phillips, M.D., was about to be called to testify, when Chief Justice Tindal interposed, and, addressing the solicitor general, said that he and his learned brethren felt that the evidence "and especially that of the two last medical gentlemen,[9] who were strangers to both sides, so very strong, that unless medical evidence were called on the part of the crown to combat it he would stop the case." The solicitor general said that after that intimation, he could not press for a verdict.

The chief justice thus put the question to the consideration of the jury:

> The point I shall have to submit to you is, whether on the whole of the evidence you have heard you are satisfied that at the time the act was committed, for the commission of which the prisoner now stands charged, he had that competent use of his understanding as that he knew that he was doing, by the very act itself, a wicked and a wrong thing? If he was not sensible at the time he committed that act that it was a violation of the law of God or of man, undoubtedly, he was not responsible for that act, or liable to any punishment whatever flowing from that act. If, on balancing the evidence in your minds, you think the prisoner capable of distinguishing between right and wrong, then he was a responsible agent, and liable to all the penalties the law imposes. If not so, and if in your judgment the subject should appear involved in very great difficulty, then you would, probably, not take upon yourselves to find the prisoner guilty. If that is your opinion, then you will acquit the prisoner. If you think you ought to hear the evidence more fully, in that case I will state it to you, and leave the case in your hands.

The foreman of the jury said that they required no more information, and without hesitation they returned the verdict "Not guilty, on the grounds of insanity."

M'Naghten was afterward removed to one of the usual receptacles of insane persons for permanent confinement.

England's reaction to the verdict was mainly negative. The Queen voiced her displeasure in a letter to Peel. The matter was referred to the law lords, in which Tindal played a prominent role, and two years later the M'Naghten Rule, which in essence repeated the judges' charge to the jury and confirmed it.

Let us review briefly what we have. Both Hatfield and M'Naghten stood trial for their acts. There was no preliminary hearing to determine their competency to stand trial. Both were found not guilty by virtue of insanity and both spent the rest of their lives in mental institutions.

How many prime ministers have since been assassinated? None. Since 1843 every presidential assassin paid for their acts with their lives. All of them were unquestionably psychotic.[10] Where there were trials, there was no difficulty in getting psychiatrists to testify that they were legally sane. Have we been as free as the English from the scourge of these psychotic assassins? Something must be wrong with our approach.

Let us suppose that M'Naghten had been tried in the United States under the "M'Naghten Rule." It would have been shown that the crime was planned, although not very well because he had confused Drummond for Peel. He had watched Drummond come and go. He had been seen loitering about the Treasury, stalking his intended victim. He lied when he said that the pistols were to be used to shoot birds, and in the lie he confessed to knowing that pistols were lethal weapons. With the same facts and apparently the same rules, M'Naghten would undoubtedly have been found guilty under the M'Naghten Rule. The governor's commission reported that the M'Naghten Rule is used only in cognizant terms—to which I must add that when it is used in this way it really is no longer the M'Naghten Rule; rather, it is Hale's rule," the same Lord Hale who believed in witches, had married a female servant in his later years, and had executed a soldier before he could be pardoned.

Isaac Ray, M.D., a New England psychiatrist, had tremendous influence not only in his own country but in England as well. Dr. Ray said "The popular notions concerning the disease were then derived from the observation of those wretched inmates of the madhouses whom chains and stripes, cold and filth, had reduced to the stupidity of the idiot, or exasperated to the fury of a demon."

The normal person believes with the same conviction that capital punishment is a deterrent, as did even the most educated person in the Middle Ages believe that the world was flat. They are and were wrong. Under these circumstances it is a credit to the courage and genius of Governor Hugh L. Carey who opposed capital punishment; in this connection, he is a statesman rather than a demagogue.

When I testified 17 years ago before the Bartlett Commission that the verdict of "Not guilty by virtue of insanity" is a greater deterrent than is capital punishment, I did so because of my experience with a few psychotic and/or epileptic murderers, all of whom would rather be executed than admit that they were psychotic and/or epileptic persons; this confirmed in my mind the accumulated wisdom of a few latter-day experts in the field. I must confess that I thought of myself as somewhat of a genius, certainly far smarter than they were in 1843.

In April, 1843, the anonymous editor of *Fraser's Magazine* wrote:

> Sir William Follett alluded, in his opening speech, to the frequent attempts made on the life of Louis Philippe. In the earlier of these attempts a revengeful trial and a sanguinary death were resorted to by the authorities; but it was not till that course was abandoned and one of the offenders was consigned to the obscurity of a private madhouse that the regicidal epidemic was in any degree stayed.

Now, I had never learned this in a History I course, nor is it mentioned in any of the encyclopedia references to Louis Philipe, or by the French contributor to *Assassination and Political Violence.* However, if *Fraser's Magazine* knew it, certainly the judges and prosecutor of M'Naghten knew it; now it is understandable that the solicitor general appeared in court surrounded by alienists, all of whom were ready to testify that M'Naghten was psychotic; the judge's directed verdict was likewise intended to save the Queen's life (which she did not seem to appreciate). *Fraser's Magazine* took great pleasure in the triumph of British good sense and justice. I trust that I will be permitted my own patriotic fervor. In 1835, Richard Lawrence, who at times believed that he was Richard III, and at other times that he was the possessor of vast realms in England and Europe, presented claims to Congress for vast sums that he felt were his due. He came to believe that President Jackson, in conspiracy with steamship companies, was depriving him of his rightful claims, and fired two shots at the president, but both shots misfired. The proecutor, Francis Scott Key, courageously cooperated with the defense and a verdict of "Not guilty by virtue of insanity" was obtained.

Fraser's Magazine regretted the fact that the father had not listened to the warning of the provost of Glasgow and had his son institutionalized. Had M'Naghten's father sought to have his son institutionalized now, during the era of the revolving door policy, it is doubtful (1) that he could have secured a bed for his son, or if he had succeeded, (2) that his son would have been kept in the confines of an institution. This however is a situation that has altered considerably since I testified before the Bartlett Commission, and it warrants another report.

Conclusion

It would appear to me that the M'Naghten Rule grew out of the French experiences with their would-be regicides, and it is a pity that this was, to my knowledge, not mentioned either at the trial or in the history books.

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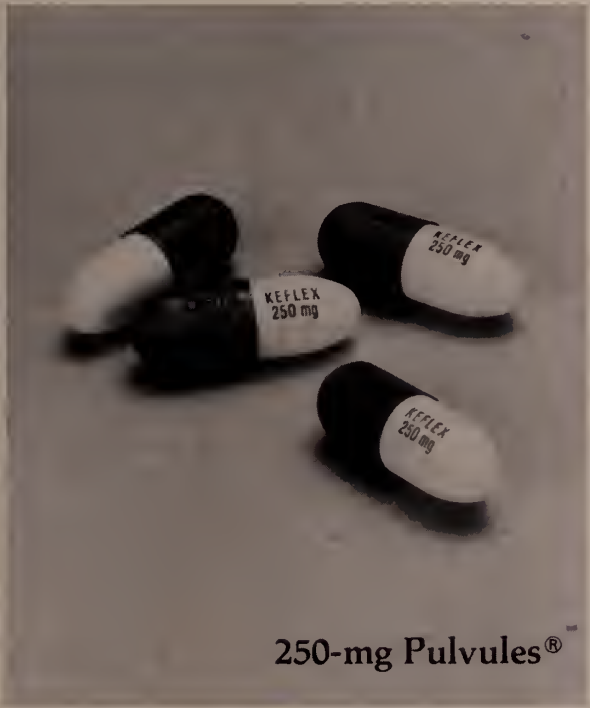

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Since the licensing of live, attenuated rubella vaccines in 1969, there has been a drastic reduction in acquired rubella accompanied by an even greater reduction in the congenital form of the disease. The total eradication of the congenital rubella syndrome has been the goal of the national immunization program using the concept of herd immunity to reduce and eventually eliminate the circulation of wild rubella virus. If more than 90 percent of the susceptible population could be immunized, this conceivably would be accomplished. However, it is dependent on a vaccine immunogenic enough to produce long-lasting, if not life-long, immunity. If the vaccine protection proves not permanent while concurrently the normal community spread of wild virus is interrupted, there might be created a population of rubella-susceptible adults. This would result from a decrease in the incidence of subclinical rubella infections in the total community which normally "boost" waning immunity. Clearly, this sequence of events must be minimized or nullified.

By the second half of the 1970s, it became apparent that vaccine failure, both primary and secondary, was a significant problem and was threatening to undermine the success of the prevention program. Many studies have alluded to this, and most of them have involved preadolescent children. Estimates of the large number of these children growing up to adolescence and young adulthood in the 1980s have been advanced by Horstmann[1] and Krugman.[2] Since the recent publication of the study by Lawless et al.,[3] in which the rubella susceptibility of previously vaccinated sixth grade students was assessed and found to be 13.2 percent, it seemed that information on the susceptibility of high school students to rubella was needed. It also appeared that the relative importance of primary versus secondary vaccine failure could be more clearly delineated by using an older test group with a more variable spread of vaccination dates. With this goal in mind, the prime author (Dr. Berman) contacted the school district, where he is employed as school physician, and the Nassau County Department of Health. A study protocol was developed in which students from Oceanside High School, Oceanside, New York, would volunteer to participate in a program of blood testing for rubella antibodies.

Study design

Oceanside High School, in a suburban, mainly middle-class community, was thought suitable for this study because of its fairly large student body of almost 2,500 and relatively complete health records. Coincidentally, these were being further verified and updated to comply with the new State regulations. The initial plan was to obtain participation of a large enough proportion of the senior class of about 725 students so that lower grades would not have to be contacted. Students were offered free vaccination or revaccination if their blood tests showed they were rubella-susceptible. Because of the age (15 to 18 years) of the participants, student and parental consent forms were prepared and distributed. Much effort was put into publicizing the program and educating the students and parents regarding the rubella vaccine. On two occasions, senior class meetings were held to discuss the program and to motivate the students to participate. Informative articles appeared in the school newspaper and several newspapers in the community. Attractive posters were created by the Nassau County Department of Health, and they were displayed on the walls throughout the school.

TABLE I. Rubella antibody study groups of senior high school students

	Number of Students	Number Years Post Vaccine Mean	Range	Percent with HI Titer ⩾ 1 : 8	Geometric Mean HI Titer
Group I	49	10.9	7–12	87.8	23
Group II	13	3.2	1–6	100	54
Group III	24	...	...	54.2	10

Unfortunately, relatively few students were convinced that this was a worthwhile program for their participation. In particular, the senior girls could not identify themselves with the potential problem of congenital rubella which might face them directly in a relatively few years. In addition, there existed some amount of simple fear surrounding the drawing of blood. However, the best single term to characterize the failure of cooperation would be apathy. Attempts to recruit students from the other grades met with more success. This probably occurred because without a blood antibody test some would have been compelled to receive vaccination according to the new State law since their histories of rubella immunity were incomplete or doubtful.

However, the total response was still disappointing. A total of 98 students signed up for the program, but only 86 appeared for the blood drawing (46 boys and 40 girls). They were divided into three categories. The main test group (group I) of 49 consisted of those students vaccinated more than six years ago (prior to January 1, 1975). There was a small group of 13 students (group II) who had been vaccinated less than six years ago but only three of the students since January 1, 1979. The third group (group III) consisted of 24 students with a history of the disease only, mostly without specific physician verification.

The blood drawing was done in the school during school hours in one of the gymnasiums arranged for this program. A team of Nassau County Department of Health nurses came to the school to perform the phlebotomies. The school physician was present for moral support, for last-minute questions, and for the remote possibility of an acute reaction.

The program was completed without incident, and antibody titers were performed at the Nassau County Division of Laboratories and Research. Those students found to be susceptible were offered free vaccination or revaccination.

Results

The results are documented in Table I and, in general, are in agreement with the findings in previous studies. A few of these findings should be emphasized. Although the numbers are small in each group, secondary vaccine failure over a period of 7 to 12 years appears to be the major problem in group I. Despite the fact that only 3 of the 13 students in group II may have received the newer, more efficient RA27/3 vaccine, which first became available in 1979, all the students in the group demonstrated adequate titers after a period of 1 to 6 years. If the date January 1, 1972 had been used to separate groups I and II instead of January 1, 1975, there would have been 18 students in group II, all with protective titers. Also, note the much higher mean titer in group II compared with group I. A total of four students in group I gave histories of rubella disease (three in the epidemic year 1964) contracted prior to immunization, but eliminating these students from this group would not significantly alter the findings or their interpretation.

The group III results serve to reiterate the previous conclusions of many investigators and clinicians concerning the lack of reliability of a history of rubella disease. It corroborates the stringent stance taken by the State of New York Department of Health in not accepting histories of rubella as sufficient proof of immunity.

Comment

Unlike measles vaccine where the primary cause of vaccine failure appears to be the immunization of infants less than 13 months of age,[4] this is apparently not the case for rubella. Balfour and Amren[5] initially found that 36 percent of 159 children lacked rubella HI (hemagglutination inhibition) antibodies an average 4.7 years post immunization. Further studies showed that those children vaccinated at less than 14 months of age had a higher failure rate, but their final tabulation of 303 children showed a 35 percent failure rate (60/172) for children vaccinated at 13 months or younger and, even at 14 months or older, a failure rate of 21 percent (27/131) was noted.[6] In the study by Wilkens and Wehrle,[7] in which 9.9 percent of 452 children given HPV-77:DE-5 vaccine had primary serologic failure and 2.2 percent demonstrated secondary failure, the age at immunization did not seem to be important.

Unfortunately, the vaccine in greatest use prior to 1979 (HPV-77:DE-5) has proved to be the one associated with the greatest secondary failure and an overall serologic failure rate of 10 to 20 percent.[6] Horstmann[1] found that 8.5 percent of children given this particular vaccine demonstrated secondary serologic failure at follow-up three to five years later (all these children had demonstrated antibody shortly after vaccination). The Cendehill vaccine, in use from 1970 through 1976, has also been associated with an unacceptable (although lower) rate of failure. Schiff et al.[8] found an overall failure rate of 8 percent using this vaccine. Unfortunately, the HPV-77:DK-12 vaccine, which this and other studies had found to be more immunogenic, had to be discontinued because of its high incidence of serious side-effects in children.[9]

Another question recently raised has been the relationship between absent HI titers and possible persisting protection. Balfour[6] has tested some seronegative children by revaccinating them with the current vaccine, RA 27/3, but his results were inconclusive. On the other hand, Harris et al.[10] claim that 17 percent of sera minimally positive for HI antibodies showed no antibody when tested by a more sensitive radioimmunoassay method in which possible nonspecific inhibitors causing false-positive results have been circumvented. Recently, the ACIP (Advisory Committee on Immunization Practices) has advised that any level of rubella antibody should be taken as presumptive evidence of immunity.[11] However, Gellis[12] still feels that it is more sensible to revaccinate individuals with very low titers until more refined antibody testing techniques are available.

The present rubella vaccine, RA 27/3, licensed in January, 1979, shows promise of eliminating the problem of excessive vaccine failure. Combined primary and secondary failure rates have been less than 3 percent for children and adults followed up as long as seven years.[13,14] Balfour[6,15] found only 0.5 percent primary failure and 2.2 percent secondary serologic failure in children initially immunized at 12 to 17 months of age and followed for four years.

Conclusion

This is another study demonstrating that the present rubella immunization policy of the ACIP and the American Academy of Pediatrics may be in difficulty. Lawless et al.[3] recently commented that the overall susceptibility level of 15 percent in their student population is similar to that of the prevaccine era and suggests the need for booster immunization of preadolescents. In the same issue of *Pediatrics*, Krugman[2] recommended a two-dose program for rubella vaccination in the future. For the present, we should attempt to reduce the number of susceptible children estimated by Horstmann[1] to be three million among those vaccinated prior to 1975. If we combine this with the estimate by Krugman[2] that 300,000 infants born each year may eventually become susceptible, the potential problem for the immediate future is apparent. Balfour's[6] recommendations appear sound. In particular, he recommends serologic testing of all postpubertal girls, with vaccination or revaccination using RA 27/3 for all those without detectable HI titer, after appropriate precautions are taken concerning pregnancy and avoidance of same for three months. Perhaps boys should also be tested, and it remains to be clarified whether or not all individuals with the minimal HI titer of 1:8 should now be reimmunized with the RA 27/3 rubella vaccine. We cannot remain complacent about the currently existing 80 to 90 percent rubella-immunity levels in our high school population. To prevent the resurgence of the congenital rubella syndrome, the sights must be set at 95 to 100 percent rubella immunity levels.

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Serendipity in our files

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REMARKS ON THE GUNSHOT WOUNDS OF THE CIVIL WAR.[1]

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Then in charge of the U.S. Army General Hopsital, Frederick, Md.

I have been asked to resurrect some dead facts concerning gunshot wounds of the Civil War, and hence my remarks may partake somewhat of a funereal tone. To me has been assigned a brief review of the effects and treatment of gunshot wound in the Civil War that raged from 1861 to 1865. During that time I was in the regular service in the capacity of an assistant surgeon, and as our rank was less than that of the volunteer surgeon, and as the regular troops were few, the regular assistants were largely placed in the U.S. Army General Hospitals. By such action it fell to me early in 1862 to be assigned to the charge of the General Hospital at Frederick, Md., which served as the base hospital of the various campaigns in the Shenandoah Valley, and also later of the battles of South Mountain, Antietam and of Gettysburg. It was also the reception hospital after the small but bloody battle of Monacacy Junction, which saved Washington from General Early's last raid. This fight occurred within three miles of the hospital. The hospital grew from a capacity of 150 patients in 1861, to one of 3,000 beds in 1865, when I withdrew from army life. During this time over 30,000 patients were treated there, of which about two-thirds were wounded men.

The wounds that were met with were principally gunshot and shell wounds, and the personal experience there obtained was confirmed by the larger results gathered in the "Medical and Surgical History of the War." This valuable publication states that there were 246,712 wounds treated during the war, of which only 922 were sabre or bayonet wounds; that is to say, only 0.37 per cent. were of other origin than from gunshot wounds. This small number of wounds that resulted from hand-to-hand conflicts was less than was similarly encountered in the various wars such as the Crimean, the Austro-Prussian and others occurring from 1850 to 1870, when the percentage was 2.4 of the whole number of men wounded, which percentage was again lessened to 1.4 per cent. in the Franco-Prussian War. All this only meant that battles and other military contests were being decided at greater distances.

Projectiles.—Under the head of gunshot wounds were classed wounds from all missiles, and these latter varied from the round lead bullet, weighing 387 grs., to the round bullet with three buckshot made into a cartridge—a very effective weapon at close range. There was also the conical bullet, known best as the Minié ball, which varied in size and weight from the lighter Spencer rifle bullet of 134 grs., to the Enfield bullet of 450 grs., and to others of 671 and 760 grs., with a caliber of 69 to 71. These larger bullets were very destructive, and even in these days, when the military tendency is towards a lighter missile in order to incapacitate rather than to slay, in hunting, when the intent is to bring down the game, the larger bullets, I am informed, are yet preferred. The smallest lead projectile then most in use was the Colt's pistol bullet, with a weight of 207 grs. the larger iron or steel projectiles were grape shot, canister, shrapnel and other shells; these latter damaged most by their fragments. Rarely did wounds result from a round cannon-ball. No injuries from the windage of cannon-balls were encountered. It may be of interest to note that of the 245,000 gunshot wounds there were but 359 from solid shot, 12,250 from fragments of shells, 1,153 from grape and canister, and the balance was from various kinds of bullets.

The *wounds* produced varied considerably, but the general rule held good, whether they were from a round or conicle bullet or from a shell fragment, that the wound of exit was usually larger than that of entrance. The conical ball did not, however, always hold true to the direction of its long axis, either from some cant given to it external to the body, or by some impact on a fascia or a bone by which either the wound of entrance or the wound of exit was unduly distorted, or the bullet, *conical* or *round*, flattened by an external ricochet, produced large lacerations, both on entering and on leaving limb or body. These ricocheting bullets, as well as others, likewise carried earth and foreign bodies into the wounds, not only altering the entrance wound and producing extra dangers, but also adding complications of interest both to the surgeon and to the patient. While the general rule as to entrance and exit wound was fairly true, yet so many variations were encountered that their proper interpretation demanded much experience and acuteness on the part of the observer, who, after all, was often wrong in his deductions. Of the vagaries of bullets, I would like to refer to one where, in opening an abscess in the submaxillary region in a soldier, I found that of a molar tooth. On looking into the patient's mouth, it was seen that he had his full complement of teeth. He, however, recollected that in the fight in which he was wounded his comrade was shot through the cheek. This same bullet had evidently passed the broken tooth of soldier No. 1 to soldier No. 2. Another man from whom 1 extracted a piece of trouser material of some size, with his lodged bullet, said: "I never had a pair of pants of that pattern." I once found a Minié ball split from its tip to its undivided base and resting with one-half on each side the sharp edge of the tibia, which was unbroken. In another man the bullet entered the orbital region laterally and well forward. It was supposed, as he had no special symptom, to have lodged in the superior maxilla. He returned to the ranks and did his duty, and some six months later, while at home on a furlough, died suddenly. At the autopsy the bullet was found resting on the sella turcica, where by pressure it had finally eroded a vessel. Another time at an autopsy a conical bullet was discovered suspended in the folds of the omentum. It was remarkable that it should have stopped there. Occasionally the wound of entrance was very obscure. This was especially instanced in the case of Maj.-Gen. Phil. Kearney, a dashing, brave cavalry officer, who was ambushed with his attending staff at Chantilly, Va. The General, with those not killed outright, spurred lustily and escaped, crouching low on his saddle to avoid the shower of bullets. He reached his troops, but was found to be mortally injured, and died soon after. No wound was found on his person, and it was only at the autopsy that it was ascertained that the bullet had entered at the anus and had raked upward through the abdomen to the thorax.

From looking at some of these old specimens acquired in my military hospital service, one might almost think that some of them must have been caused by explosive bullets, but this was probably not so. For though in the beginning of the war the Government issued 30,000 explosive bullet cartridges, 10,000 of these were early abandoned in the field, and as it is roughly stated that it takes a ton of bullets to kill a man the statistics of the Surgeon-General's office seem to prove this rule, for only 130 wounds were supposed to have been produced by explosive bullets, and a similar infrequency was observed on the Confederate side.

For the *detection* of lodged bullets all medical officers were furnished with the porcelain-tipped probe of Nélaton, who successfully recognized the long imbedded bullet in the ankle of the Italian patriot, Garibaldi, by the mark made by the lead on its surface when it was used. When this was not at hand during my short term of field duty, having learned the trick from my esteemed preceptor, Dr. Gurdon Buck, I used several times with good result either the stem of a clay pipe or the squarely cut end of a round sliver of Georgia pine, which would likewise show the telltale marks of the hidden bullet.

For the *treatment* of bullet and shell wounds in general, we found, and by "we" I mean the medical corps of our hospital, which embraced men who have since won distinction, such as Keen, of Philadelphia; Andrew H. Smith, of New York; Porter, of Bridgeport; Dunott, of Harrisburg; North, of Waterbury, and other who were then assistant surgeons in the army, and doing good and patriotic work. To repeat, we found that we did best by the simpler means of cleanliness, with plenty of water and good ventilation. The wounds were covered by lint, smeared with either simple cerate or an ointment of Balsam of Peru. Towards the end of the war the wounds of entrance and exit were often enlarged at once to allow of self-drainage. We had plenty of suppuration, plenty of pyemia, and, alas, at times, too much hospital gangrene. Of this latter disease, at first the best treatment was the repeated application of pure nitric acid, with about 60 per cent. of failures, but later, in 1863, Dr. Goldsmith, of Louisville, Ky., suggested strong solutions of bromine, and even pure bromine, when the failures diminished to 2.6 per cent. It has since become an extinct disease, and we never knew its germ. May it remain so. It and the more frequent pyemia were due to overcrowding and bad air and bad surgery. For, looking backwards, the surviving surgeons of that day must admit that they were unwittingly more fatal to those under their care than the battle was; that death followed the path of the surgeon, with his poisonous technique and dressing. What indeed was more provocative of infection than the care, for instance, of the sponges used at an operation. These were used repeatedly, whether for clean or septic cases, as we now say. Washed repeatedly, it is true, in fresh water, but, after all, germ laden. Kept, too, soaking in water until again required, and reproducing millions of virulent germs, which, by the surgeon's act, were at the next operation smeared freely over the wound. The Borgias never did as much! though they knew what they were doing! Maggots from the many flies also invaded wounds frequently; they were troublesome, but did but little harm; a few drops of chloroform on the wriggling mass usually destroyed them. Of the wound complications we had two serious ones to contend against. One, the greatest, was pyemia; the other was frequency of secondary hemorrhage, and particularly after amputations. You will understand the condition of our wounds, when I tell you that in over 300 major amputations, that is to say (not including hands and feet), in only one case was total primary union obtained. What a contrast to our present results with the aseptic treatment! After the battle of Antietam I had, as the field hospitals were rapidly emptied to permit McClellan's army to take up the pursuit of General Lee, to receive in my wards nearly 130 cases of compound fractures of the thigh; and more harrowing still, nearly 60 suppurating gunshot fractures or wounds of the knee joint. The lesson then just learned from Dr. Gay that such joints when suppuration ensued should be freely laid open, was followed by but few, and among the first to employ it in the army was Dr. J. W. S. Gouley. With these patients, received six to ten days after the battle, with joints distended with pus, for the bullet-holes seldom drained themselves, naught remained but free incisions and drainage, with rubber tubing, the use of which had just been evolved by Chassaignac. This brought many to a condition warranting amputation, with all its risks.

It was not until the last year of the war that an approach to antisepsis was made. A mixture of dry earth and cresylic acid was furnished for use in hospitals, but its employment was not well received, nor did its results balance its messiness and discomfort. In the treatment of sinuses and suppurating cavities, empirical means were successfully used, such as solutions of bichloride of mercury, of nitrate of silver and pure Balsam of Peru, which substances, at a later period, were recognized as more or less potent antiseptics, and this explained their efficacy.

The treatment of penetrating gunshot wounds of the abdomen was then in its infancy. It consisted mainly in opium, and generally in the large doses suggested by the distinguished clinician, Dr. Alonzo Clark. I have records of several successful results, even where foeces had escaped from the bullet holes immediately following or soon after the wounding. There were recorded in the Surgeon-General's office 3,653 of such penerating wounds, of which 80 per cent. died and 20 per cent. recovered. The mortality after amputations of all kinds was 20 per cent. Of the major amputations—that is to say, of the thigh, leg, arm and forearm—the mortality was about 42 per cent.

For fractures of the thigh the extension treatment of Buck or the anterior suspension splint of Nathan R. Smith was employed and for many fractures of the leg and upper extremity the recently introduced plaster of Paris bandage as resorted to, with great comfort to the patients, especially where transportation to other hospitals was necessary. This method of treatment was first brought to New York by Dr. Buck from abroad, and the first splint of this kind applied in America was by his house surgeon, Dr. Hoffman, about 1855. Later Dr. Little improved the method, and by his efforts it was introduced generally into military use.

I should like to allude, in concluding, to a quasi medical complication, though it was not of necessity associated with gunshot wounds.

There existed among the lesser trials of the medical officer not only at this time, but also in the time of my predecessors and probably under the jurisdiction of our successors in the army, the difficulty of successfully carrying out the proper treatment of the medical or surgical malingerer. He was worse than a wounded man. He was a bad example; a fraud on the Government. I always tried, in managing these intractables, to preserve the humane feelings that should belong to our profession, but the closest approach I ever made to savagery was in the treatment of the sound or restored soldier, cowardly at heart, whose mass of deceit and inertia taxes one's endeavors to the uttermost. I failed often by mild measures, such as by extra work, guard-house duties, increased as to make such men appreciate that it was a "softer job" at the front than in the hospital. But disappointment was most common in those who feigned chronic rheumatism or loss of voice, both hard to pronounce assumed diseases. Later on, an old army medical officer told me as he inspected by list of supposed humbugs, that his rule, based upon his experience in Mexico and subsequently, was for chronic rheumatism cases to shave the head and then apply a fly-blister 2 × 6 inches centrally on the shaven part, and every second day to put on a similar one at a lower level along the spine, until the patient could not sit down. With this was conjoined a mixture of castor oil and tincture of aloes, which was given fasting every second day in alternation with the blisters. A rough treatment, you will say, as I did, but nevertheless I tried it, and had a real success in many cases, especially in those when I placed the blister at the lowest situation first!

But when I came to the lost voice malingerer I was often foiled, for such a deceiver was of a higher type than the rheumatic soldier. Usually, if watching by a detective nurse brought no evidence, the suspect was given enough ether to set him talking. One such man, however, passed through such a trial as that without uttering a word. A surveillance of two months revealed nothing wrong. We had laryngoscoped him and found nothing. He came finally before the Examining Board and was recommended for the desired discharge from the army. As these papers had to be approved at Washington, a delay of two months ensued, and he was put on as an assistant nurse at night, watching in Barrack E, under Dr. Paullin. In these large hospitals there is a Medical Officer of the Day, whose duty is to be ready for emergencies during twenty-four hours, and he slept in a specified room with his name on the sign outside. This particular night that I am about to refer to, Dr. Shimer, one of the other surgeons, was on duty as Medical Officer of the Day, but, being taken ill, asked Dr. Paullin to relieve him for the night. After midnight the doctor's door was opened, a man rushed in an awakened the surgeon with the cry: "Come to Barrack E quick, for God's sake, Doctor. Jones is bleeding to death," and as the man said this the doctor turned over and recognized the malingerer, who said, weakly: "I didn't know you were on duty." His discharge was revoked and he was sent to the front to develop more patriotism.

Pardon, Mr. Chairman, this digression, as it is not altogether germane to my subject, but it may be considered a parting shot.

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[1] Read at Stated Meeting of the New York County Medical Association, New York City, January 18, 1904.

... a report on the quality of ambulance service as observed in 1862 ...

At a meeting of the Boston Society for Medical Improvement, held September 22, 1862, Dr. Bowditch remarked as follows:

"I desire to bring before the society a subject of great importance to the future welfare of our wounded soldiers; although at first sight it may not seem exactly appropriate for a meeting of this society.

"During my recent visit to Washington with other physicians, summoned there by the Secretary of War, I was brought immediately in contact with the abominable system, or rather no system of ambulances now in use in our army. The atrocities I saw committed, are, I think, a sufficient reason for bringing the subject before you, in order that, either by the individual effort of the members, or by the united action of the society, public opinion may be made so strong as to force the government to devise some plan more in accordance with common humanity, and more truly military in its discipline.

"On the evening of Friday, September 5th, at the request of the Surgeon-General, I joined an ambulance train that was just starting to go to the relief of our starving and wounded men near Centreville. There was a train of fifty carriages. I subsequently learned that three of the drivers, afraid of entering the enemy's lines, escaped with their ambulance wagons, before we reached Long Bridge. This was easily accomplished as there was no escort, and, as it subsequently appeared, no power to prevent such an event. It is true, an army surgeon accompanied and gave general direction to the train; but he was on the first wagon, and could not know what was doing towards the end of the long train. I soon perceived that the drivers were men of the lowest character, evidently taken from the vilest purlieus of Washington, merely as common drivers, and for no other qualification. Their oaths were flaunted forth without the least regard to the presence of superiors, and with a profusion that was really remarkable even in the vicinity of Washington. The driver of my ambulance become sleepy as the night wore on; and as his zigzag course over a Virginia road was rather perilous, and as he informed me that he had been overturned a few weeks previously, I though it more prudent to drive myself, rather than to let him do so. While the moon was up, this was comparatively easy. He accordingly slept *inside of the carriage* until three or four a.m. He then again reluctantly took the reins, because I was unwilling, owing to the darkness, to drive further. His whole deportment during the night showed a disregard for everything save his own comfort.

"Early in the forenoon, however, appeared on the part of the drivers of nearly one-half the train, a total want of discipline, and a forgetfulness of the object and character of our mission, that seemed to me atrocious. Suddenly I perceived that one-half of the train was stopping, and all the drivers, leaving their carriages, rushed into an adjacent field, and there spent some minutes in stoning and shaking the trees in an apple and peach orchard; and all this in the presence of part of the family of a Virginia planter! These individuals made no resistance. They apparently thought it would be of no use, for over all this road had the two armies swept again and again. In vain I pleaded that we were breaking the sacredness of the flag of truce—that we richly deserved death for plundering private property. In vain I urged the inhumanity of leaving our suffering, starving soldiers, in order to fill their own greedy stomachs. I appealed to one of the three leaders who rode on horseback, and pretended to be the leader of the train. He only smiled a smile of ineffable contempt, and munched his stolen apple with perfect *nonchalance*. Meanwhile the flag of true was lost far off in the distance, and our party was obliged to drive for some time with great rapidity in order to overtake it. Just as my carriage started, a heavy stone struck it not very far from my head. I had evidently been hurled, and *justly hurled*, at us for our infamous conduct. I remarked that hereafter I should know why our ambulances were fired upon by the enemy. The only answer I obtained was an oath.

"About mid-day we arrived, and found our men in a most piteous condition, lying everywhere, inside and outside of every building connected with a small farm house. The negro quarters was a palace, the manure heap was a soft bed. The fairest place was under a wide-spreading tree. I found the drivers did not feel it to be their duty to help the sufferers, but skulked or swore or laughed, as it pleased each. On the following morning, it is true, I did persuade my own driver to bring me water, as I was dressing the wounds of the soldiers, but it was difficult to get that, and he aided me because I asked him to do so, and not because he had any heart in the work.

"On Saturday p.m. we started for Washington—all the sick having been arranged in different ambulances under the charge of various surgeons. That night I shall never forget. I had taken one of those most severly wounded under my own special charge. The ball had passed into his chest, and caused intense difficulty of breathing. He was a German, and one of the most uncomplaining of sufferers—and his broken words of gratitude for the slightest token of kindness were most touching. None but a brute could have failed to be kind to him. He could lie only on one side, and consequently his head was placed directly behind my driver. During the first part of the way I did not think the driver paid the least attention to the road with reference to the comfort of the patient. In early night his tongue ran glibly on in loud indifferent talk, or the vilest profanity—thus preventing all sleep. As the night progressed, I was distressed to find that the whisky, with which he probably had supplied himself, was having its usual soporific effect, and he fell back upon the panting form of my patient. I lifted him up, and told him I could not allow such treatment of the sick man. The only response I got was a muttered oath of 'men complaining,' &c. But it was all in vain; again and again did he fall back, until at last I took the reins and drove most of the night with one hand, while with the other I supported this snoring drunkard!

"Of course, I reported all these facts in a letter to the Surgeon-General. He assured me that I could not tell him anything new—that he had months since foretold to the Secretary of War the horrors that would occur with such a set of wretches as usually were found in a body of ambulance drivers—that he had vainly endeavored to obtain *some system*, but there was none now. The whole of the ambulances are under the quartermaster's department. He (the Surgeon-General) had not the control of a single carriage. All his efforts had been in vain.

"I want now (continued Dr. Bowditch), through this society, to create a public sentiment that will compel the government to attend to this matter, and to have a real ambulance corps. Dr. Hammond (the Surgeon-General) is not wedded to any plan—but he has suggested the appointment of six ambulances to each regiment, and three men to each ambulance, viz: one driver and two assistants. The latter would take the wounded, in a careful, methodical manner, from the field. This would prevent, in some measure, the soldiers from leaving their ranks, and would likewise be more humane for the wounded. All the corps would be under strict military discipline. But I repeat, all that is desired is that some plan be adopted. Now all is chaos. I make no motion on this matter, but leave these facts before the society, hoping they will, in some way, tend to relieve our suffering soldiers."

Dr. J. Mason Warren moved that Dr. Bowditch be requested to reduce his remarks to writing, and that the facts be laid before the public in the journals of the day.

Dr. H. W. Williams moved that Dr. Bowditch be a committee to report some plan of address to the Secretary of War, to be sent by the physicians of Massachusetts, in furtherance of some plan for the establishment of a United States ambulance corps.

S. L. ABBOT, *Chairman of the Meeting.*
FRANCIS MINOT, *Secretary.**

* Originally published in our Transactions of the New York State Medical Society for the year 1863, page 348.

continued from page 368

Simple assistance in helping a mother restructure the home environment may be sufficient to improve the parent-child relationship."

Neglected child?

Sam, age 3 months, was doing well with treatment for meningitis in the hospital, but no member of his family had visited since his admission five days earlier. Complaints by angry staff members about uncaring parents prompted a home visit.

Sam's mother was at home with her two other children, one ill. Sam's father was at work. He held two full-time jobs. Another family shared the small apartment with Sam's family and it was badly overcrowded. Without a car and unable to afford a sitter, Sam's parents had been unable to visit the hospital.

As a result of the home visit, the illness of Sam's brother was treated, emergency housing was located, and child care and transportation were arranged for the family.

When there is concern over the emotional health of parents or their ability to nurture their children, a home visit provides a far more realistic look at family life, Dr. Berger says.

Home visits should not be considered a substitute for office services, but as an extension of care for children, he writes.

Factors other than efficiency and technology contribute to reluctance of physicians to visit parents' homes, he points out. Physicians fear communities where the social class, ethnic background, or crime rate differs greatly from his own surroundings. A woman physician is reluctant to visit a home where the father is potentially abusive. A male physician is concerned that a young single mother will misinterpret his visit as a personal call.

Writing in the September American Journal of Diseases of Children, Dr. Berger concludes that "By no means do all families in a pediatric practice require home visits." And the visit often can be delegated by the physician to a nurse practitioner or other assistant.

Obituaries

Frank Earl Adair, M.D., New York City and Bedford.
Died December 31, 1981; age 94.
Johns Hopkins University School of Medicine, 1915. Memberships: National Institutes of Health Advanced Cancer Council, New York Academy of Medicine, New York Surgical Society, New York County Medical Society, Medical Society of the State of New York, American Medical Association. Consultant, National Cancer Institute; Professor of Surgery, Cornell University Medical School; past president, American Cancer Society; Chairman, American College of Surgeons Cancer Committee; Diplomate American Board of Radiology and American Board of Surgery; Fellow American College of Surgeons; World War I: served in France as staff surgeon with New York Hospital Unit of the U.S. Army.

Moses Bacher, M.D., The Bronx.
Died April 20, 1980; age 82.
University and Bellevue Hospital Medical College, 1924. Memberships: Bronx County Medical Society, Medical Society of the State of New York, American Medical Association.

Arthur Bamberger, M.D., New York City.
Died August 10, 1981; age 88.
University of Berlin, 1922. Member: New York County Medical Society, Medical Society of the State of New York, American Medical Association.

Edward Stanley Betz, M.D., Glens Falls.
Died November 30, 1981; age 62.
Syracuse University College of Medicine, 1959. Member: American Academy of Family Physicians, New York Academy of Medicine, Medical Society of the County of Warren, Medical Society of the State of New York, American Medical Association.

Meyeron Coe, M.D., Ridge.
Died December 17, 1981; age 85.
University and Bellevue Hospital Medical College, 1920. Member: American Geriatrics Society, Medical Society of the County of Queens, Medical Society of the State of New York, American Medical Association.

Francis Paul Contino, M.D., New York City.
Died August 14, 1981; age 78.
Georgetown University School of Medicine, 1927. Member: American Academy of Family Physicians, New York Cardiological Society, Medical Society of the County of New York, Medical Society of the State of New York, American Medical Association.

Edward D. Dake, M.D., Rome.
Died December 11, 1981; age 76.
Hahnemann Medical College, 1931. Member: American Medical Association, Oneida County Medical Society, Medical Society of the State of New York.

Joseph A. Fahey, M.D., Lancaster.
Died November 29, 1981; age 77.
Georgetown University School of Medicine, 1932. Member: Medical Society of the County of Erie, Medical Society of the State of New York.

Peter Fries, M.D., New York City and Armonk.
Died October 11, 1981; age 38.
Louvain Medical School Belgium. Member: Medical Society of the County of New York, Medical Society of the State of New York, American Medical Association.

Edward Adams Hardy, M.D., Pelham.
Died December 23, 1981; age 72.
Cornell University, 1936. Member: Medical Society of the County of Westchester, Medical Society of the State of New York.

Maurice Jacobs, M.D., New York City.
Died: December 3, 1981; age 86.
University of Stefan Batorego, Poland, 1927. Member: Polish Medical Society, Medical Society of the County of New York, Medical Society of the State of New York.

Abraham Lieff, M.D., New York City.
Died December 9, 1981; age 82.
Queen's Medical School, Ontario, Canada, 1924. Member: Bronx County Medical Society, Medical Society of the State of New York; World War II: served with British Army.

Samuel Lee Kountz, M.D., Great Neck.
Died December 23, 1981; age 51.
University of Arkansas Medical School, 1958. Member: Kings County Medical Society, Medical Society of the State of New York; Fellow American Academy of Surgeons.

Francis James Queally, M.D., Yonkers.
Died November 9, 1981; age 66.
Medical School of Trinity College, Dublin University, 1940. Member: New York Celtic Medical Society, Association of Military Surgeons of the U.S., Medical Society of the County of Westchester, Medical Society of the State of New York. Past president of the County American Cancer Society chapter and the Livingston County Medical Society; World War II: Captain, U.S. Army Medical Corps.

Paul Baldwin Shuey, M.D., Long Island City.
Died July 4, 1981; age 84.
Harvard Medical School, 1921. Membership: Medical Society of the County of Queens, Medical Society of the State of New York.

Alfred C. Vrejan, M.D., Brooklyn.
Died November 11, 1981; age 58.
Cluj, Rumania, 1949.

James W. Walker, M.D., Syracuse.
Died November 11, 1981; age 64.
Georgetown University Medical School, 1943. Member: Medical Society of the District of Columbia, American Medical Association, District of Columbia Society of Pathologists, American Society of Clinical Pathologists, College of American Pathologists, Medical Society of County of Cayuga, Medical Society of the State of New York. Fellow College of American Pathologists; World War II veteran.

Byard Williams, M.D., The Bronx.
Died December 15, 1981; age 75.
Columbia University College of Physicians & Surgeons, 1930. Member: Medical Society of the County of New York, Medical Society of the State of New York; Fellow American College of Physicians.

Note: In the January, 1982 issue of the **Journal** the name of the fourth author of the article by Camiel, et al entitled "Left Cervical Aortic Arch" was misspelled. Her name should read Shelley N. Weiner, M.D.

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BULIMIA AND VOMITING SYNDROME

Alexander R. Lucas, M.D.
Section of Child and Adolescent Psychiatry, Mayo Clinic
Professor in Psychiatry
Mayo Medical School
Rochester, MN 55901

Numerous young women, and a lesser number of men, vomit to control their weight. Most do so only after eating excessive quantities of food and the behavior is usually secretive. This behavior is probably much more common than previously thought. Little data are available about the various behaviors which constitute the bulimia and vomiting syndrome. The condition involves episodes of excessive overeating followed by vomiting, purging or fasting. A variety of terms have been used to describe this condition, none of which are generally accepted.

Definitions

- **Anorexia nervosa** – This condition occurs ten times more frequently in females than males, usually at the time of puberty or later in adolescence.[1,2] A behavior involving the irrational fear of becoming fat results in severe weight loss from self-starvation.
- **"Bulimarexia"** – A recent term used to describe the practice of gorging, followed by fasting, vomiting or purging.[3]
- **Bulimia** – An abnormal and constant craving for food; insatiable hunger or appetite. A medical term used to identify the conditions in which an individual gorges with food.
- **Binge eating** – Episodes of consuming great quantities of food; a form of bulimia.
- **"Bulimia nervosa"** – A recently proposed term to describe the irresistible urge to overeat followed by self-induced vomiting or purging.[4]
- **Functional, psychogenic or nervous vomiting** – Terms used to describe vomiting without discernible physical cause, having an assumed psychologic cause.
- **Purging** – Evacuation of the bowels with laxatives or enemas.
- **Vomiting** – Disgorging the contents of the stomach through the mouth.

Although anorexia nervosa has been written about extensively, the term is a misnomer because it does not start with a true loss of appetite. Rather, the individual with the disease actively suppresses hunger sensations. Likewise, the term "bulimarexia" (from bulimia and anorexia) is inaccurate because the condition does not manifest lack of appetite, nor is it necessarily a form of anorexia nervosa. Rather, individuals with this condition swing from overeating to emptying themselves regardless of their state of hunger or satiety. The conditions referred to as functional, psychogenic or nervous vomiting have occasionally been reported.[5] A patient may describe this as "getting sick," with or without nausea. The reflux of injested food has been described as occurring almost automatically or self-induced by various means. It is often assumed that the vomiting is involuntary, but close inquiry frequently reveals the intentional nature of this activity.

The Social Context

Bulimia and vomiting have precedence in the banquets of ancient Rome. The participants, after lounging and gorging at the feast-laden tables, would tickle their throats with feathers, vomit, and return to continue overeating. In Roman times, the men engaged in this activity, while today mostly women are involved. Many clinicians speculate that "pigging out" followed by furtive vomiting has again become very widespread, this time on college campuses.

Although it is likely that both bulimia and vomiting have become common in our society, the incidence and prevalence figures are not known. Nearly half of the patients with anorexia nervosa develop bulimia and vomiting,[4,6] but whether the behaviors represent a sequel to or a distinct sub-group of anorexia nervosa is not known.[7,8] These behaviors clearly are not restricted to individuals with anorexia nervosa because most people who binge eat and vomit do not have anorexia nervosa. As society has placed greater emphasis on the desirability of thinness in women, it is likely that this emphasis has caused more and more individuals to vomit in order to control their weight.

The desire to become thin, more attractive, and more physically perfect can be overwhelming until vomiting becomes a daily activity and an all-consuming preference. Associated with this behavior may be the notion that if the perfect figure is attained, everything in life will be well. Some women who were highly valued as children because they excelled in so many areas found competition increasingly difficult as they reached high school and college. The expectation for women to excel in multiple areas including home and marriage, a career, and as a social and sexual being undoubtedly contributes to this condition. In certain pursuits such as dancing and gymnastics, vomiting to keep thin has become almost an occupational hazard. The extent to which men are affected is not known but some wrestlers who are required to perform at a prescribed weight resort to vomiting.

Is Bulimia a Disease?

Bulimia and vomiting both are symptoms which occur in a great variety of conditions. They are not diseases. Both are behaviors which occur within a spectrum of severity and frequency. The point at which overeating becomes bulimia or when vomiting becomes abnormal is somewhat arbitrary. These symptoms may occur separately or in combination. Some overeat only, some only vomit, and some do both. Others purge as well, through the use of laxatives, enemas or diuretics. When these activities produce physiologic symptoms and cause incapacity, the behavior should certainly be considered abnormal and pathologic.

Causes

There are, of course, many organic causes for vomiting such as common as well as serious illnesses.

Bulimia can also have an organic cause, such as in certain hypothalamic diseases associated with excess appetite or lack of satiety inhibition. The behaviors discussed here occur by conscious choice, particularly in regard to vomiting and purging. During episodes of extreme overeating, patients often say they feel they are driven by an irresistible force. Numerous theories have been advanced as to why certain people are prone to eating disorders. These include biologic determinants, individual psychologic and family influences and social causes.[1,2,3,9] Analogy to addiction has sometimes been made in the sense that if the patient succumbs to the first bite she or he feels powerless to stop. The dilemma posed by an addiction to a substance necessary for life is apparent.

Implications for Nutrition and Health

Frequent episodes of overeating obviously will lead to overweight and eventual obesity. By fasting, vomiting and purging, weight control may result, but weight loss and protein-calorie malnutrition may supervene. Even if the weight remains within a reasonable range, vomiting, laxative use, and the use of enemas can lead to ominous medical complications, such as dehydration and electrolyte disturbances. Hypokalemia (low level of serum potassium) is the most serious of the complications and can lead to cardiovascular and kidney failure. Extensive dental enamel erosion is a result of chronic vomiting. As a rule, specific vitamin and mineral deficiencies do not develop but are possible depending on the nature of the diet and the extent of vomiting and purging. Patients with bulimia frequently have salivary gland enlargement. The mechanism underlying this change and its significance is not clear. It is well known that women with anorexia nervosa have cessation of their menses sometimes before, and always after, a critical amount of weight loss. Menstrual disturbances may also occur in women with the bulimia and vomiting syndrome, particularly if there have been radical dietary changes. Other endocrine and metabolic changes are possible due to dietary aberrations, but these have not been extensively studied as in anorexia nervosa.

Approaches to Treatment

Unlike anorexia nervosa and obesity, there is no simple, foolproof treatment for bulimia and vomiting. This area is further complicated by useless treatment methods and lack of trained personnel. Initially, competent medical evaluation is of importance to assess the problem, evaluate the nutritional state of the patient, and to determine the presence of any complications. Following this, successful treatment depends on the patient to acknowledge that something is wrong, to have the motivation to overcome the abnormal behavior, and exert control and willpower over the situation.

The physician and nutritionist should be aware of some general approaches to treatment. This includes allowing the patient to relate the entire story in a nonjudgmental atmosphere, followed by a frank and factual discussion of nutritional and health consequences. Personal or interpersonal conflict including anxiety, depression or social conflicts should be explored through discussion followed by appropriate psychiatric or psychologic therapy.

Treatment methods that are more specific include:

Dietary instructions – Many patients benefit from diet education as to the appropriate quantities of food necessary for weight maintenance. They have found that adherance to a set of dietary guidelines gives them a feeling of control and assurance of adequate nutrition without weight gain. Encouraging regularity in dietary habits assures weight stability and probably minimizes the liklihood of eating binges or long periods of fasting which probably also contribute to bulimia. Dietary guidelines help many patients structure and regulate their daily schedule. Careful time management seems to help avoid extremes in overactivity and boredom, which may contribute to the eating problem.

Environmental structure – When the problem is out of control, a hospital setting may be necessary. When meals are served to the patient in an established routine and snacking is avoided, many have stopped their eating binges and vomiting. This type of environmental structure has proven helpful in curtailing this problem. However, maintaining the improvement once the patient leaves the hospital and is again responsible for his own time management is more difficult.

Psychiatric treatment – When there are major disturbances in personal functioning, symptoms of severe anxiety and/or depression, psychiatric treatment is then indicated and directed toward the particular symptoms or disorder. Although there are some reports of successful psychiatric treatment for these eating disorders, in general the search for and resolution of underlying emotional or unconscious conflicts has not been effective. One theory holds that binge eating and vomiting represent inappropriate expression of anger reflecting interpersonal conflicts.[9]

Pharmacologic treatment – No drug has proven efficacy in the treatment of bulimia or self-induced vomiting. Phenytoin is reported to be effective in some individuals with bulimia.[9]

Group therapy – Group techniques have been advocated for individuals with eating disorders. One approach to the bulimia and vomiting syndrome is from the feminist perspective, conceptualizing it as a problem of female socialization.[3] Methods to improve personal effectiveness and assertiveness are emphasized. Self-help groups have evolved in parts of the nation patterned somewhat along the lines of Alcoholics Anonymous.*

Other techniques – Behavior modification techniques are frequently advocated for eating disorders. These methods have appeal because of their simplicity and apparent scientific basis. However, they can be inappropriately coercive and counter-therapeutic when someone else's will is imposed upon the patient. Methods involving relaxation and biofeedback seem promising especially because they require the patient's active involvement.

Summary

The bulimia and vomiting syndrome has become a widespread phenomenon and poses a major public health problem for women in their late teens, 20's and early 30's. An effective specific treatment for the condition is not yet available, but acknowledgement of the problem and the determination to overcome it are necessary prerequisites for recovery.

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*Information about resources and support groups can be obtained from National Anorexic Aid Society, Inc., P.O. Box 29461, Columbus, OH 43229 and American Anorexia Nervosa Association, Inc., 133 Cedar Lane, Teaneck, NJ 07666.

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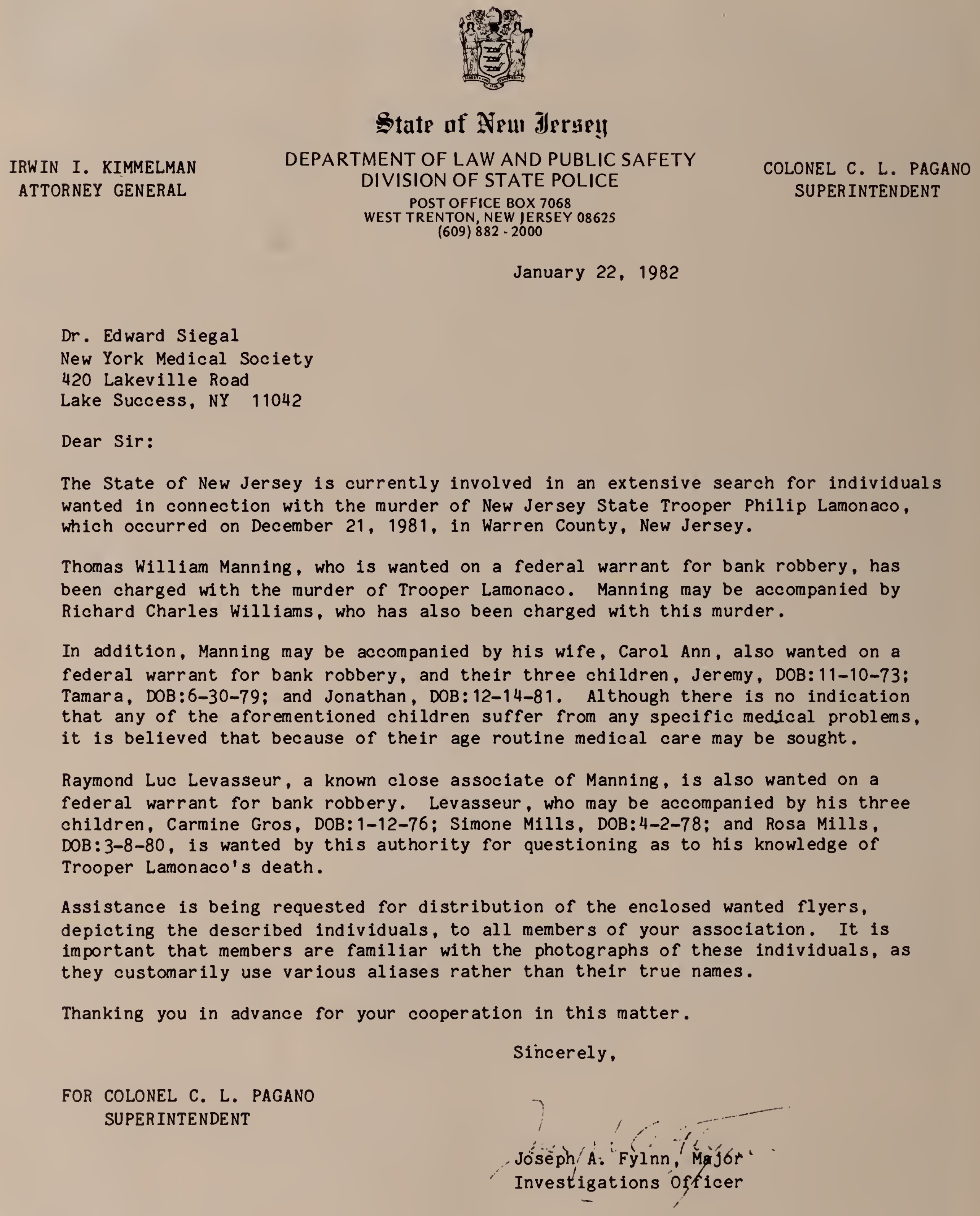


State of New Jersey

DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF STATE POLICE
POST OFFICE BOX 7068
WEST TRENTON, NEW JERSEY 08625
(609) 882 - 2000

IRWIN I. KIMMELMAN
ATTORNEY GENERAL

COLONEL C. L. PAGANO
SUPERINTENDENT

January 22, 1982

Dr. Edward Siegal
New York Medical Society
420 Lakeville Road
Lake Success, NY 11042

Dear Sir:

The State of New Jersey is currently involved in an extensive search for individuals wanted in connection with the murder of New Jersey State Trooper Philip Lamonaco, which occurred on December 21, 1981, in Warren County, New Jersey.

Thomas William Manning, who is wanted on a federal warrant for bank robbery, has been charged with the murder of Trooper Lamonaco. Manning may be accompanied by Richard Charles Williams, who has also been charged with this murder.

In addition, Manning may be accompanied by his wife, Carol Ann, also wanted on a federal warrant for bank robbery, and their three children, Jeremy, DOB:11-10-73; Tamara, DOB:6-30-79; and Jonathan, DOB:12-14-81. Although there is no indication that any of the aforementioned children suffer from any specific medical problems, it is believed that because of their age routine medical care may be sought.

Raymond Luc Levasseur, a known close associate of Manning, is also wanted on a federal warrant for bank robbery. Levasseur, who may be accompanied by his three children, Carmine Gros, DOB:1-12-76; Simone Mills, DOB:4-2-78; and Rosa Mills, DOB:3-8-80, is wanted by this authority for questioning as to his knowledge of Trooper Lamonaco's death.

Assistance is being requested for distribution of the enclosed wanted flyers, depicting the described individuals, to all members of your association. It is important that members are familiar with the photographs of these individuals, as they customarily use various aliases rather than their true names.

Thanking you in advance for your cooperation in this matter.

Sincerely,

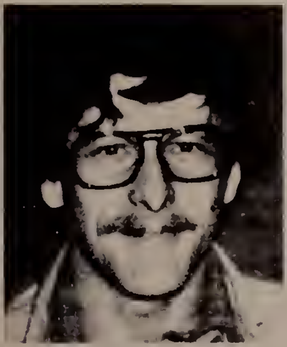
FOR COLONEL C. L. PAGANO
SUPERINTENDENT

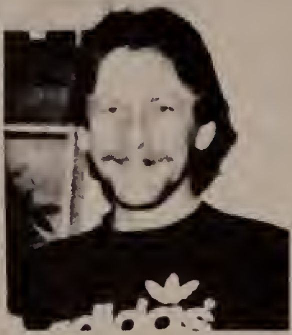
Joseph A. Fylnn, Major
Investigations Officer

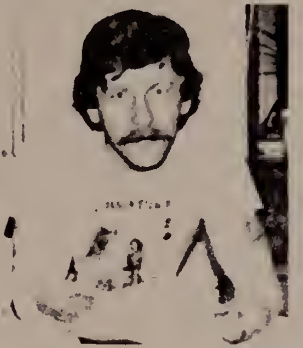
$25,000 REWARD

For Information Leading To The Arrest and Conviction of the Perpetrators of the

MURDER OF A N.J. STATE TROOPER







THOMAS WILLIAM MANNING

AKA

Barry A. Eastbury; Tom Manning; Barry Collins; Michael Harris; Thomas J.Stockwell; Anthony Eastbury; Barry G. Easterly.

White Male

Age	35 years
Date of Birth	6 / 28 / 46
Place of Birth	Boston, Mass.
Height	5′ 10″
Weight	150 pounds
Hair	Brown
Eyes	Hazel
Complexion	Fair
S.S. No.	023 - 34 -5658
S.B.I. No.	701277A
F.B.I. No.	264019G

F.P.C. 120905130812TT121212

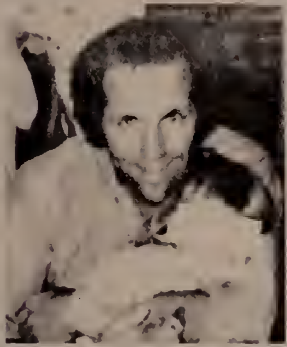
H.F.C. $\frac{12\ \ M1\ \ U\ \ III\ \ 8}{M1\ \ T\ \ OI}$ Ref $\frac{U}{U}$

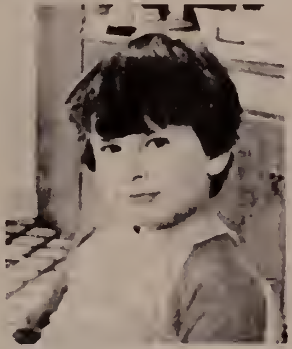
MARKS AND SCARS · Scar: on nose, pierced left ear; TATTOOS: Heart with a cross on upper right arm; Shield with 'TOM' and banner on lower right arm; Spade on back of left hand; Rose with 'DONNA' on upper left arm; Panthers head on left forearm.

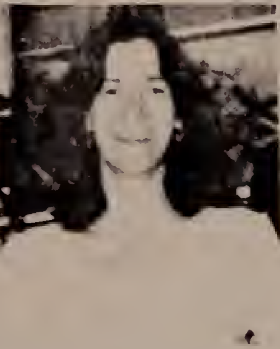
Thomas William Manning has been charged with the murder of a NJ State Trooper which occured December 21, 1981 on Interstate Route 80 in Warren County, New Jersey. May be accompanied by wife Carol Ann · WF, DOB 01/03/56 · 5′6″ · 125 lbs. and children, Jeremy, WM, DOB 11-10-73; Tamara, WF, DOB 06-30-79; and Jonathan, WM DOB 12-14-81

WANTED FOR QUESTIONING IN CONNECTION WITH THE ABOVE MURDER

In addition, the subjects described below are being sought for questioning in connection with the murder. Levasseur is a known associate of Manning, they may be together. Levasseur may be accompanied by his daughters, Carmine Jeannette Levaseur Gros, WF, DOB 01-12-76; Simone Mills, WF, DOB 4/2/78; and Rosa Mills, WF, DOB 3/8/80







RAYMOND LUC LEVASSEUR

AKA

Robert Raymond; Walter Rogers; Joseph Michael Mocchi; John Joseph Boulette, John Mills, Jack Mills

White Male

Age	35 years
Date of Birth	10/10/46
Place of Birth	Portland, Maine

F.P.C. 17AA11C01309AA10P009

(Child, Jeremy, as listed above)

Height	6′ 0″
Weight	200 pounds
Hair	Brown
Eyes	Green
Complexion	Ruddy
S.S. No.	006-44-3289
F.B.I. No.	791943G

H.F.C. $\frac{17\ \ L\ \ 9\ \ A\ \ OO\ \ 13}{S\ \ 2\ \ A\ \ 10}$ Ref $\frac{1}{2}$

CAROL ANN MANNING

AKA

CarolAnn Saucier; Dianne Collins; CarolAnn Harris; Mrs. Thomas William Manning; Dianne Annese; Mrs. Michael Harris;

White Female

Date of Birth	01/03/56
Place of Birth	Sanford, Maine
Height	5′ 6″
Weight	125 pounds
Hair	Brown

MARKS AND SCARS · Scars: on right elbow, outside right eye, right ankle, bottom of left earlobe missing; TATTOOS: Dragon on upper right arm, Panthers head with 'LIBERATION' on left arm.

NOTIFY

N.J. State Police, Major Crime Unit
(609) 882-2000 Ext 429

N.J. State Police, Fugitive Unit
(609) 882-2000 (800) 792-8824

N.J. State Police, Blairstown
(201) 362-6128 – 362-9973

USE EXTREME CAUTION – SUBJECTS WILL RESIST ARREST

REMARKS: All three subjects are also wanted on a Federal Warrant for bank robbery. They are alleged members of a terroristic group who have claimed responsibility for several acts of violence. They are known to use automatic weapons and fictitious identifications.

New Jersey State Police
Printing Unit

Bulletin No. 82-3
Dated January 19, 1982 (30,000)

Month in Washington

The Medicaid program would be federalized and responsibility for some $47 billion worth of now federal programs would be shifted to the states in a dramatic proposal for governmental realignment called for by President Reagan in his State of the Union address.

The President said that starting in fiscal 1984 (a year from next October), the federal government "will assume full responsibility for the cost of the rapidly growing Medicaid program to go along with its existing responsibilities for Medicare."

At the same time the President advanced a "bold, innovative program" of returning some $47 billion of federal programs to states and localities over a 10-year period.

"As part of a financially equal swap, the states will simultaneously take full responsibility for such programs as Aid to Families with Dependent Children (AFDC) and food stamps. This will make welfare less costly and more responsive to genuine need because it will be designed and administered closer to the grass roots and the people it serves."

Complete details of the program shifts won't be known for a while. But it is known that the following health related programs will be turned over to state jurisdication:

Child Nutrition
Child Welfare
Child Abuse
Social Services Block Grant
Prevention Block Grant
Alcohol, Drug Abuse & Mental Health Block Grant
Primary Care Block Grant
Maternal & Child Health Block Grant
Primary Care Research & Development
Black Lung Clinics
Migrant Health Clinics
Family Planning
Women, Infants & Children (WIC)

Other programs that apparently would revert to the states include school lunch program, vocational rehabilitation, energy aid for the poor, water and sewer grants, aid for highways outside the interstate system, block grants for social services and community services, and others.

"In a single stroke, we will be accomplishing a realignment that will end cumbersome administration and spiraling costs at the federal level while we ensure these programs will be more responsive to both the people they are meant to help and the people who pay for them," President Reagan told Congress.

Under the swap, the federal government will apply the revenue from certain excise taxes to a grass-roots trust fund for the states. Some $28 billion a year will flow into the fund. By 1988 the states would be in complete control of more than 40 federal grant programs. The trust fund would start to phase out and the excise taxes would be turned over to the states.

The states would be given wide leeway on how to use their share of the trust fund. They could use it to pay for federal grants in areas such as transportation, education and social services, or for other purposes.

Both Medicaid and Medicare were marked for economies by the President who pointed to these programs in declaring that he will propose savings of $63 billion over four years in entitlement programs.

No specific dollar savings were mentioned for the two health programs, but the Administration has been considering slashes totaling $5 billion a year.

Medicare and Medicaid are programs "with worthy goals," said President Reagan, but "their costs have increased from $11.2 billion to almost $60 billion more than five times as much, in just over 10 years."

Said the President:

"Waste and fraud are serious problems. Back in 1980, federal investigators testified before one of your committees that 'corruption has permeated virtually every area of the Medicare and Medicaid health care industry.' "

"One official said many of the people who are cheating the system were 'very confident that nothing was going to happen to them.'

"Well, something is going to happen. Not only the taxpayers are defrauded. The people with real dependency on these programs are deprived of what they need because available resources are going not to the needy but to the greedy. The time has come to control the uncontrollable."

Among the cuts the Administration is expected to recommend for Medicare and Medicaid are a flat two percent reduction in the Medicare reimbursement rate for hospitals; a limitation of five percent in the rise for the physicians' fee screen; a reduction to 80 percent of Part A, the usual and customary reimbursement for hospital-based physicians; limitation of physician reimbursement for services in hospital outpatient departments; elimination of the subsidy for private hospital rooms; indexing of the Medicare Part B physicians services deductible to the Consumer Price Index, and mandatory enlistment of the federal work force in the Medicare program.

Explaining the need for transferring programs to the states, the President cited "the overpowering growth of federal grants-in-aid programs during the past few decades."

In 1960, he said, there were 132 categorical grant programs costing $7 billion. Today there are about 500 programs costing almost $100 billion.

"Neither the President nor the Congress can properly oversee this jungle of grants-in-aid; indeed, the growth of these grants has led to a distortion in the vital functions of government . . ."

One intergovernmental commission, President Reagan noted, has said that the growth of grants-in-aid has made

Continued on page 404

Prepared by the Washington, D.C. office of the American Medical Association.

DECISIONS MADE IN THIS BUILDING WILL AFFECT YOUR FUTURE!

WHY PHYSICIAN INVOLVEMENT IN STATE AND LOCAL ELECTIONS IS VITALLY IMPORTANT . . .

HEALTH RELATED LEGISLATION

Of the nearly 9100 Bills introduced in the General Assembly in 1981, approximately 800 of these, or 9%, were related to Health Care in New York State.

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Our elected officials have long had powers which affect the practice of medicine in New York State, such as appointment of Agency Heads and State Boards. Guidelines for the application and acceptance of Federal Grants are set by the Governor—affecting medical care, health facilities, research, etc.

In July of 1981, Governor Hugh Carey signed into law the "Collateral Sources" Bill, a major piece of Medical Malpractice Reform Legislation. This increased receptivity on the part of the legislature and the Governor, to the genuine needs of the Medical Profession, is attributable in a large degree to the increased involvement of physicians in the entire legislative process.

We have helped create a new climate in Albany and Washington, a climate in which over-regulation can be curtailed!

Our opportunities are great. But EMPAC (Empire Medical Political Action Committee) and NYMPAC (New York Medical Political Action Committee) cannot support this larger agenda with the dedicated minority of support we now have in the New York State Medical Community. Only 1 out of 10 MSSNY members belong to EMPAC and NYMPAC.

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the federal government "more pervasive, more intrusive, more unmanageable, more ineffective, more costly, and above all more unaccountable."

The fate of the President's proposals in Congress is uncertain. Democrats were indicating they may put up stiff resistance. The November elections are only months away, and the controversial, sweeping nature of the proposals will set off a prolonged debate that might spill over into the next session of Congress.

* * * * * *

The American Medical Association joined health providers and insurers, organized labor, and business in formally endorsing the concept of voluntary local coalitions to tackle the problems of health care costs, quality and access.

The unprecedented gathering of major national organizations representing all aspects of health care to agree on common goals was announced at a news conference here attended by principal officers of the organizations.

The withdrawal of federal funding in health and the new emphasis on private solutions was cited by Harvard U. Professor John Dunlop, coordinator of the national coalition effort, as major factors in the encouragement of coalitions.

The six organizations "seek to encourage and to assist the efforts in a growing number of local communities in which local affiliates of the national organizations have voluntarily joined together to put into effect common programs for utilization review, facility and technology review and planning, and other activities most appropriate to the particular locality to restrain cost increases while recognizing an appropriate concern over quality and access to health care," Dunlop told reporters.

In addition to the AMA, organizations involved are the American Hospital Association (AHA), the AFL-CIO, Blue Cross and Blue Shield Associations, the Health Insurance Association of America (HIAA) and the Business Roundtable.

Noting that the AMA has been responsible for developing 25 of the present 70 coalitions, AMA Executive Vice President James Sammons, M.D., told the news conference the primary focus of coalitions is to determine what the problems of the local area are and to come up with programs for dealing with them. He described the coalition movement as "a totally different" activity than the Voluntary Effort (VE) which is a national program to restrain cost rises.

Dr. Sammons said the AMA opposes federal health planning but believes that voluntary planning at the local level "is necessary and desirable."

The AMA long has recommended experimentation with health insurance benefit packages through such steps as removing mandatory hospitalization for patients to receive benefits and requirements for care in specific types of institutions, Dr. Sammons said. "All of us must look at changes in benefit packages that can be productive."

* * * * * *

The AMA has argued before the Supreme Court that when professionals advance their ethical standards for the benefit of patients the government should encourage the effort, not hinder it.

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The Justices were urged in a hard-hitting, one-hour oral argument to reject the FTC (Federal Trade Commission's) actions against the AMA's ethical restrictions against misleading advertising.

The FTC should have given the AMA a medal instead of a long and tedious trial, said AMA counsel Newton Minnow. He noted that the AMA was the first professional organization to rewrite its ethical codes following the Supreme Court's historic 1975 decision rejecting a state bar association's fee standard.

The new AMA code limited the restrictions against physician advertising to make unethical only advertising that is false, misleading or deceptive.

But the FTC didn't pay attention, said Minnow. The agency is obsessed with the past, unconcerned with the present and blind to the future, the lawyer said.

Dismissing the FTC conspiracy charge as "nonsense," the AMA attorney said the agency is determined to "press for its pound of flesh" despite the AMA's compliance. The AMA's warnings to the FTC of the impact of improper advertising on patients went unheeded, he said.

It was wrong of the FTC not to even look at the AMA's current standards, he said. The protection of the public is at stake, Minnow said. "If a doctor advertises that he cured his last 25 patients, we think that is false and misleading. We are dealing with health, life and safety." Why should the government try to stop guidelines intended to protect and benefit the public, asked the Chicago lawyer?

* * * * * *

The AMA has been awarded a $300,000 physician placement contract to help the NHSC (National Health Service Corps) place PPO (Private Practice Option) physicians in communities suited to them.

NHSC scholarship physicians who elect to take the PPO are released from their government service obligations if they establish a private practice in HMSAs (Health Manpower Shortage Areas).

The AMA will help PPO physicians settle in communities where their practices will have a good chance of success. The AMA will identify and develop potential sites by matching a list of physician vacancies to a list of HMSAs and by working with local and state medical and professional organizations. They will screen the list to insure that the communities are receptive to NHSC placements.

The AMA presently works with the NHSC on temporary physician placement through a contract program, Project USA. Under this program, the AMA identifies physicians interested in a 1-week or 2-week practice in a shortage area and arranges for them to serve at NHSC or Indian Health Service (IHS) sites. The AMA provides physicians to cover the practice while Federal physicians are on vacation or continuing their medical education.

* * * * * *

The Administration will ask Congress to give the government power to crack down on health professionals who have defaulted on student loans.

The announcement by HHS (Health and Human Services) Secretary Richard Schweiker followed a hearing by the Senate Governmental Affairs Subcommittee where the staff charged that 50,000 health professionals, including more than 5,000 physicians, are seriously delinquent.

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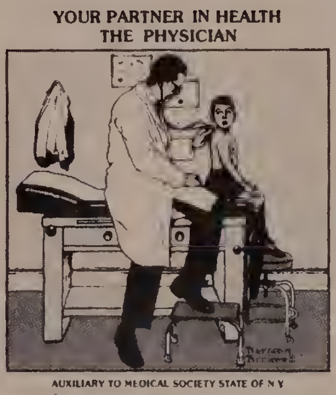

The stamp has been created by the Auxiliary to MSSNY as one way of promoting a positive image of physicians. The 4-color stamp, shown here in full size, was made from a Norman Rockwell drawing. Physicians are urged to use it in their correspondence. Stamps are .03¢ each. Check is payable to Auxiliary to MSSNY. Mail to: Mrs. Ezra A. Wolff, 70 East Gate, Manhasset, N.Y. 11030.

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Schweiker said as many as 30 percent of borrowers might be delinquent in repaying some $20 million of the Health Professions Student Loans and Nursing Student Loans.

"Some new students may be unable to get loans to attend medical or nursing school because some former loan recipients have not repaid their indebtedness. "We owe it to future health profession students to stop the widespread delinquency in loan payments," he said.

In addition to the legislation being prepared, the HHS Secretary outlined three other steps: Establishment of a watchdog program by the HHS Inspector General and Assistant Secretary for Health; (2) exploration by the HHS counsel on better ways of catching delinquents; and (3) performance standards for schools to be used in processing future loan applications.

Under the loan program, a $70 million revolving pool, the department makes the money available to schools which lend it to qualified students. The schools are responsible for repayment from the students.

* * *

An Institute of Medicine Committee has recommended that the public be given unrestricted access to statistical information gathered by PSROs (Professional Standards Review Organizations) on the federal health-care services provided by individual hospitals and other institutions.

The committee suggested that information on care provided by individual physicians and other health-care practitioners be provided in coded form only. Such statistical information would include the number and duration of hospital stays for patients receiving federal-health care benefits, diagnosis before and after treatment, aggregate demographic data, mortality rates, and so forth.

The committee stressed that any public release of medical statistics should guarantee the privacy of individual patients.

The Institute report was given to the House Subcommittee on Government Information and Individual Rights and the House Subcommittee on Health and the Environment.

Current federal regulations require PSROs to provide the public upon request with information only on individual institutions and only if the names of physicians cannot be determined either "directly or indirectly." Federal regulations prohibit public release of statistics on care provided by individual physicians.

The Institute committee's conclusions were limited to disclosure policies for PSRO data on federal patients. However, the importance of "enhancing consumer choices and the public accountability of medical institutions," said the committee, is "powerful enough to warrant more general application of its recommendations," to other medical review data collected by government agencies or private organizations.

Recent court decisions have held that PSROs are not agencies of the federal government and thus subject to federal pubic disclosure requirements.

* * *

The AEI (American Enterprise Institute) is conducting a one-year project to determine how the private sector can take a bigger role in solving fundamental societal problems

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and providing needed human services.

President Reagan has asked for a detailed report on the findings of AEI's study and for policy options by June 1982.

The AEI said it will look at a number of specific areas of need including health care, child welfare, youth employment, housing, crime prevention, and economic development.

AEI President William Baroody said private sector initiatives do not have to mean that the private sector replaces dollar for dollar the money cut from the federal government.

"That would neither be feasible, nor, in my judgment, desirable," said Baroody. "There is a whole range of contributions that government still needs to make and that the private sector through business, neighborhood groups, labor unions, church groups, and voluntary associations are making and can make that do not have to entail large sums of money."

* * *   * * *

George Washington U. Medical School in Washington, D.C. will raise tuition next Fall to $19,000 a year, believed to be one of the highest in the country. At present, the G.W. tuition is $950 under the $15,950 charged by Georgetown U. Medical School only a short distance away. A Georgetown spokesman said his school expected to lift its tuition to about the same range as George Washington's. Among the reasons cited for the raise was the phasing out of federal support and the lack of any state support for the two private medical schools.

Are the results of
$100 million worth of
government-funded research
on hypertension
worth reading about?

Marijuana is termed a dangerous drug

Marijuana is now the third most frequently used drug in the United States, after alcohol and cigarettes.

Two thirds of young adults say they use marijuana.

So what? Marijuana doesn't really hurt you, does it?

Wrong. Marijuana can hurt you. There is now no doubt at all that marijuana is a dangerous drug, with great potential for serious harm to young American users.

Studies point to a growing body of evidence from both animal and human experiments and from the observations of physicians coping with its effects on behavior, performance, and functioning of various organ systems that marijuana is by no means the harmless amusement that many believe it to be.

Despite the increase in use of marijuana in the United States, a majority of pesons in all age groups continue to disapprove of regular use and to advocate its continued prohibition, says the American Medical Association's DRUG ABUSE, the handbook for physicians on the problem.

Street marijuana has increased markedly in potency over the past five years, the AMA points out. Prior to 1975 it rarely exceeded one percent of THC (tetrahydrocannabinol), the active ingredient. In 1979, concentrations of 5 percent were not uncommon. Hash oil, a marijuana extract that was unavailable less than 10 years ago, has a THC content of 15 percent to 20 percent. Street grades of hashish have THC concentrations of around 10 percent.

Also, the AMA says, the practice of combining marijuana and alcohol use is becoming more common, and poses a hazard of more widespread and severe reactions to the combined effects of the drugs.

Cannabis (marijuana) is obtained from the flowering tops, leaves, and stems of the hemp plant, found throughout most of the tropic and temperate zones of the world.

Marijuana and hashish are the principal drug-type products of the hemp plant.

Marijuana is composed of the cut and dried stems, leaves, and tops of the hemp plant. It usually is rolled in paper and smoked like a tobacco cigarette.

Most marijuana grown in the United States is considered inferior because it contains a low concentration of THC. Jamaican, Colombian, and Mexican varieties contain much more. Most potent varieties come from Thai, Nepalese, and Indian stock.

Hashish is a concentrated preparation of the secretions of the hemp plant, which are collected, dried, and compressed into balls, cakes, or cookie-like sheets. It is stronger than marijuana.

Marijuana use often begins at a much earlier age than it did in 1970, and is more likely to be frequent rather than occasional experimetnal use. Most older adolescents and young adults have had some experience with marijuana, the AMA book reports.

Recent research shows that cannabinoids contain psychoactive substances of high potency and rapid onset. Marijuana affects the brain, circulatory system, heart, lungs, and nervous system.

Target organ for marijuana is the brain. Structural changes occur in the brain with marijuana use, as well as changes in the patterns of brain waves. Acute marijuana intoxication impairs learning, memory, thinking, comprehension, and general intellectual performance. Even at moderate levels of social use, driving skills are impaired.

Marijuana smoke contains larger amounts of cancer-causing hydrocarbons than tobacco smoke. With daily use, lung damage can appear in three months. Bronchitis and emphysema are common in regular users.

The most marked effect on the heart and circulatory system is an increase in heart rate. Heart action of up to 140 beats per minute is not uncommon under marijuana influence.

Chronic use of marijuana may be associated with disruption of the menstrual cycle and at least temporary infertility. Miscarriage is more common among users. Among lab animals, sperm abnormalities have been noted, along with damage to the male reproductive organs.

Many physicians experienced in treating drug abusers believe that regular marijuana may seriously interfere with psychological functioning, personality development, and emotional growth and learning, especially in childhood and adolescence. The psychological damage may be permanent. Large doses of THC can induce hallucinations, delusions, and paranoid feelings. Thinking becomes confused and disoriented. The initial euphoria may give way to anxiety reaching panic proportions.

Even moderate use is associated with school drop-outs, psychoses, panic states, and adolescent behavior disorders.

Why use marijuana?

Users report a feeling of euphoria and well being, feelings of relaxation and heightened sexual arousal, vivid visual imagery, and a keen sense of hearing. Senses of taste, touch, and smell may be enhanced. Time seems to pass more slowly.

These effects usually are not achieved with the first try. With continued use, the user learns to get high.

Several genuine therapeutic uses have been suggested for THC. These include treatment of asthma, glaucoma, and nausea arising from drug treatment of cancer patients. For the latter use it has been proved helpful. In glaucoma, THC has been of some help, largely when used in combination with other drugs. Medical use of marijuana in

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Material for inclusion in the medical news section must be received eight weeks prior to publication date.

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clinical research is now authorized in more than 20 states.

The American Medical Association is clearly on record as opposing legalization of marijuana for recreational use.

"Legislators should keep in mind the primary need to give young people a clear message that marijuana use may be hazardous and is not sanctioned or endorsed by society. Fines, although more appropriate penalties than prison sentence when applied to possession for personal use, should be large enough to constitute a deterrent to use," the AMA has declared.

Medical Education in the U.S.

The number of students enrolled in the U.S. medical schools during the 1980–81 academic year increased slightly over the previous year, according to this week's Journal of the American Medical Association, which is devoted to medical education.

There were 65,497 medical students in schools across the U.S., up from 64,195 in the 1979–80 academic year. The total enrollment included 79 students from Canada and 946 students from other countries.

The number of applicants for the 1980–81 academic year was 36,100, a slight decrease from the number applying in the preceding year, and a 15.3 percent decrease from the peak year 1974–75. This was the sixth consecutive year of decline in medical school applications. The number of applicants accepted was 17,146.

The number of women entering medical school continues to increase. For the 1980–81 academic year, there were 4,970 women in the entering class, an increase of four percent over the preceding year. More than 46 percent of women who applied to medical school were admitted. Approximately 29 percent of the students entering medical school in the 1980 to 1981 academic year were women, a figure that is three times the percentage of women entering medical school in 1969, when enrollment of women in medicine began to increase. The total nubmer of women in medical school during the 1980 to 1981 academic year was 17,373, making up 26.5 percent of the entire enrollment. Of the 15,667 MD graduates in 1981, 3,892 or 24.8 percent were women.

The total number of minority students enrolled in medical schools in 1980–81 was 8,569. Since 1978, Puerto Rican students enrolled in accredited schools both in the Commonwealth and on the mainland have been included in the minority count. There were 2,290 minority students enrolled in the entering class for the 1980–81 academic year. Howard University College of Medicine in Washington, D.C.; Meharry Medical College in Nashville, Tenn.; and Morehouse School of Medicine in Atlanta, Ga. (which has a provisionally accredited two year program that is to be converted into a four-year program in 1983) admitted 24.4 percent of the 932 first year black students enrolled in the 1980–81 academic year.

As of October, 1981, there were 124 schools in the U.S. conducting accredited or provisionally accredited programs to award the MD degree.

The number of full-time faculty teaching in U.S. medical schools during the 1980–81 academic year was 50,536, up from 48,892 the previous year. For the past four years, the medical student to full-time faculty ratio has been approximately 1.3 to 1. Many faculty members simultaneously provide patient care along with teaching, and they also participate in the instruction of other health profession students, conduct research, and perform administrative duties.

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In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, **which regimen was proven most effective?**[1]

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Figures on enrollment by sex and figures on tuition for individual medical schools state-by-state, and statistics on residents-in-training by specialty are included in the Dec. 25 issue of The Journal of the American Medical Association. These figures are available through this office for those of you who do not receive JAMA.)

Successful human genetic engineering foreseen in the coming years

Bacteria are being genetically programmed to produce insulin and human growth hormone among other medically useful substances. Individual cells, kept alive under laboratory conditions, have had their genetic defects corrected by the insertion of normal genes. A gene from a rabbit successfully made a home for itself in a mouse embryo — and the mouse that developed reportedly churned out rabbit protein in its red blood cells.

Yet when an attempt at gene therapy was carried out last year on two patients, one in Israel, the other in Italy, to correct a hereditary form of anemia, it was strongly criticized, both privately and in the press.

Behind the scenes, though, some physicians wondered what all the fuss was about, particularly since this new procedure offers a chance of curing a disease that had been considered incurable. If physicians have a duty to help their patients, then why not try it, they asked?

Well there is a reason why not, and for Dr. W. Frank Anderson of the National Institutes of Health Heart, Lung and Blood Institute, it is because the time is not ripe for gene replacement therapy in human beings. Writing in this week's Journal of the American Medical Association, Dr. Anderson said there are obstacles still to be overcome.

In the case of the hereditary anemia in question (known as beta-thalassemia), the normal human gene that is obtained through a complex cloning process does not work when it is inserted back into human cells. No one knows why it does not function as it is supposed to, though there is speculation. But whatever the reason, the key point Dr. Anderson said, is that the specific gene called the beta-globin gene that is available through the cloning process won't help the patient with beta-thalassemia because it is a nonfunctional gene. Getting the beta-globin gene to work, obviously, is the first obstacle to overcome.

There are other cloned genes with lengthy names that do work — that are, as they say, "functional," at least in laboratory animals, and that is where they should be thoroughly studied first. Even so, Dr. Anderson said, inserting a functional gene into animal cells in tissue culture is not the same as curing the whole animal. The two obstacles here involve getting the gene into the right cells — which is the case of certain cells such as brain or liver cells is easier said than done — and getting the gene to stay in those ceslls, a feat known as stabilizing the gene in its target cell.

Then there is the problem of risk. The concern is, Dr. Anderson said, that alteration of the genetic makeup of a cell, even if the alteration is to correct a defect by inserting a normal gene, might transform the cell over time and make it malignant.

So where do we stand? Before attempting gene therapy in humans, Dr. Anderson recommends caution. All of the questions concerning obstacles and risks can be answered, at least in part he said, in experimental animals where researchers should make certain that the cloned gene is effective, that it remains in appropriate cells long enough to be helpful and that it does not cause greater harm than good.

After — and only after — these criteria are met, Dr. Anderson is confident tht gene therapy will provide a cure for certain hereditary diseases that are caused by single defective genes. It is even possible that defects might be corrected so that the children of a patient will also be free from disease, he said. But he warns that some claims about the potential of genetic engineering in humans are farfetched. Altering characteristics such as personality and intelligence, he said, are probably outside the realm of possibility at least for the foreseeable future.

Study suggests too many patients admitted for intensive care

Most of us think of intensive care units in hospitals as the place where the most seriously ill patients — people we picture as being close to death — are surrounded by machines and given around-the-clock attention, the kind of care associated with life-saving situations. That may not be entirely accurate according to a study in this week's Journal of the American Medical Association.

Dr. William A. Knaus at George Washington University Medical Center in Washington, D.C. reported that nearly half the patients admitted to his hospital's ICU over an eight-month period actually did not need intensive treatment. Instead, these patients mainly needed close nursing attention with the emphasis on observation, and this, Dr. Knaus suggests, could have been accomplished elsewhere in the hospital rather than in the costly ICU.

The implication of this study, if the same pattern holds true nationally, is that admissions to ICUs conceivably could be cut back without jeopardizing patient care and this, in turn would slow the demand for more ICU beds, which have been increasing at about four percent a year.

In 1960, only 10 percent of U.S. hospitals with more than 200 beds had ICUs. Now 99 percent of these hospitals have such facilities, and it is estimated that some 42,000 patients a day are in intensive care units. Traditionally, Dr. Knaus said, it has been assumed that these patients require "a costly level of therapeutic intervention and have a high in-hospital mortality." He and his colleagues, who conducted the study on 624 consecutive admissions to the ICU, found a far different situation. About half of the patients admitted were not in any immediate danger; in other words their vital signs were stable, and they received only minimal amounts of active treatment.

Other studies, Dr. Knaus pointed out, have shown that for every patient admitted to the ICU not needing intensive treatment, an experienced ICU nurse is being under-utilized.

With emphasis lately on improving the cost-effectiveness of medical care, Dr. Knaus said that it is appropriate to take a closer look at who is being admitted to ICUs. Substantial savings could occur if only essential requests for ICU admissions are made.

Donation of bodies or organs for transplantation and medical science

On death the human body is a veritable storehouse of human tissue valuable to those still living.

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The deceased body can be of great service as a source of organs and tissues for transplantation, for medical education, and for research.

The American Medical Association points out that transplantation of tissues of one person to another has been attempted since earliest history. The problems of tissue preservation, wound infection, operative technique, and the rejection of the grafted tissue by the host doomed most early attempts. With the advances of 20th century science many of these difficulties have been overcome and transplantation has become a practical reality for many individuals.

About 25 kinds of tissues and organs from persons both living and dead are being used with increasing frequency for transplantation, the AMA says.

Today, an important factor limiting transplantation is the lack of enough suitable organs and tissues from human donors.

Transplantation has become so well accepted that an anatomical gift act is now the law in every state. These laws make it possible for an individual's wishes to be respected regarding the disposition of part or all of his body immediately following his death. Human tissue and organs are too valuable to be allowed to decay if their use can give life and health to others.

Prospective donors should remember, however, that organs and/or bodies are accepted on a need basis. No medical facility is obliged to accept an offered gift. The age and condition of the donor and the availability of specialized staff and facilities at the time and place of death may prevent acceptance of a generously offered gift.

Kidney transplants

Transplantation of whole organs from one person to another was first accomplished in 1954 when a kidney was transplanted. Such operations are no longer experimental and kidney transplants are now the most frequently performed organ transplants, with a high rate of success.

More than 2,000 kidney transplants are performed annually in the United States and 10–20,000 kidneys may eventually be needed each year.

The first eye bank in the U.S. was founded in 1944 and transplantations of corneas (the clear portion of the front of the eye) are well established. Cornea transplants restore sight to many persons whose vision has been severely damaged or destroyed by injury or disease. Other parts of the eye frequently used for transplantations include the sclera and vitreous. Restoration of sight is a significant event second only to life itself to most people.

Many of the structural tissues in the body, including bone, tendons, heart valves, fascia (the fibrous tissue that covers muscles), dura (the membrane covering the brain), and cartilage have been transplanted with great success for more than 20 years. These tissues do not have to be living to provide a valuable lattice work on which the individual can regrow and replace damaged or lost tissue. Unlike living organs, these tissues can be stored for indefinite periods in tissue banks and thereby provide a ready supply for the surgeon faced with reparative surgery.

In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study), **which Step-2 regimen was preferred and was deemed effective without significant adverse effects?**[2]

Books Reviewed

Pancreatic Cancer. Edited by Isidore Cohn, Jr., and Paul R. Hastings. Geneva, Switzerland, International Union Against Cancer, 1981. UICC Technical Report Series, Volumes 57. Illustrated, 142 pages. Softcover, $11, plus postage and packaging. (Available from above organization at 3 Rue du Conseil General, Geneva, 1205.)

The collection of workshop papers on pancreatic carcinoma is the result of the "meeting of the minds" of international experts on every phase of this disease from epidemiology to animal models to recommendations for future investigations. The need for such a conclave is highlighted by the facts that the incidence of pancreatic carcinoma is increasing; early diagnosis is virtually impossible, the lack of a specific diagnostic marker, need for a sensitive animal model, and finally an extremely inadequate therapeutic response. This summation of what has come to pass, so far, in this miserable disease with such a dismal outlook, is most welcome. As one of the editors, Dr. Isodore Cohn, Jr., states in the introduction "that the suggestions made in the monograph may serve as guideposts for future endeavors in research" is a laudible reason for the conclave.

Each paper presented by the experts succinctly and concisely develops the present state of knowledge of a particular aspect of pancreatic carcinoma, and the last chapter collates the aims and the collective thoughts of each participant.

The softcover binding is convenient, the format and style are clear, and the few diagrams and tables state their message well.

I found the chapters on pathology of pancreatic tumors, the functioning of endocrine tumors, and the survival and prognosis particularly informative but this is not to exclude praise for the other papers. The bibliography is extensive, meaningful, and should satisfy most academicians.

This monograph quickly updates the present clinical and experimental status of pancreatic carcinoma and should be of great use to any physician who is involved in the diagnosis and treatment of this disease; it is especially useful to internists, gastroenterologists, and those in the investigative field. **Joseph J. Ricca, M.D.**

Thomas Willis's Oxford Lectures. Edited by Kenneth Dewhurst. Limited edition. Oxford, Great Britain, Sanford Publications, 1980. Illustrated, 192 pages. Hardcover, 9 English pounds.

Thomas Willis stands as one of the great medical scientists. He also had close associations with many of the "Oxford Club," notably Hooke, Boyle, Lower, Petty, and Wren, whose contributions to science, medicine, and other disciplines are among the most long lasting and significant in history.

Yet, although Willis was one of these great minds of the seventeenth century, he was outshone in reputation during his lifetime and well afterward by others. For instance, Thomas Sydenham, his contemporary, was considered by most to be the outstanding clinician of the period, exerting widespread influence through his teachings and writings. But whereas Sydenham had little interest in chemistry or physiology, none in microscopic studies, and an aversion to hypotheses, Willis, himself a clinician too, engaged in all of these endeavors, establishing a body of work that became a foundation on which others could build.

A pioneer in the description and treatment of nervous diseases and in the anatomy and physiology of the nervous system (we are all aware of the "Circle of Willis"), his interests also took him to other medical subjects, as for example diabetes—he brought attention again to the long forgotten sweet-tasting characteristics of the urine of people with diabetes mellitus. Although he was ahead of his time in the use of experiment and controlled observation, he was also a man of his century, relying immoderately on drugs and bloodletting, and believing that the mentally ill could be "possessed" by demons that could be exorcised, subscribing to the therapy of force to curb unruly "animal spirits" of the deranged.

Kenneth Dewhurst has put together in a slim, handsome volume a collection of notes taken down by John Locke and Richard Lower during attendance at 34 of the Oxford lectures delivered by Willis in 1661 and 1667. The reasons for the popularity at the time of these oral presentations are easy to understand, for they contain virtually no digressions nor repetitions of classical texts but, instead, are eloquent recitals of observations and ideas that spring from the experiments of an enthusiastic investigator. The findings are reported honestly, without embellishment, and fresh insights are offered to test accepted opinion.

The integration of the notes into a spritely text is by itself a service to scholars and practitioners but Dewhurst has additionally written absorbing chapters, some of which contain entirely new material, on the life and works of Willis and on the history of his professorship (endowed by Sir William Sedley with approximately 2,000 pounds). We get to know Willis as a man as well as a great name: his origins, education, religion, beliefs, politics, achievements, and disappointments. Strengths and frailities are plainly on view. One also sees a picture of education in the universities, including the public and hidden influences on personal advancement.

Both as intellectual entertainment and a useful source of information on Willis and his period, this book with its organized, easily readable text and extensive notes is well worth possession by clinicians and historians. **Albert S. Lyons, M.D.**

Hospice: Complete Care for the Terminally Ill. By Jack McKay Zimmerman, M.D. Foreword by Dame Cicely Saunders. Baltimore, Md., Urban & Schwarzenberg, 1981. Hardcover, 191 pages. Price, $19.

This year, preoccupation with the subject of death and dying appears to dominate the health care field, and with this has come a resurgence in the hospice concept for treatment of the terminally ill.

Continued on page 416

Medical Meetings

New York State Academy of Family Physicians

The New York State Academy of Family Physicians will hold its Annual Convention from May 14 to 19, 1982 at Kutsher's Country Club in Monticello, New York. The Congress of Delegates will convene on May 14, 15, and 16 and the Scientific Assembly will be held on May 17, 18, and 19, 1982.

Heart attack prevention

The Laboratory of Physiological Hygiene at the University of Minnesota and the Minnesota Affiliate of the American Heart Association will present a Workshop on Heart Attack Prevention, June 2 to 4, 1982. The workshop will provide the knowledge, skills, and procedures needed by busy practitioners to help patients reduce their risk of cardiovascular disease. It will give practical guides to risk assessment and specific skills in treatment methods to minimize risk. Participants will learn how to modify blood lipid levels, blood pressure, smoking habits, weight, and physical activity levels in a step-care approach.

National Council on Alcoholism to host annual alcoholism forum

The National Alcoholism Forum, the Annual Conference of the National Council on Alcoholism (NCA), will be held April 2 to 5, 1982 at the Shoreham Hotel, Washington, D.C.

For registration information, write Forum Registrar, National Council on Alcoholism, 733 Third Avenue, New York, N.Y. 10017, or call (212) 986-4433.

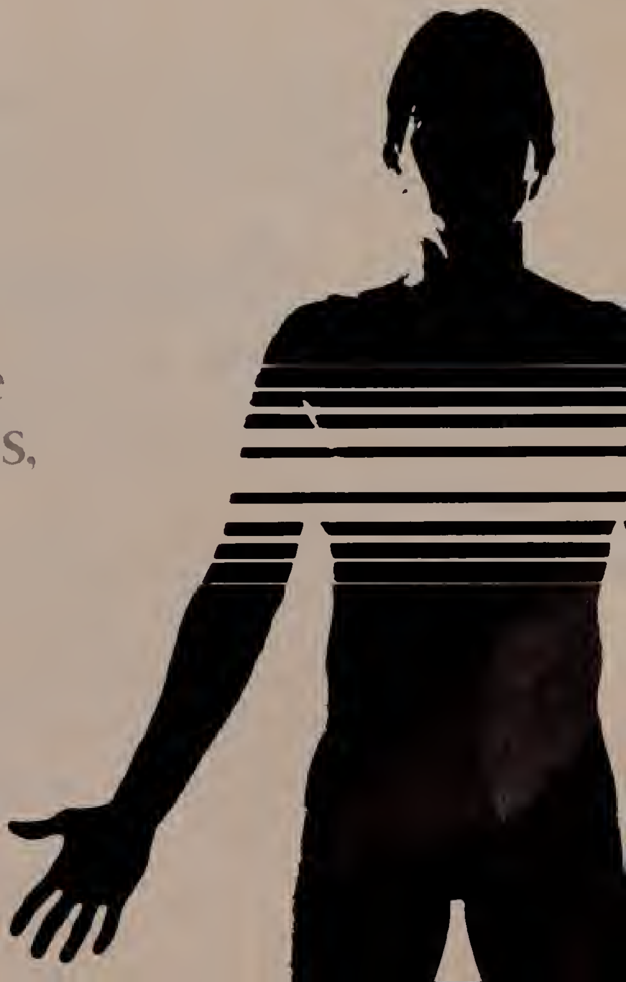
Atlanta is site of 1982 American College of Cardiology annual session

The American College of Cardiology will hold its 31st Annual Scientific Session in Atlanta, Georgia, April 25 to 29, 1982.

Further information about the 31st Annual Scientific Session can be obtained from the Meeting Services Department, American College of Cardiology, 9111 Old Georgetown Road, Bethesda, Maryland 20814.

Continued on page 414

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?**[3]



Continued from page 413

Advances in anesthesia for the cardiac patient

NYU Medical Center and the Department of Anesthesiology offer the upcoming course Advances in Anesthesia for the Cardiac Patient. It is to be held on Friday and Saturday, June 25 and 26, 1982.

Accreditation: 11½ AMA category I credit hours. 11½ NYSSA category I credit hours.

For further information call or write: NYU Postgraduate Medical School, 550 First Avenue, New York, N.Y. 10016; telephone: (212) 340-5295.

1982 CME meeting of the American College of Chest Physicians

On June 21 through 25, 1982 a five day course will be held at The Palmer House in Chicago, Illinois. Course director for this postgraduate course is Reuben M. Cherniack, M.D., F.C.C.P., professor and vice-chairman, department of medicine, University of Colorado; and chairman of the department of medicine at the National Jewish Hospital and Research Center in Denver.

This educational program has been designed to review subjects which are considered important in the preparation for the Subspecialty Board in Pulmonary Medicine. During the course, twenty-five areas of content basic to the understanding of etiology, pathogenesis, diagnosis, functional assessment and therapy will be thoroughly covered by the faculty. Using an electronic system, the overall audience response to multiple choice questions will help guide the presentor through coverage of each topic. Each attendee will have their own answer sheet to keep track of their individual score, indicating where further study is necessary. This will also allow for interaction between registrant and faculty. Case management problems will be given to each attendee upon his registration at the course.

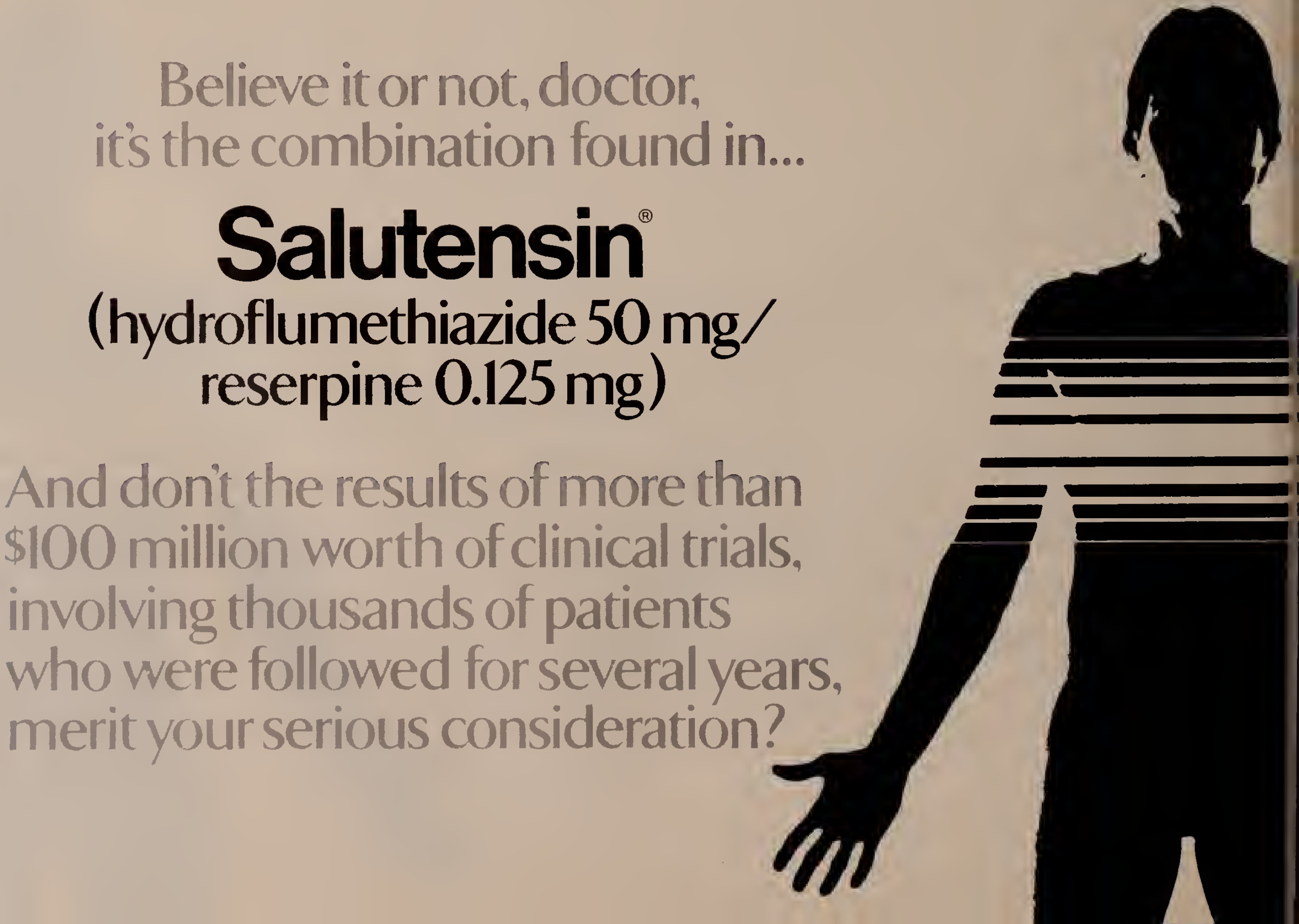
As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the American College of Chest Physicians designates that this continuing medical education offering meets the criteria for 32 credit hours in Category 1 of the American Medical Association for the Physician's Recognition Award.

For further information, please contact: Dale E. Braddy, Director of Education, A.C.C.P., 911 Busse Highway, Park Ridge, Illinois 60068.

Historic educational event to take place in Toronto, Canada

The American College of Chest Physicians and the International Academy of Chest Physicians and Surgeons present a six-day scientific program incorporating the XIV World Congress on Diseases of the Chest and the 48th Annual Scientific Assembly of the ACCP has combined its World Congress with the ACCP's Annual Assembly. The meeting will be held at the Sheraton Centre Hotel in Toronto, Ontario, Canada on October 10 to 15, 1982. An attendance of over 6,500 is anticipated.

Continued on page 415



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And don't the results of more than $100 million worth of clinical trials, involving thousands of patients who were followed for several years, merit your serious consideration?

The Scientific Program Committee has designed this clinical conference to bring together the world's leaders in cardiopulmonary medicine. Each session will have an international faculty representing the many disciplines of chest medicine. This scientific assembly will include 11 world symposia sessions, 20 Forum and Section programs and 23 luncheon panels. Five postgraduate courses will be held on Sunday, October 10th. Other meeting highlights include the presentation of original investigations, special clinical research programs, clinical colloquia sessions, motion picture clinics and technical exhibits.

World symposia sessions will offer in-depth discussions on the latest diagnostic and treatment procedures in chronic obstructive lung disease, antiplatelet agents in cardiovascular disease, asthma, the effects of cigarette smoking, calcium ion blocking drugs, bronchoscopy and tuberculosis. Additional topics to be presented are "Controversies in the Control of Hypertension," "Surgery for Evolving Myocardial Infarction, Acute Infarction and Established Infarction," "Controversies in the Diagnosis and Management of Pulmonary Embolism" and "New Horizons in Chronic Obstructive Pulmonary Disease."

Six world-respected scientists have been selected by the Awards Committee to receive special recognition at this international medical meeting. Each honoree will present a "state-of-the-art" lecture during the conference. The honored lecturers are:

Margaret R. Becklake, M.D., Montreal, Quebec, Canada
"Occupational Lung Diseases: Past Record and Future Trend"

Vickin O. Bjork, M.D., Stockholm, Sweden
"The Development of an Artificial Heart Valve"

Wallace Fox, M.D., London, England
"Short Course Chemotherapy for Tuberculosis: Where Do We Stand Today?"

Ray W. Gifford, Jr., M.D., FCCP, Cleveland, Ohio, USA
"Controversies in the Control of Hypertension"

Professor Paul Sadoul, FCCP, Nancy, France
"Evaluation of Respiratory Impairment"

Ewald R. Weibel, M.D., Bern, Switzerland
"How Does Lung Structure Affect Gas Exchange?"

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the American College of Chest Physicians designates that this continuing medical education offering meets the criteria for hour-for-hour credit in Category 1 as outlined by the ACCME and by the American Medical Association for the Physician's Recognition Award. Over 40 hours of Category 1 credit can be obtained.

For further information, regarding registration and copies of the advance program, please write to: Dale E. Braddy, Director of Education, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Illinois 60068.

Material for inclusion in the medical meetings section must be received eight weeks prior to publication date.

And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

Please see references and brief summary of prescribing information on last pages of this advertisement.

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- ☐ Journal article reprints of the clinical studies mentioned in this ad

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Continued from page 412

Jack Zimmerman, M.D., carefully explains his subject, "Hospice: Complete Care of the Terminally Ill" with expertise and skill. He adequately describes his experience with the Church Hospital Hospice Program in Baltimore, Maryland, going into great depth and detail with this organization's function, purpose, and successful administration. Everything one would need to know from the inception of the hospice concept to its medical, social, psychiatric, and administrative points of view are completely detailed and discussed.

The Church Hospice Program is a hospital-oriented hospice concept and, apparently, this appears to be the most expedient way in which a hospice can properly serve its purpose. A free-standing hospice, without the backup of a general medical and surgical facility, would be inadequate and result in no cost reductions. Dr. Zimmerman, as director of this particular hospice program, is well qualified to discuss this subject and his comments are cogent and to be taken seriously by all of us in the health-related field. Dr. Zimmerman poses many questions and answers concerning the management of medical care, social services, and related problems of hospice administration.

Unfortunately, in New York State, there have been no set standards for the establishment of hospice care or the judging thereof. There is no doubt that New York State would benefit from such a program. However, because of the lack of standards, the State of New York Department of Health has been unable to develop a certification for any hospice within its jurisdiction. As a result, third-party payers are at a loss as to whom is eligible for payment of hospice care in New York State.

At the present time, there are two pilot studies underway in this State which, if successful, may set the guidelines for future programs. It is hoped that within the next year these guidelines, set by the Hospice Association, will be adopted by the State of New York Department of Health. It is hoped that this will alleviate the burden placed on many hospitals, nationally as well as those within the state, which are experiencing a severe bed shortage because many of the terminally ill patients now occupy beds that would be more suitably occupied by the acutely ill, both medical and surgical.

This is a book recommended for anyone who wants to become involved in a primary problem facing medicine for the next several decades. For those involved with the care of the terminally ill and dying, this author's experience will certainly enlighten and heighten his interest and offer guidelines to implement this type of program. **Lawrence S. Kryle, M.D., F.A.C.P.**

Bedside Diagnostic Examination. Elmer L. DeGowin, M.D., M.A.C.P., and Richard L. DeGowin, M.D., F.A.C.P. Fourth edition. New York, Macmillan Publishing Co., Inc., 1981. Illustrated, 1,039 pages. Softcover, $19.95.

Elmer and Richard DeGowin (father and son) are presenting the fourth edition of their well-known text. Since its first publication in 1965, the book has become familiar to, and often used by, medical students and house officers. The recent death of the elder Dr. DeGowin (after completing work on this fourth edition) will be a great loss to the medical community.

Salutensin® Salutensin-Demi™

(Hydroflumethiazide, Reserpine Antihypertensive Formulation)

Brief Summary of Prescribing Information (12) 10/27/78
For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

This edition, besides having some chapter revisions, contains a new section concerning the differential diagnoses of abnormal laboratory findings. The majority of the book's approximately 1,000 pages, however, deals with the basic elements of history taking and physical examination in the diseased patient.

Instructions are occasionally spiced with pearls of wisdom and useful anecdotes, such as the problems of diagnosing skin lesions in black patients, examination of the abdomen when the patient is ticklish, and that classic, the differential diagnosis of unilateral scleral icterus. The text is meant to be a basic guide in the essentials of physical diagnosis, aimed at the medical student and early resident level; it goes far toward achieving this goal.

Unfortunately, the new edition has not corrected the greatest weaknesses of this book. The reader finds it difficult to understand the plan of the text initially, and then finds it cumbersome to use as a reference. This seems to result from the author's attempt to have the book serve two purposes at once: as a pathophysiologically oriented list of diseases as well as an instructor in abnormal physical findings.

Some sections of the book seem totally misplaced; that is, a well-written section on ultrasound examination by William Cohen is found buried in the chapter entitled "Methods in the Physical Examination." Most readers would consider this a laboratory technique. A section on the treatment of cardiorespiratory arrest is thrown into the middle of a discussion on the diagnosis of cardiac rhythm disturbance. Another annoying fault is shared with the previous editions; the sketches are primitive and often unclear.

In spite of its shortcomings, *Bedside Diagnostic Examination* is a useful reference text for the medical student or beginning resident, or for the practicing physician refreshing his knowledge of physical diagnosis. **Mark W. Frampton, M.D.**

Intra-Abdominal Infection. By Samuel Eric Wilson, M.D., Sydney M. Finegold, M.D., and Russell A. Williams, M.D. New York, McGraw-Hill Book Co., 1982. Illustrated, 495 pages. Cloth.

This book is a product of the many years experience of a well-known group of researchers in infectious disease and surgical infectious problems. The book attempts to give a comprehensive review of the subject with extensive bibliography and updating of current thinking and research. The book meets the distinct need of allowing those who treat intra-abdominal infections to have a very good appreciation for the remarkable research and change that has taken place in the last decade as well as a full and complete appreciation of the historical perspectives of some of the more difficult surgical infections that we have treated over the years.

This book is indeed well organized; the chapters are exceptionally clear; the detail is presented in a very fine fashion; most of the tables and photographs of exemplary x-rays or studies are of a superior quality. The content of the chapters is remarkably succinct and complete. The authors are to be commended on an excellent job for updating the topic of intra-abdominal infection.

The chapters on microflora of the gastrointestinal tract, anatomy and physiology of the peritoneum, and pathogenesis of intra-abdominal sepsis are very well written.

Continued on page 423

ADVERSE REACTIONS

Hydroflumethiazide

Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

1 tablet b.i.d.

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References:

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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SCHEDULE OF SCIENTIFIC MEETINGS

1982 ANNUAL CME ASSEMBLY

Medical Society of the State of New York
Rye Town Hilton, Port Chester, New York

FRIDAY, JUNE 25

Morning:
- Anesthesiology/Surgery (General Session)
- Emergency Medicine/Radiology (General Session)
- Medical Legal & Workers' Compensation Matters/Occupational Medicine (General Session)
- Obstetrics & Gynecology
- Orthopedic Surgery

Afternoon:
- Chest Diseases
- Dermatology & Syphilology
- Emergency Medicine/Radiology (General Session-cont'd)
- Gastroenterology, Colon & Rectal Surgery
- Hand Surgery (General Session)
- Obstetrics & Gynecology (cont'd)

SATURDAY, JUNE 26

Morning:
- Cancer (General Session)
- Cardiovascular Diseases
- Internal Medicine
- Neurology & Neurosurgery (General Session)
- Ophthalmology
- Urology

Afternoon:
- Cancer (General Session—cont'd)
- Internal Medicine (cont'd)
- Ophthalmology (cont'd)
- Otolaryngology
- Pathology

SUNDAY, JUNE 27

Morning:
- Allergy & Immunology
- Physical Medicine & Rehab.
  - Plastic, Reconstructive & Maxillofacial Surgery (General Session)
- Preventive Medicine
- Psychiatry/Pediatrics/School Health/Family & General Practice (General Session)

●

CME CREDITS: Each program will be eligible for CME Category I Credits on an hour-for-hour basis

●

SCIENTIFIC & TECHNICAL EXHIBITS

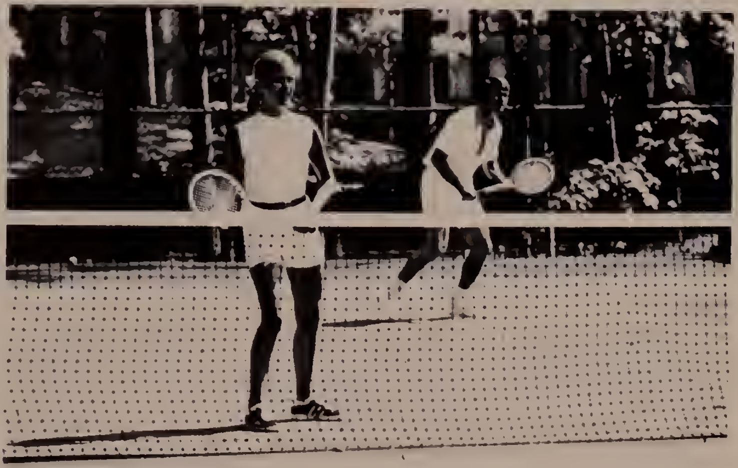
THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

1982 Annual CME Assembly

Friday, June 25—Sunday, June 27

Medical Controversies of the 80s

All physicians are invited to attend our Annual Continuing Medical Education Program to be held at the Rye Town Hilton. You will have the opportunity to obtain Category I CME Credits during 2½ days of outstanding General Sessions, Symposia, and Panel Discussions. Our meetings are designed to inform the physician of the latest developments not only in his specialty, but in other areas of medicine as well.



As in the past, there will be Scientific and Technical Exhibits to help the physician to become acquainted with the latest research techniques, and to learn about new products and services that will help the physician provide better medical care. The opportunity to visit with friends and colleagues in a relaxed setting is an important part of the Annual Assembly. Come join us!

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SUITES:	$175 and up				

MEDICAL SOCIETY OF THE
STATE OF NEW YORK
1982 CME ASSEMBLY
JUNE 25–27, 1982
SUITES ON REQUEST TO HOTEL

☐ CONFIRMATION REQUESTED
If two or more to occupy room, name of joiner(s) ____________________

If a range of rates is offered and the rate requested is not available, the next available rate will be assigned. Reservation requests must be received no later than June 4, 1982, and will be held until 6:00 p.m. on the date of arrival unless otherwise specified.

If reservations are made by telephone, you must identify the Medical Society meeting for the special rate to apply. Rates subject to applicable sales tax.

RESTAURANTS

Penfield's for gracious dining—an adventure in gourmet food, and Penfield's Patio for informal lunches and cocktails. Also the Tulip Tree for casual meals and buffet surrounded by the greenery of ferns and flowers.

GUEST ROOMS

Each has color TV with AM/FM radio, refrigerator and coffee maker. Rooms are beautifully appointed with large windows overlooking the wooded grounds and gardens.

AMPLE PARKING FACILITIES

TRANSPORTATION

Convenient regularly scheduled ground transportation is available from LaGuardia and Kennedy Airports. On arrival, go to the baggage claim area and look for Airport Transportation Services free courtesy phone (it's red). From airports, service is throughout the day and evening with departures every hour (½ hour service during peak travel times). Last departure leaves Kennedy at 11:30 p.m. and LaGuardia at 11:15 p.m. One-way fare: $11.00. Round-trip fare: $21.00. By train from Manhattan (Grand Central Station), take the New Haven line to Rye, New York (about 45 minutes). From the Rye Station, it is a 5 minute taxi ride to the Rye Town Hilton.

HOTEL RESERVATIONS

Physicians must make their own hotel reservations no later than June 4, 1982, direct with the Rye Town Hilton. In order to take advantage of the special rates for sleeping rooms, please mention that you will be attending the Medical Society CME Assembly.

RECEPTION & DINNER DANCE

All physicians and their guests are invited to attend the Medical Society dinner dance on Saturday, June 26th. Ronald Dougherty, M.D., Chairman, MSSNY Committee on Drug Abuse, will be the guest

speaker. A reception sponsored by the Medical Society of the State of New York will begin at 7:00 p.m. Dinner will be served at 8:00 p.m. $39.00 per person.

MEETING & EXHIBIT HOURS

Friday, June 25: 8:30 a.m.–5:00 p.m.
Saturday, June 26: 8:30 a.m.–5:00 p.m.
Sunday, June 27: 8:30 a.m.–12:30 p.m.

INTERMISSIONS

There will be morning and afternoon intermissions for coffee, and to allow time to visit the exhibits.

REGISTRATION

Registration is open to MSSNY members and their guests, nonmember physicians, medical students, and members of the allied professions. There is no registration fee. Registration hours will be: Thursday, June 24 from 4:00 p.m. to 8:00 p.m., Friday & Saturday, June 25 & 26, from 8:00 a.m. to 5:00 p.m., and Sunday, June 27, from 8:00 a.m. to 12:00 Noon. All meetings and exhibits will close at 12:30 p.m. on Sunday.

PRE-REGISTRATION

Please fill out the pre-registration form and mail to the Medical Society address as indicated on the form. Your badge and tickets will be held at the MSSNY Registration Desk located in the Grand Ballroom exhibit area.

PRE-REGISTRATION FORM

1982 Annual CME Assembly, June 25–27
RYE TOWN HILTON

(please print)

Name____
(last) (first) (Initial)

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City & State________________________________Zip____________

Member of MSSNY: Yes________No________Specialty________________________

Note: There is no registration fee.

Saturday Reception & Dinner/Dance________tickets @ $39.00. Total________________

Please make checks payable to: Medical Society of the State of New York, clip and mail to Division of Advertising & Meeting Services, Medical Society of the State of New York, 420 Lakeville Rd., P.O. Box 5404, Lake Success, New York 11042.

Directions to the Rye Town Hilton

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from major New York Metropolitan Airports

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Take the Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave. following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

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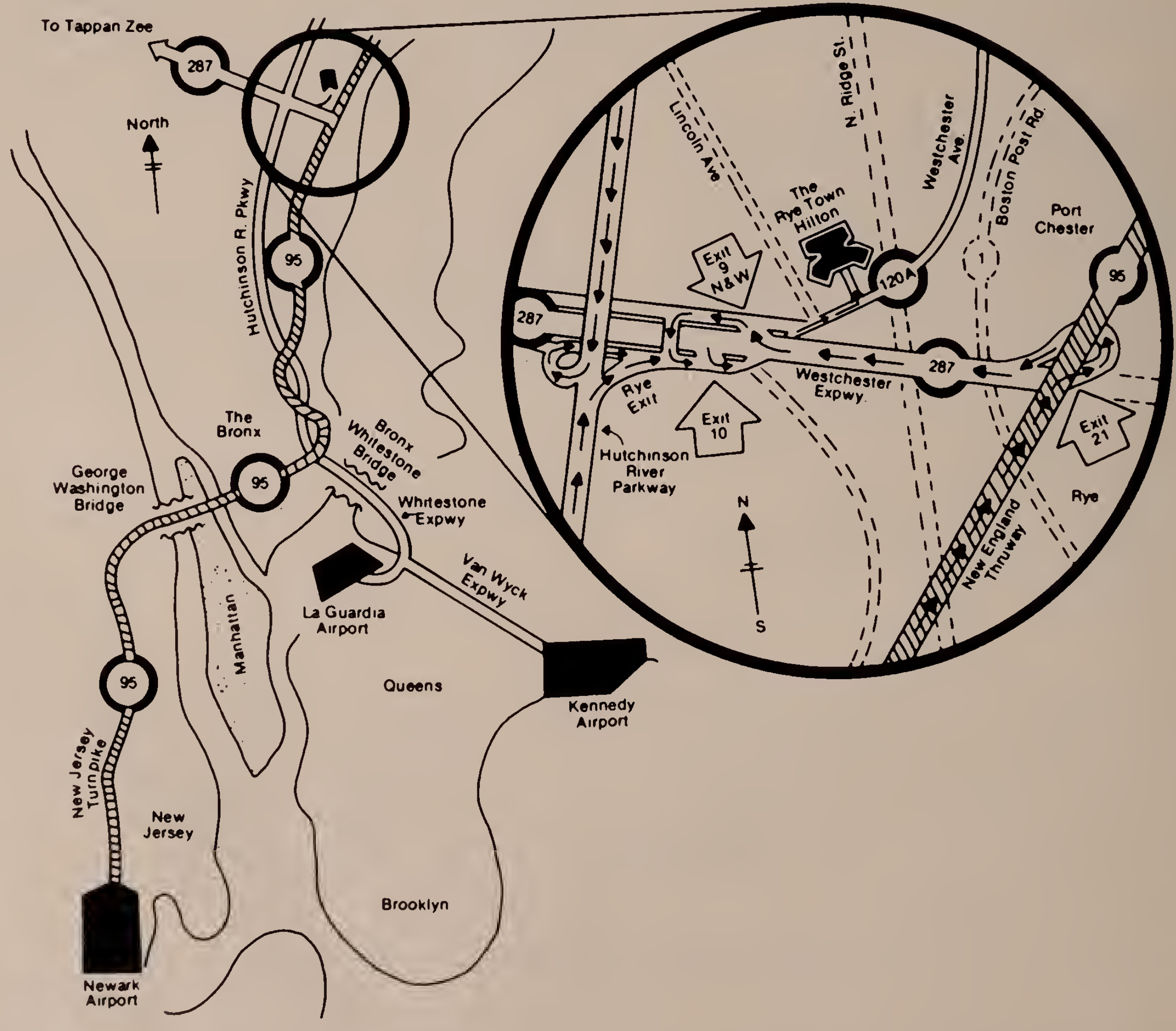
FROM NEWARK AIRPORT
Take New Jersey Turnpike (95) to the George Washington Bridge. Proceed on U.S. 95 to Cross Westchester Expressway Exit 21. Proceed west on Cross Westchester Expressway (287) to Exit 9NS. Turn left at first traffic light onto Kennilworth Road. Turn left immediately at second traffic light onto Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).



Continued from page 417

The decision tree in the chapter on noninvasive methods is well presented. The one area of recent development not fully discussed is percutaneous catheter drainage.

This book should be read by every resident in surgery and probably by nearly every practicing surgeon. **James T. Evans, M.D., F.A.C.S.**

Principles of Cancer Treatment. By Stephen K. Carter, M.D., Eli Glatsein, M.D., and Robert B. Livingston, M.D. New York, McGraw-Hill Book Co., 1982. Illustrated, 951 pages. Hardcover, $79.

This major text is a comprehensive, multidisciplinary presentation of the principles of cancer treatment. The book focuses on advances in the entire range of therapy and encompasses new areas of clinical research. The first part of the book reviews broad oncologic principles and details the fundamentals of the various methods used to treat malignant conditions. In the second part, the appropriate therapy for each tumor is outlined in detail and, in most instances, the therapy administered by outstanding centers in the country is included.

The book, if widely used, can lead to a deep understanding, and to more effective management of cancer, influencing, in this way, the survival rate. **Leonard B. Goldman, M.D., F.A.C.R.**

Structure and Function of the Circulation. Volume 1. C. J. Schwartz, N. T. Werthessen, and S. Wolf, Editors. New York, Plenum Press, 1980. Illustrated, 819 pages. Cloth, $75.

The editors did not contribute to the volume that is comprised of 12 chapters written by 14 authors. These authors are British, Canadian, and Australian contributors. Concern is chiefly with the morphologic features of blood vessels and the peripheral vascular system. Most chapters are just reviews of standard materials. It is difficult to perceive why the book was compiled and for whom. It does carry much information and two chapters deal with recently acquired information. Most readers if engaged in clinical practice might find it refreshes their knowledge but any person actively engaged in modern research will not find it of value. To be sure it reviews much most of us may have forgotten in part but it is not written with the efficiency of a modern advanced textbook. It is not condemned nor is it recommended.

Although one judges the book to deal chiefly with anatomy and morphologic thought of the arteries and arterial system, it is not a well-integrated work. It seemed to this reviewer to be a rather artificial, incomplete, and classical treatment of the cardiovascular system; it lacked evidence of conceptual inclusive thought or the excitement of new discovery. **Chandler McC. Brooks**

Cancer: The Misguided Cell. By David M. Prescott and Abraham Flexer. Sunderland, Ma., Sinauer Associates, Inc., Publishers, 1982. Illustrated, 314 pages. Paperback, $12.95.

The authors are two well-known professors of molecular, cellular, and developmental biology at the University of Colorado. The aim of the book is to present in clear and concise terms the main currents of biologic knowledge that are essential to an understanding of the nature of cancer. They have described how dramatic advances in science during the past decade have revolutionized the understanding of the gene, the mechanisms of inheritance, and the processes of cellular growth and function. With this information, the scientist may be able to solve the mysteries of cell differentiation, immunity, and malignant transformation.

The book is addressed not only to practitioners, but to modern readers who are interested in learning more about the cancer cell. **Leonard B. Goldman, M.D.**

Sports Medicine: Fitness, Training, Injuries. Edited by Otto Appenseller and Ruth Atkinson. Baltimore, Md., Urban & Schwarzenberg, 1981. Illustrated, 395 pages. Hardcover, $35.

The book is edited by neurologists with supporting, contributing essayists of exceptional expertise. The emphasis is on fitness, training, and injuries with a diversified approach in the medical rather than the surgical aspects. The basic science discussions woven throughout the sections are outstanding with detailed bibliographies.

The essayists have provided an enjoyable book, written with clarity, and still providing practical information. The editors have fulfilled the need for a sound text suitable for the medical school curriculum of the emerging sports medicine discipline.

This book is highly recommended and merits a broad readership among the sports medicine enthusiasts. **Ralph S. Emerson, M.D.**

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GHOSTWRITER—National editor will transform your raw data into polished reports, studies, or presentations that speak up to make points. Mark Diamond Associates: N.Y. (212) 251-5639.

PRESENTING THE FIFTH ANNUAL SPRING Seminar in Anesthesiology, March 27, 1982, sponsored by the Anesthesiology department, The Genesee Hospital, Rochester, New York 14607.

TAX CONSULTANT, CPA/MBA IN TAXATION—Financial advice for physicians including: Tax return preparation, IRS audit representation, IRS approved pension plans, monthly financials, professional corporations, computer and accounting system installations. Highest quality work at very reasonable prices. Free, no-obligation consultation. Call day or evening. Richard Freeman, CPA (516) 938-7726.

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PRACTICES WANTED

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ACTIVE GENERAL OR INTERNAL MEDICAL practice wanted. North Shore of Nassau County or Western Suffolk County. Details first letter. Respond to Dept. 212, c/o NYSJM.

PRACTICES WANTED—CONT'D

OPHTHALMOLOGIST 31, BOARD CERTIFIED, seeks to purchase retiring practice or association with ophthalmologist in Greater New York City Metro area or suburbs. Will also consider rental space in busy medical building. All replies confidential—Dept. 220, c/o NYSJM.

WANTED—TO BUY INTERNAL MEDICINE, Cardiology practice. Would also consider buying General Practice. Please reply to Dept. 223, c/o NYSJM.

PULMONARY INTERNIST, 34, ABIM, Pulmonary Board Eligible, experienced in all aspects of pulmonary medicine including consultations, Fibroptic Bronchoscopy, ICU and Pulmonary Function Testing, seeks private practice, solo, group or hospital based in New York City, willing to do some general medicine. Available July, 1982. Reply Dept. 229, c/o NYSJM.

DESIRES TO PURCHASE INTERNAL MEDICINE/General Office Practice in Greater New York City metro area including Queens with top price. Reply to Dept. 235, c/o NYSJM.

GASTROENTEROLOGIST, AVAILABLE 7/82, ABIM, GI BE, Harvard trained, 29 y.o., proficient in all endoscopic procedures, looking to associate with gastroenterologist, internist, or multispecialty group in Long Island, Westchester, or NYC. Clifford A. Berken, M.D., 135 Pleasant Street, Brookline, Mass. 02146. (617) 566-6629.

GENERAL MEDICAL PRACTICE. Wish to buy private practice or associate with partner or group. 3 years residency training in General Medicine, General Surgery and Urology. Prefer NYC Metropolitan Area or Long Island. Call Jeffrey Netter, M.D. evenings and weekends (212) 796-3292 or Monday—Friday (212) 381-9210.

POSITIONS WANTED

OPHTHALMOLOGY: EXPERIENCED 44-year old Board Certified seeks position in established practice as General Medical Ophthalmologist with surgery option. All locations considered. C.V. on request. Reply Dept. 217, c/o NYSJM.

32 FEMALE BOARD ELIGIBLE Pediatrician, looking for full time, part time positions in Emergency Room, ambulatory care or private practice in New York City. Reply Dept. 233, c/o NYSJM.

PRACTICES AVAILABLE

FOR SALE, VERY ACTIVE PARTNERSHIP (2 man) practice, general and internal medicine. Established 28 years, south shore eastern Nassau County. Grosses 6 figures annually. Partners will retire upon sale of practice. Reply to Dept. 211, c/o NYSJM.

BUSY SUCCESSFUL FAMILY PRACTICE—30 years Queens County, New York City. High income. Retiring. Will work with and introduce. Hospital privileges available. Terms negotiable. Available July 1, 1982 or later. Reply Dept. 236, c/o NYSJM.

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PRACTICES AVAILABLE—CONT'D

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BOARD ELIGIBLE OR CERTIFIED (INTERNIST-CARDIOLOGIST) to associate with group in rapidly growing area in Ocean County, New Jersey. Salary with eventual partnership. Please send curriculum vitae to: Dept. 193, c/o NYSJM.

PHYSICIANS—NEEDED for 75 summer camps for children, located in Northeastern states, July and/or August. Contact: Association of Independent Camps M, 157 West 57th Street, New York, N.Y. 10019. (212) 582-3540.

PHYSICIAN DURING JULY AND AUGUST, 1982 for children's camp located at Beach Lake, Pa., accommodates 350 campers, age 6–16; complete modern Health Center; 2 R.N.'s in attendance; will accept one M.D. for each month; no children accepted who are of camp age. Camp opens June 29 and closes August 23. Private room and facilities. Write, and include your phone number, to Trail's End Camp, c/o Beach Lake, Inc., 215 Adams Street, Brooklyn, N.Y. 11201.

INDUSTRIAL PHYSICIAN: Albany, N.Y. area. Interested in treatment of injuries, preemployment examinations, and evaluation of disabilities. Knowledge of disability evaluation of Workers Compensation claims is essential. Pension plan and excellent fringe benefits. Well established professional corporation with shareholder acquisition or investment potential. Salary negotiable. Reply Dept. 181, c/o NYSJM.

CERTIFIED OR BOARD ELIGIBLE anesthesiologist to join group of 8 at community hospital on Long Island, New York. Early full partnership. Reply Dept. 234, c/o NYSJM.

EMERGENCY DEPARTMENT PHYSICIAN needed for 316-bed modern, general hospital with complete facilities from cardiovascular surgery to neonatal intensive care. Excellent salary with incremental raises over 2 year period. Excellent fringe benefits: retirement plan; malpractice insurance; long term disability and supplemental life insurance; 4 weeks vacation; 2 weeks educational leave with expense account; 40 hour week of 8 hour shifts. Regional hospital serves multi-county area of 250,000 plus population. City of 40,000 with excellent schools and college. Outstanding outdoor recreational opportunities near Finger Lakes. Charles H. Kinley, M.D., Director, Emergency/Outpatient Department, Arnot-Ogden Memorial Hospital, Elmira, New York 14901. (607) 737-4258.

OBSTETRICIAN/GYNECOLOGIST NEEDED to join two others 50 miles from New York City in mid-Hudson Valley. Salary leading to full partnership. Beautiful area, growing population. Send C.V. to Drs. M. L. Giampe and P. W. O'Daly, Box 990, Beacon, N.Y. 12508.

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OB/GYN: MULTISPECIALTY HOSPITAL BASED group in rural upstate New York seeks Board Certified/eligible OB-GYN for established practice. Position will be available in July 1982. Certified nurse-midwife is part of group. Salary negotiable. Beautiful recreational area in upper Catskill mountain region. JCAH hospital with excellent medical staff and support services. Contact: Thomas E. Lavell, M.D., 1 Titus Place, Walton, N.Y. 13856.

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what goes on IN CONTINUING MEDICAL EDUCATION

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420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK CITY

Doctors Hospital

170 East End Avenue
Thursday, April 1st at 4:15 p.m.
April 1
CLINICAL LECTURES
INFECTIONS OF THE CENTRAL NERVOUS SYSTEM
Shalom Hirschman, M.D.
CREDIT: AMA Cat. 1 (1 1/2 hrs.)
For further information contact The Secretary of CME, Doctors Hospital, 170 East End Avenue, New York 10028. Tel: 212/870-9118.

New York Society Clinical Ophthalmology

146 East 71st Street
*The New York Academy of Medicine
2 East 103rd Street
April 5, 8:00 p.m.
HAS CT SCANNING PUT THE NEURO-OPHTHALMOLOGIST OUT OF BUSINESS
William F. Hoyt, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Norman B. Medow, M.D. 146 East 71st Street, New York 10021.

The Jewish Hospital and Medical Center of Brooklyn in Association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY Downstate Medical Center

55 Prospect Place
Brooklyn
*B-51 Conference Room
Basement, Leviton Bldg.
3:30–4:30 p.m.
April 14
CURRENT APPLICATIONS OF BONE MARROW TRANSPLANTATION
Richard O'Reilly, M.D.
April 21
THE VON WILLEBRAND FACTOR
Jacob Rand, M.D.
April 28
AMERICAN SOCIETY OF CLINICAL ONCOLOGY
NO FEE. CREDIT: AMA Cat. 1
For further information contact the Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212/240-1211.

Saint Mary's Hospital of Brooklyn

170 Buffalo Avenue
Brooklyn
8:00 a.m.–9:00 a.m., Wednesdays
*Third Floor Board Room
April 7
NEWER MODALITIES IN THE TREATMENT OF CORONARY ARTERY DISEASE
Mark A. Seldon, M.D.
April 14
SUDDEN CORONARY DEATH
Atul B. Chokshi, M.D.
April 21
ELECTROPHYSIOLOGY
John D. Fisher, M.D.
April 28
CORONARY BYPASS SURGERY—1982
Stanley Giannelli, M.D.
CREDIT: AMA Cat. 1
For further information contact Saint Mary's Hospital of Brooklyn, 170 Buffalo Avenue, Brooklyn 11213. Tel: 212/774-3600.

New York University Medical Center Post-Graduate Medical School

550 First Avenue
*Alumni Hall
April 19–24, Monday–Saturday
BOARD REVIEW IN PHYSICAL MEDICINE AND REHABILITATION
FEE: $525. CREDIT: AMA Cat. 1 (41 hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295 (24-hour telephone)

Beth Israel Medical Center co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
*Loeb Auditorium/Hospital for Joint Diseases
Orthopaedic Institute
301 East 17th Street
April 21, 8:30 a.m.–4:30 p.m., Wednesday
UROLOGY FOR PEDIATRICIANS
Elliot Leiter, M.D.
FEE: TO BE ANNOUNCED. CREDIT: AMA Cat. 1 (6 hrs.)
For further information contact Beverley R. Baptiste, Post-Graduate Education Office. Tel: 212/420-2000.

Metropolitan Hospital Center in affiliation with New York Medical College Cosponsored by The American Society of Clinical Pathologists

1901 First Avenue
*Metropolitan Hospital
April 21
MUSCLE
Joanna H. Sher, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Victor Tchertkoff, M.D., Metropolitan Hospital Center, 1901 First Avenue, New York 10029. Tel: 212/360-6253.

Westchester Square Hospital in collaboration with Albert Einstein College of Medicine

*Conference Room
2475 St. Raymond Avenue
Bronx
April 22, 4:00–5:30 p.m., Thursday
URINARY TRACT INFECTION
Herbert Tanowitz, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)

State University of New York Downstate Medical Center, Dept. of Anesthesiology, Kings County Hospital Center in cooperation with District I, NYSSA

450 Clarkson Avenue
Brooklyn
April 26, 4:00–5:00 p.m.
ANESTHESIA FOR THORACIC SURGERY
Jonathan L. Benumof, M.D.
CREDIT: AMA Cat. 1
April 27, 5:00–6:00 p.m.
MONITORING OF PULMONARY VASCULAR PRESSURES: RATIONALE AND PITFALLS
Jonathan L. Benumof, M.D.

CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D., SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn 11203. Tel: 212/735-2133.

Albert Einstein College of Medicine of Yeshiva University and Montefiore Hospital and Medical Center

111 East 210th Street
*Rosenthal Auditorium
Montifiore Hospital & Medical Center
111 East 210th St.
April 28, 1:00–5:00 p.m.
NEW APPROACHES TO LOW BACK PAIN
For further information contact Office of Continuing Professional Education, Montefiore Hospital and Medical Center, Albert Einstein College of Medicine, 111 East 210th Street, Bronx 10467. Tel: 212/920-6676.

Jointly sponsored by New York Medical College, Westchester County Medical Center and The Oculoplastic Foundation, Inc.

630 Park Avenue
April 29–May 2
SEMI-ANNUAL OCULOPLASTIC SURGICAL DISSECTION COURSE
FEE: $650. CREDIT: AMA Cat. 1 (40 hrs.)
For further information contact Ms. P. Tamkin, c/o Dr. P. Guibor, 630 Park Avenue, New York 10021. Tel: 212/734-1010.

Beth Israel Medical Center and the American Association of Psychiatric Administrators Cosponsored by The Page and William Black Post-Graduate

10 Nathan D. Perlman Place
School of the Mt. Sinai School of Medicine, CUNY
New York 10003
*Loeb Auditorium, Hospital for Joint Diseases
Orthopaedic Institute
301 East 17th Street, N.Y. 10003
Friday, April 30, 1982—9:00 a.m.–5:00 p.m.
ANNUAL MEETING NEW YORK STATE CHAPTER, A.A.P.A.
IMPACT OF THE PSYCHIATRIC ADMINISTRATOR ON PATIENT CARE
Yoosef A. Haveliwala, M.D.
CREDIT: AMA Cat. 1 (6 Hrs.)
For further information contact Beverley R. Baptiste at 212-420-2000

NYU Medical Center Post-Graduate Medical School in Cooperation with The Page and William Black Post-Graduate School of Medicine of the Mount Sinai School of Medicine, CUNY

550 First Avenue, New York 10016
*Grand Hyatt Hotel, New York
Friday to Sunday, April 2–4, 1982
CT IMAGING OF THE HEAD & NECK
R. Thomas Bergeron, M.D., Norman E. Chase, M.D.
Peter M. Som, M.D.
CREDIT: AMA Cat. 1 (22½ Hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue
New York 10016, Tel. #212-340-5295.

Beth Israel Medical Center Cosponsored by the Page and William Black Post-Graduate School of the Mt. Sinai School of Medicine, CUNY 10 Nathan D. Perlman Place, New York 10003

*Loeb Auditorium
Hospital for Joint Diseases Orthopaedic Institute
301 East 17th Street, New York
Wednesday, April 14, 1982—8:30 a.m.–12:00 noon
THE CURRENT STATUS OF GASTROINTESTINAL CANCER:
A REVIEW AND UPDATE
Dr. Alvin M. Gelb
CREDIT: AMA Cat. 1 (15 hrs).
For further information contact Beverly R. Baptiste
Post-Graduate Education Office, Tel. 212-420-2000

Semmelweis Scientific Society

*New York Academy of Sciences
2 East 63rd Street
New York 10021
Friday, April 23, 1982 at 8:00 p.m.
IATROGENICALLY INDUCED RENAL FAILURE
Ervin A. Gombos, M.D.
CRYOSURGERY FOR SKIN CANCER
Laszlo Biro, M.D.
CREDIT: AMA & AAFP Category 1
For further information contact Otto C. Kestler, M.D., President
515 Madison Avenue, Suite 1720, New York, Tel. 212-758-2590

QUEENS COUNTY

Jamaica Hospital Medical Center

89th Avenue & Van Wyck Expressway
Jamaica
*Community Room
Noon–1:00 p.m., Mondays
PRIMARY CASE CONFERENCES
PSYCHIATRY
April 5
THE TROUBLED ADOLESCENT IN MEDICAL PRACTICE
Lester I. Abend, M.D.
April 12
MARITAL & FAMILY PROBLEMS IN MEDICAL PRACTICE
Henry Greenbaum, M.D.
April 19
LEGAL PITFALLS OF TREATMENT OF DISTURBED PATIENTS BY NON-PSYCHIATRIC PHYSICIANS
Stanley Brodsky, M.D.
April 26
DEPRESSION-CAUSES & TREATMENT
Jack Schnee, M.D.
*Community Room
10:45–11:45 a.m., Tuesday
April 6
ENDOCRINOLOGY & METABOLISM
REVIEW OF THYROID DISEASE—Part II
Lawrence Roseman, M.D.

ENDOCRINOLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room, on Tuesdays—Amar Jit Singh, M.D.
*Community Room
10:45–11:45 a.m., Tuesday

HEMATOLOGY
April 13
AUTOIMMUNE HEMOLYTIC ANEMIA
Malcolm E. Levine, M.D.

The following HEMATOLOGY LECTURES will be held on Wednesday, from 9:00 to 10:30 in the Trump Pavilion:
MEDICAL GRAND ROUNDS-PROGRESS IN MEDICINE
April 21
CURABILITY OF ACUTE LEUKEMIA

Fred Rosner, M.D.

HEMATOLOGY CASE PRESENTATION are conducted monthly, from Noon to 1:00, in the Community Room, on Tuesdays—Malcolm E. Levine, M.D. and Staff
HEMATOLOGY GRAND ROUNDS are conducted bi-monthly on Fridays, from 1:00-2:30 in the Community Room

*Community Room
10:45-11:45 a.m., Tuesdays
April 27
NEPHROLOGY
INTERSTITIAL NEPHRITIS
Emmanuel B. Masih, M.D.

NEPHROLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room, on Tuesdays—Amarjit Singh, M.D. & Emmanuel B. Masih, M.D. and Staff

*Community Room
10:45-11:45 a.m., Tuesdays
April 20
NEUROLOGY
MUSCLE DISEASES
Charles Huey, M.D.

NEUROLOGY CASE PRESENTATIONS are conducted monthly, from noon to 1:00 in the Community Room, on Tuesdays—Neurology Staff
TUESDAYS: 8:00-9:00, Rheumatology Case Presentations conducted by William A. O'Connell, M.D.
3:30-4:30, Infectious Disease Case Presentations conducted by Robert H. Lapin, M.D.

*Trump Pavilion
9:00-10:30 a.m., Wednesdays

MEDICAL GRAND ROUNDS & PROGESS IN MEDICINE
April 7
THE BLACK HYPERTENSIVE MALE & IMPOTENCE
Elijah Saunders, M.D.
April 14
CURRENT TREATMENT OF HYPERTENSION
Marvin Moser, M.D.
April 21
CURABILITY OF ACUTE LEUKEMIA
Fred Rosner, M.D.
April 28
TREATMENT OF MUSCULO-SKELETAL PAINS IN THE ELDERLY
Peter Barland, M.D.

WEDNESDAYS, 1:00-2:00, TUMOR BOARD—Fourth Wednesday—CLINICAL PATHOLOGY CONFERENCE, Assembly Room

*Community Room
8:30-9:30 a.m., Thursdays

CARDIOLOGY
April 1
ELECTROPHYSIOLOGY & PHARMACOLOGY OF VENTRICULAR ARRHYTHMIAS IN MYOCARDIAL INFARCTION
El Sharif, M.D.
April 22
HYPERTENSION IN THE BLACK POPULATION
Gerald Thomson, M.D.

The following CARDIOLOGY LECTURES are held on Wednesdays, from 9:00-10:30 in the Trump Pavilion: MEDICAL GRAND ROUNDS-PROGRESS IN MEDICINE
April 7
THE BLACK HYPERTENSIVE MALE & IMPOTENCE
Elijah Saunders, M.D.
April 14
CURRENT TREATMENT OF HYPERTENSION
Marvin Moser, M.D.

ECG & ARRHYTHMIAS CONFERENCES are held monthly, on Thursdays, from 9:30-10:30, Thomas A. Bizzaro, M.D.

*Community Room
9:30-10:30 a.m., Thursdays
April 15
INFECTIOUS DISEASES
INFECTION OF UNKNOWN ORIGIN
Robert H. Lapin, M.D.

INFECTIOUS DISEASES CASE PRESENTATIONS are conducted monthly, from 3:30 to 4:30 in the Community Room, on Tuesday—Robert H. Lapin, M.D.

*Community Room
9:30-10:30 a.m., Thursdays

ONCOLOGY
April 22
SENIOR ONCOLOGIST LOOKS AT BREAST CANCER
Mark Markham, M.D.

The following ONCOLOGY LECTURES are held on Wednesdays, from 9:00-10:30 in the Trump Pavilion; MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE

TUMOR BOARD 1:00-2:00, Wednesday, Fourth Wednesday—CLINICAL PATHOLOGY CONFERENCE
Assemby Room

*Community Room
9:30-10:30 a.m., Thursdays

RHEUMATOLOGY
April 29
DIAGNOSIS & MANAGEMENT OF CRYSTALLINE PRECIPITATED SYNOVITIS
Jon Stevenson, M.D.

The following RHEUMATOLOGY LECTURES will be held on Wednesday, from 9:00-10:30 in the Trump Pavilion: MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE
April 28
TREATMENT OF MUSCULOSKELETAL PAINS IN THE ELDERLY
Peter Barland, M.D.

RHEUMATOLOGY CASE PRESENTATIONS are conducted monthly, from 8:00-9:00 in the Community Room, on Tuesday, William A. O'Connell, M.D. and Staff

*Community Room
10:45-11:45 a.m., Fridays

MEDICAL GASTROENTEROLOGY
April 16
CHRONIC INTESTINAL ISCHEMIC SYNDROMES
Lawrence Brandt, M.D.
April 30
VISCERAL ANGIOGRAPHY
Heywood Y. Epstein, M.D.

MEDICAL GASTROENTEROLOGY CASE PRESENTATIONS are conducted on alternate Fridays, in the Community Room, 10:45-11:45—Robert T. Todaro, M.D., and Staff
FRIDAYS, Noon to 1:00, Assembly Room RADIOLOGY CONFERENCES, Emerick Demeter, M.D., & Staff, alternating with MEDICAL-PATHOLOGY-MORTALITY CONFERENCE, Elizabeth Khayat, M.D. & Staff, or PATHOLOGY GRAND ROUNDS, Department of Pathology, Cornell Medical Center

*Assembly Room
Noon-1:00 p.m., Fridays
April 23
PATHOLOGY GRAND ROUNDS
THE PLAMSA LIPOPROTEINS
Gordon F. Fairclough, Jr., M.D.

FRIDAYS, bimonthly, 1:00 to 2:30, Community Room, HEMATOLOGY GRAND ROUNDS
For further information contact The Jamaica Hospital Medical Center, Department of Medicine, 89th Avenue & Van Wyck Expressway, Jamaica 11418. Tel: 212/657-1800.

NASSAU COUNTY

Nassau County Medical Center sponsored by Department of Medicine, co-sponsored by The Office of Continuing Medical Education, Nassau County Medical Center

2201 Hempstead Turnpike
East Meadow
*Amphitheater Dynamic Care Building
10:00 a.m., Thursdays

April 1
UPDATE ON NEUROPATHIES
Walter G. Bradley, M.D.

April 8
DIAGNOSTIC MUSCLE FATIGUE IN THE OBESE
Michael G. Sampson, M.D.

April 15
ENDOCARDITIS CAUSED BY UNUSUAL STREPTOCOCCI
Rose Recco, M.D.

April 22
CHRONIC LYMPHOCYTIC LEUKEMIA
Robert Silber, M.D.

April 29
THE DEHUMANIZATION OF MEDICINE
Arthur Manoharan, M.D.
CREDIT: AMA Cat. 1
For further information contact Nassau County Medical Center, 2201 Hempstead Turnpike, East Meadow, 11554.

Long Island Jewish-Hillside Medical Center—Sponsored by Department of Surgery, LIJ Medical Center, The Post-Graduate Institute for Medical and Dental Education New Hyde Park, New York and the Health Sciences Center State University of New York at Stony Brook

April 1
SURGICAL PATHOLOGY IV
Leonard Kahn, M.D.

April 8
ADVANCES IN MANAGEMENT OF CONGENITAL CARDIAC ANOMALIES
Allan Wolpowitz, M.D.

April 15
VISITING PROFESSOR
THE CURABILITY OF BREAST CANCER
C. Barber Mueller, M.D.

April 22
GUEST LECTURER
INFLAMMATORY BOWEL DISEASE: POST-OPERATIVE COMPLICATIONS AND REOPERATION RATES
Adrian J. Greenstein, M.D.

April 29
CERTIFICATION AND RECERTIFICATION
Irving Margolis, M.D.
For further information contact Long Island Jewish-Hillside Medical Center, New Hyde Park 11042.

SUFFOLK COUNTY

Brookhaven Memorial Hospital Medical Center

101 Hospital Road
Patchogue
*1st Floor Conference Room
8:30 a.m., Saturday

April 3
MEDICAL GRAND ROUNDS
Allen Kaplan, M.D.
CREDIT: AMA Cat. 1 & AAFP

*2nd Floor Conference Room
8:00–9:00 a.m., Tuesday

April 20
PEDIATRIC GRAND ROUNDS
ANTIBIOTIC THERAPY IN THE PEDIATRIC SURGICAL PATIENT
Charles Dennis, M.D.
CREDIT: AMA Cat. 1 & AAFP

*1st Floor Conference Room
8:00–9:00 a.m., Tuesday
PEDIATRIC CONFERENCES

April 6
DRUG THERAPY FOR CONVULSIVE DISORDERS
David Rothner, M.D.
FEE: $10. CREDIT: AMA Cat. 1 & AAFP

*1st Floor Conference Room
8:00–9:00 a.m., Fridays
CLINICAL PROBLEMS IN FAMILY MEDICINE

April 2
EMPIRIC USE OF ANTIBIOTICS
Stephen Weitzman, M.D.

April 16
OPPORTUNISTIC INFECTION
Leon Smith, M.D.

April 23
PUBLIC HEALTH
TROPICAL DISEASES HERE ON L.I.
Richard Berman, M.D.

April 30
SEXUALLY TRANSMITTED DISEASES
Yehudi Felman, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Dorothy S. Lane, M.D., Director of Medical Education, Brookhaven Memorial Hospital Medical Center, 101 Hospital Road, Patchogue, 11772. Tel.: 516/654-7797.

BUFFALO

State University of New York at Buffalo Children's Hospital

219 Bryant Street
Buffalo
*The Pillar and Post Inn
Niagara-on-the-Lake
Ontario, Canada

April 16–17
THE 4TH ANNUAL NEONATAL/PERINATAL SPRING SYMPOSIUM PRESENTS INFECTIOUS DISEASES
Ralph J. Wynn, M.D.
FEE: $70. CREDIT: AMA Cat. 1 (8 hrs.)
For further information contact SUNY at Buffalo, Children's Hospital, 219 Bryant Street. Buffalo 14222. Tel: 716/878-7630.

The Niagara Frontier Colon and Rectal Society *School of Nursing Auditorium of Buffalo General Hospital

Saturday, April 24, 1982 at 8:00 a.m.
A REVIEW OF COLON AND RECTAL SURGERY
For further information contact Amarjit Singh, M.D.
Tel. 716-883-0550

ROCHESTER

University of Rochester and the Rochester Ophthalmological Society

Rochester

April 16–17
TWENTY-SEVENTH ANNUAL ALBERT C. SNELL MEMORIAL LECTURE
RETINOBLASTOMA
Robert M. Ellsworth, M.D.
Invited guests lecturers, William H. Jarrett, M.D., Allen M. Putterman, M.D. and David Smith, M.D.
For further information contact the Program Chairman, Primitivo D. Roca, M.D., 277 Alexander Street, Rochester 14607.

SCHEDULE OF SCIENTIFIC MEETINGS

1982 ANNUAL CME ASSEMBLY

Medical Society of the State of New York
Rye Town Hilton, Port Chester, New York

FRIDAY, JUNE 25

Morning:
Anesthesiology/Surgery (General Session)
Emergency Medicine/Radiology (General Session)
Medical Legal & Workers' Compensation Matters/Occupational Medicine (General Session)
Obstetrics & Gynecology
Orthopedic Surgery

Afternoon:
Chest Diseases
Dermatology & Syphilology
Emergency Medicine/Radiology (General Session-cont'd)
Gastroenterology, Colon & Rectal Surgery
Hand Surgery (General Session)
Obstetrics & Gynecology (cont'd)

SATURDAY, JUNE 26

Morning:
Cancer (General Session)
Cardiovascular Diseases
Internal Medicine
Neurology & Neurosurgery (General Session)
Ophthalmology
Urology

Afternoon:
Cancer (General Session—cont'd)
Internal Medicine (cont'd)
Ophthalmology (cont'd)
Otolaryngology
Pathology

SUNDAY, JUNE 27

Morning:
Allergy & Immunology
Physical Medicine & Rehab.
Plastic, Reconstructive & Maxillofacial Surgery (General Session)
Preventive Medicine
Psychiatry/Pediatrics/School Health/Family & General Practice (General Session)

◆

CME CREDITS: Each program will be eligible for CME Category I Credits on an hour-for-hour basis

◆

SCIENTIFIC & TECHNICAL EXHIBITS

physicians' placement opportunities

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Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

Please send information to the Editor, WHAT GOES ON,
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Telephone 516-488-6100

ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello, N.Y. 12701. Tel: 914/794-4900.

ANESTHESIOLOGIST

MONTICELLO, N.Y., contact Carl K. Heins, M.D., Hamilton Avenue Hospital, Monticello 12701. Tel: 914/794-4545.
SARATOGA SPRINGS, N.Y., contact Allen T. Jones, 384 Broadway, Saratoga Springs 12866. Tel: 518/584-1978.
WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

COMMISSIONER OF HEALTH

POUGHKEEPSIE, N.Y., contact Andree F. Sullivan, New Tower, Vassar Brothers Hospital, Poughkeepsie 12601. Tel: 914/452-2140.

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UTICA, N.Y., contact Irving Cramer, M.D., Medical Director, St. Luke's Memorial Hospital Center, P.O. Box 479, Utica 13503.

ENT

GLENS FALLS, N,Y., contact Orei Friedman, M.D., 591 Glen St., P.O. Box 444, Glens Falls 12801. Tel: 518/792-1404.
LONG BEACH, N.Y., contact Oscar Sreter, M.D., 270 Edward Blvd., Long Beach 11561. Tel: 516/431-7861.
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BATH, N.Y., contact W. A. Klepack, Box 831, Bath 14810. Tel: 607/776-6438 call collect.
BINGHAMTON, N.Y., contact Broome County Medical Society. Tel: 607/729-9261.
HICKSVILLE, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.
HUNTINGTON, N.Y., contact Douglas R. Phillips, M.D.,1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.
ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.
MARGARETVILLE, N.Y., contact Joseph Kehoe, Adm., Margaretville Hospital, Margaretville 12455. Tel: 914/586-2631.
NEW PALTZ, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel: 914-255-1200.
OLEAN, N.Y., contact Dr. John S. Reach, 2223 W. State St., Olean 14760. Tel: 716/372-7600.
ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.
OSWEGO, N.Y., contact J. Sherwood Dunham, Oswego Hospital, 110 West Sixth Street, Oswego 13126. Tel: call collect 315/349-5526.
POUGHKEEPSIE, N.Y., contact B. Lipton, M.D., 79 Hooker Avenue, Poughkeepsie 12601. Tel: 914/454-3232.
STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.
TONAWANDA, N.Y., contact Mrs. Sophie Rosokoff, 128 Delaware St., Tonawanda 14150. Tel: 716/693-6715.
VICTOR, N.Y., contact Victor Medical Associates, 7120 Lane Road Extension, Victor 14564. Tel: 716/924-5120.

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INTERNIST

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ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.
LITTLE FALLS, N.Y., contact Nicholas A. Prisco, Adm., Little Falls Hospital, 140 Burwell Street, Little Falls 13365. Tel: 315/823-1000, ext. 261 or 262.
MANHATTAN, N.Y., contact A. J. Cuti, M.D., Flower-Fifth Family Medical Office, 10 East 107th Street, N.Y. Tel: 212-369-2211.
NEW PALTZ, ULSTER, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel. #914-255-1200.
NEW YORK, N.Y., contact I. W. Eagle, M.D., 41 West 125th Street, New York 10027. Tel: 212/289-5795.
ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.
ROCHESTER, N.Y., contact A. D. Crown, M.D., 7 Sandle Drive, Fairport 14450. Tel: 716/586-0443.
SIDNEY, N.Y., contact John W. Sands, Adm., The Hospital, Sidney 13838. Tel: 607/563-3512.
STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.
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BINGHAMTON, N.Y., contact Dr. Joseph B. Watrous, Jr., 137 Hawley Street, Binghamton, N.Y. 13903 Tel. 607-772-0246.
NORWICH, N.Y., contact Errorl G. Jacobi, M.D., Medical Arts Bldg., Norwich 13815. Tel: 607/334-2756.
NORWICH, N.Y., contact Richard B. Foster, M.D. 129 N. Broad Street, Norwich 13815. Tel: #607-334-9229.
PORT JEFFERSTON STATION, N.Y., contact Howard Gelfand, M.D., 9 Medical Drive, Pt. Jefferson Station 11776. Tel: 516/331-1120.
WALTON, N.Y., contact Thomas E. Lavell, M.D., 1 Titus Place, Walton 13856. Tel: 607/865-6526.

OPHTHALMOLOGIST

JERICHO, N.Y., contact Norman Yourish, M.D., 400 N. Broadway, Jericho 11753. Tel: 516/681-2220.
TROY, N.Y., contact Robert M. Webb, M.D., 213 Pawling Avenue, Troy 12180.

ORTHOPEDIST

OSWEGO, N.Y., contact J.Sherwood Dunham, Coordinator, 110 West Sixth St., Oswego, 13126. Tel: call collect 315/349-5526.

ORTHOPEDIC SURGERY

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JOHNSON CITY, N.Y., contact Farouq Al-Khalidi, M.D., 370 Main St., Johnson City 13790.

WARWICK, N.Y., contact Bruce A. Smith, Adm., St. Anthony Community Hospital, 15–19 Main Ave., Warwick 10990. Tel: 914/986-2276.

PEDIATRICS

MANHATTAN, N.Y., contact A. J. Cuti, M.D., Flower-Fifth Family Medical Office, 10 East 107th Street, N.Y. Tel. 212-369-2211.

AMA'S PHYSICIANS' PLACEMENT SERVICE

Physicians seeking placement opportunities outside New York State should contact AMA, Physicians' Placement Service, 535 N. Dearborn Street, Chicago, Ill. 60610. Tel: 312/751-6000 and also refer to the physicians' opportunities listed in the classified ad section of *JAMA*, the Journal of the AMA.

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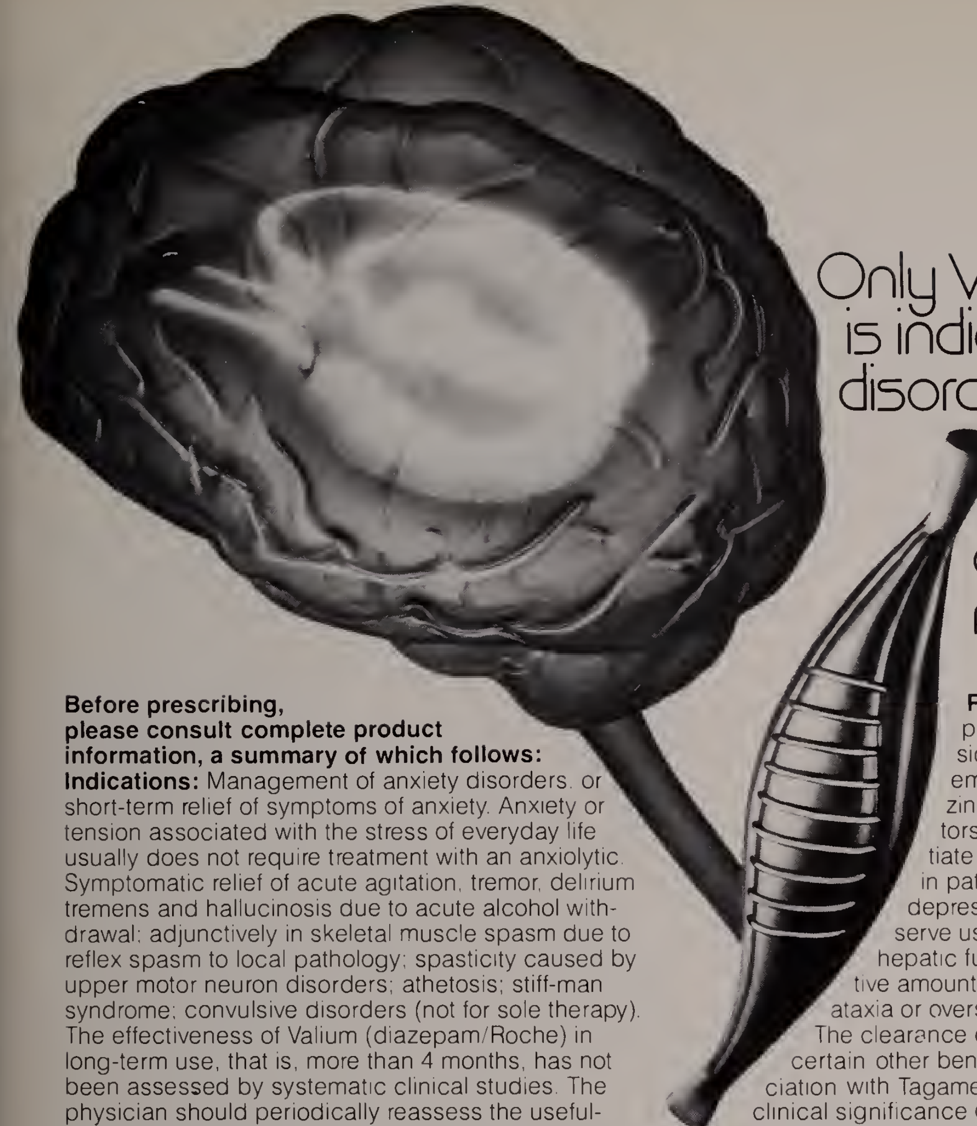
When completed, please return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Tel. 516/ 488-6100.



Only Valium® (diazepam/Roche) is indicated in anxiety disorders and as an adjunct in the relief of skeletal muscle spasm

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Indications: Management of anxiety disorders, or short-term relief of symptoms of anxiety. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. Symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy). The effectiveness of Valium (diazepam/Roche) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

The clearance of Valium (diazepam/Roche) and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

How Supplied: For oral administration, Valium scored tablets—2 mg, white; 5 mg, yellow; 10 mg, blue—bottles of 100* and 500;* Prescription Paks of 50, available in trays of 10.* Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25,† and in boxes containing 10 strips of 10.†

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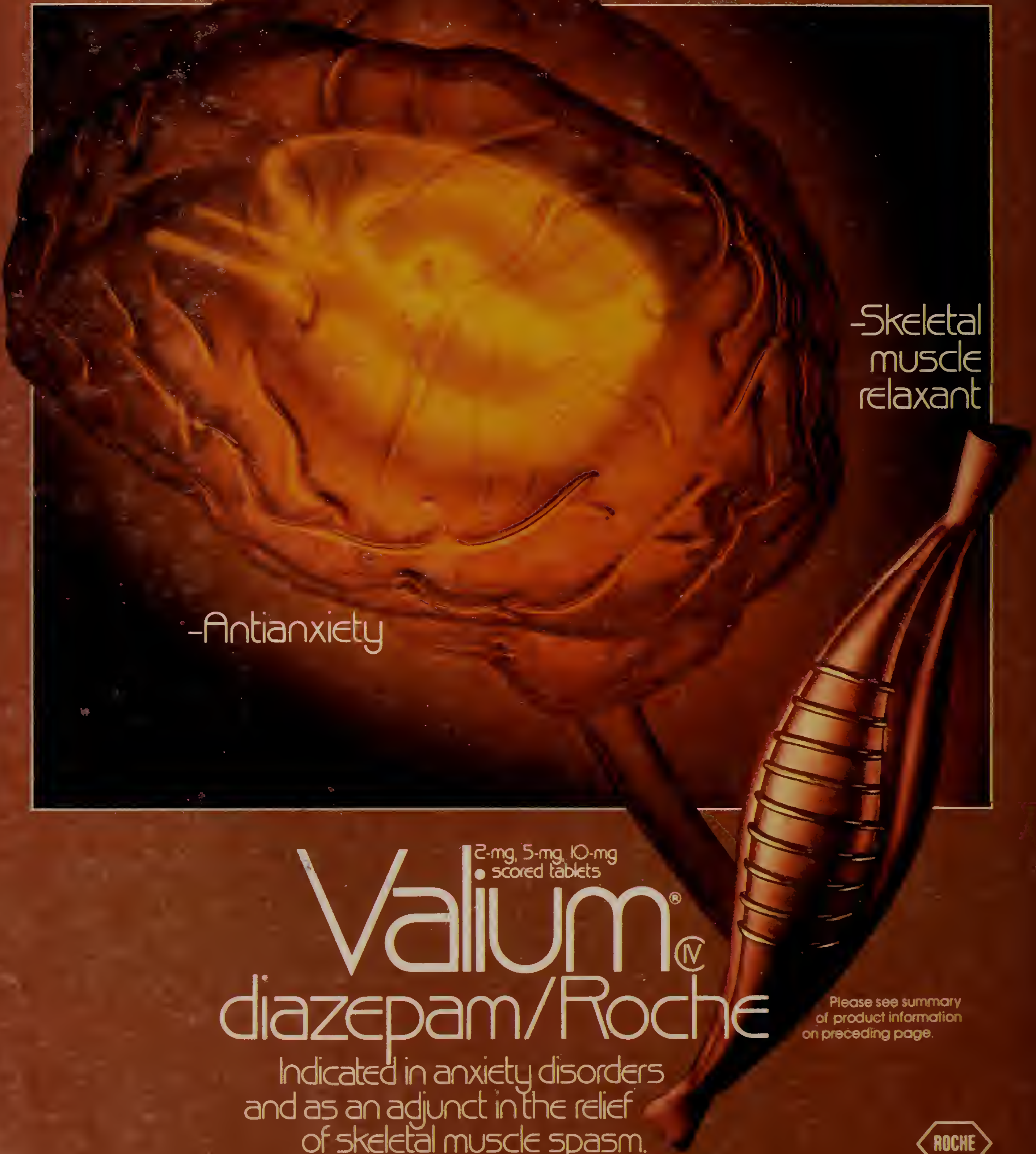

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of skeletal muscle spasm.

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MARCH 1982

vol 82 #4

Proceedings of the House of Delegates
Medical Society of the State of New York
175th Annual Meeting, October 11-14, 1981
New York City

and

Official Position Papers
of the
Medical Society of the State of New York

MINUTES OF THE ANNUAL MEETING

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Important

Your Next Meeting

The 176th Annual Meeting of the Medical Society of the State of New York will be held at the Concord Hotel, Kiamesha Lake, New York on . . .

November 7–10, 1982

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New York State Journal of Medicine

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Medical Society of the State of New York

House of Delegates

Minutes of the Annual Meeting*

October 11 through 14, 1981

The 175th Annual Meeting of the House of Delegates of the Medical Society of the State of New York was convened at the Grand Hyatt Hotel, Park Avenue at Grand Central, New York City, on Sunday, October 11, at 1:00 p.m.; on Tuesday, October 13, at 9:00 a.m.; and on Wednesday, October 14, at 9:00 a.m.; Joseph F. Shanaphy, M.D., Speaker; John L. Clowe, M.D., Vice-Speaker; Victor J. Tofany, M.D., Secretary; Allison B. Landolt, M.D., Assistant Secretary.

OPENING PROCEEDINGS

INVOCATION AND NATIONAL ANTHEM

. . . Speaker Shanaphy introduced Rabbi Ronald B. Sobel, Ph.D., of the Temple Emanu-el in New York City, who gave the invocation. This was followed by the National Anthem . . .

REPORT OF THE REFERENCE COMMITTEE ON CREDENTIALS

. . . William A. Schwarz, M.D., Chairman of the Committee on Credentials, reported that 178 delegates were registered; Secretary Tofany reported that a quorum was present. Speaker Shanaphy then declared the 175th session of the House of Delegates open for transaction of business . . .

MEMORIAL TRIBUTE

. . . Speaker Shanaphy read the names of the deceased members of the House of Delegates as follows:

Albany County: **William Henry O'Brien,** county delegate 1957.

Erie County: **John Daniel Naples, Sr.,** county delegate 1945 to 1948, 1954 to 1955, and 1958 to 1966, eighth district branch delegate 1967 and 1968.

Kings County: **Adrian Collinswood Lamos,** county delegate 1965, 1967 to 1971, and 1973 to 1976; **Anthony Wayne Martin Marino, Sr.,** county delegate 1941, 1945 to 1948, 1953 to 1955, and 1958, section on gastroenterology and proctology delegate 1949 and 1950, and vice-president of MSSNY 1968.

New York County: **May Edward Chinn,** county delegate 1959, 1960, and 1963 to 1967; **Michael Raymond Deddish,** section on gastroenterology and proctology 1962; **Lawrence Essenson,** county delegate 1954, 1957, 1958, 1965 to 1967, 1969 to 1972, and 1974 to 1975; **Samuel Karelitz,** section on pediatrics delegate 1964; **Oma Henry Price,** county delegate 1971 to 1977; **Theodore Rosenthal,** county delegate 1961, 1962, 1964, and 1971, section on preventive medicine and public health delegate 1963; **M. Theresa Scanlan,** county delegate 1947 to 1949, 1955, 1956, and 1958.

Oneida County: **Irwin Alper,** county delegate 1957 to 1962.

Otsego County: **Mahlon Charles Halleck,** county delegate 1944 to 1947.

Schenectady County: **Isaac Shapiro,** section on neurology and psychiatry delegate 1960.

---

* A verbatim copy of the proceedings of the House of Delegates is on file at the Headquarters Office of the Medical Society of the State of New York, 420 Lakeville Road, Lake Success, New York 11042.

Suffolk County: ***Francis John O'Neill***, county delegate 1953 to 1956.

Warren County: ***Francis Xavier Dever***, fourth district branch delegate 1968 to 1972.

. . . The House rose and stood for a moment of silence . . .

. . . The following memorial resolutions were presented to the House by the president or delegates of respective county medical societies and were unanimously adopted by the House . . .

Resolution 81-5, Thomas F. McCarthy, M.D.

Introduced by Bronx County Medical Society

Whereas, Thomas F. McCarthy, M.D., a Past-President of the Bronx County Medical Society and of the Medical Society of the State of New York, died on January 12, 1981, at the age of 77 years; and

Whereas, Dr. McCarthy was born in Lawrence, Massachusetts, on September 3, 1903. He graduated from Villanova University, and received his M.D. from Tufts University on June 20, 1927; and

Whereas, Dr. McCarthy, a general surgeon, interned at St. Francis Hospital in The Bronx, where he later became Director of Surgery. He also held attending or consulting appointments at Morrisania and Union Hospitals, and was the Director of Surgery at the Frances Schervier Home and Hospital; and

Whereas, He was elected to membership in the Bronx County Medical Society on April 15, 1931. He became Chairman of the Medical Economics Committee and served in that capacity for many years, becoming an authority on the subject. As well as being a member of the Comitia Minora, he was Chairman of the Malpractice Insurance Committee, and the Board of Censors, and was a member of the Board of Trustees. He was elected a delegate to the Medical Society of the State of New York in 1946, and held that position for 18 years; and

Whereas, Dr. McCarthy was elected President of the Medical Society of the State of New York in 1973–74. He was Assistant Treasurer from 1964 to 1967, and Treasurer from 1968 to 1972; and

Whereas, Besides his very active participation in the Medical Society at both the county and state levels, he was President of the Bronx Surgical Society and a member of the Bronx Catholic Physicians Guild; and

Whereas, Dr. McCarthy's long illustrious career was highlighted by the many honors conferred on him by his colleagues, who recognized his integrity and valued his leadership; therefore be it

Resolved, That the House of Delegates of the Medical Society of the State of New York express its deep sorrow on the passing of Thomas F. McCarthy, M.D.; and be it further

Resolved, That this resolution be published in the minutes of this meeting of the House of Delegates, and a copy of this resolution be sent to his family as an expression of our deep sympathy and high esteem for Thomas F. McCarthy, M.D., our distinguished colleague.

Resolution 81-8, Frederic W. Holcomb, Sr., M.D.

Introduced by Medical Society of the County of Ulster

Whereas, Frederic W. Holcomb, Sr., M.D., died on October 9, 1980, at Benedictine Hospital, Kingston, New York, after an acute myocardial infarction; and

Whereas, He was a life member of the Medical Society of the County of Ulster, the Medical Society of the State of New York, and the American Medical Association; and

Whereas, He served as Ulster County delegate in 1932 and 1934 to 1947, third district delegate in 1948, and MSSNY Councilor in 1949; and

Whereas, He was elected Vice-Speaker of the House of Delegates, serving in 1950 and 1951, and Speaker from 1952 to 1957. He was a Trustee of MSSNY from 1957 to 1963; and

Whereas, He was elected alternate AMA delegate from 1951 to 1955, delegate in 1956 and 1957, and again alternate delegate in 1959 and 1960; and

Whereas, He received the President's Citation in 1966 for long and varied community service outside the realm of the practice of medicine; therefore be it

Resolved, That this House of Delegates express its sorrow at the passing of this distinguished physician, county and state society servant and officer, citizen, husband, father, and friend, Frederic W. Holcomb, Sr., M.D.; and be it further

Resolved, That this resolution be a part of the proceedings of this House of Delegates, and that a copy be sent to his family.

Resolution 81-56, James I. Farrell, M.D.

Introduced by Medical Society of the County of Oneida, Inc.

Whereas, James I. Farrell, M.D., died on May 26, 1981, at Faxton Hospital, Utica, New York, after several months of illness; and

Whereas, He was a life member of the Medical Society of the County of Oneida, the Medical Society of the State of New York, the American Medical Association, a Fellow of the American Academy of Ophthalmology, and a Diplomate of the American Board of Ophthalmology; and

Whereas, He was a delegate in the House of Delegates for many years representing the Section on Ophthalmology; therefore be it

Resolved, That this House of Delegates of the Medical Society of the State of New York express its sorrow at the passing of this distinguished physician, county and state society servant, citizen, husband, father, and friend, James I. Farrell, M.D.; and be it further

Resolved, That this resolution be a part of the proceedings of this House of Delegates, and that a copy be sent to his family.

INTRODUCTION OF NEW DELEGATES

. . . Speaker Shanaphy introduced the following new delegates who were applauded by the House . . .

COUNTY DELEGATES

Kavasseri S. Agneshwar, Broome
Robert S. Bernstein, New York
Donald W. Bidwell, Seneca
John D. Cahill, The Bronx
George W. Calvosa, Kings
Elvio S. Conte, The Bronx
Carlo E. DeSantis, Monroe
William A. Dolan, Monroe
James F. Durkin, Cattaraugus
Thomas P. Engster, Rensselaer
Wilbur J. Gould, New York
Michael H. Grieco, New York
Philip M. Iorio, Tompkins
Chester E. Kaminester, Nassau
S. Sheldon Katz, Rockland
Richard H. Lange, Schenectady
Daniel Bushell Levin, Wyoming
George William Lewis, Chautauqua
Michael J. Lynch, Washington
Norman C. Lyster, Jr., Chenango
Siegfried Mayer, The Bronx
Hugo M. Morales, The Bronx
Donna B. O'Hare, New York
Stanley H. Oransky, Rockland
Stuart I. Orsher, New York
James F. Phillips, Erie
William S. Reed, Lewis
Eugene M. Renzi, Jefferson
J. Arthur Riesenberg, Sullivan
John Peter Roberts, Ulster
Harold S. Ross, Ontario
Morton M. Safran, Queens
Jerome H. Siegel, New York
Samuel Simon, Dutchess
Kenneth W. Trout, Westchester
Raphael M. Verdile, Jr., Rensselaer
William J. Walsh, Jr., Westchester

DISTRICT DELEGATES

Paul C. Lehmuller, Nassau
Stanley Luftschein, The Bronx

SECTION DELEGATES

Fred Antonowich, Westchester
Jack Hardy Carleton, Orange
Lawrence T. Chiarmonte, Queens
Emanuel Chusid, Westchester
John Stewart Davis, Otsego
Fouad B. Michael, Nassau
Irving M. Ratner, The Bronx
Jack Sokolow, Queens

MEDICAL SCHOOL DELEGATES

Stanley L. Lee, Kings
Linda D. Lewis, New York
Albert S. Lyons, New York

MEDICAL STUDENT DELEGATE

Matthew Joseph Kuhn, Broome

APPROVAL OF THE MINUTES OF THE 1980 MEETING

. . . The minutes of the September/October, 1980, session were approved as published in the March, 1981, issue (Volume 81, Number 4) of the New York State Journal of Medicine.

REFERENCE COMMITTEES

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William A. Schwarz, Richmond, *Chairman*
Norman Burg, Ulster
Vernal G. Cave, Kings
John D. States, Monroe
Paul W. Sum, Cattaraugus

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President-Elect
Secretary
Treasurer
Board of Trustees
Budget and Finance
Executive Vice-President
New York Delegation to the AMA
District Branches
Committee on District Branches
Physicians' Home
Research and Development
Résumé of Instructions from the 1980 House of Delegates and Actions Thereon by the Council, Board of Trustees, Executive Committee, Officers, Council Committees, and Governmental Agencies

Robert E. Gordon, Kings, *Chairman*
David M. Benford, New York
B. Basil Hyman, Richmond
John T. Prior, Onondaga
William C. Stein, Niagara

Bylaws

Edgar P. Berry, New York, *Chairman*
James M. Flanagan, Wayne
Allison B. Landolt, Westchester
George Lim, Oneida
Daniel F. O'Keeffe, Warren

Scientific Activities, Publications, and Miscellaneous

Administrative Committee for the MSSNY Pension Program
Awards and Prize Essays
General Insurance
Medical School Relationships

Membership Benefits
New York State Society, American Medical Assistants, Advisory to
Publications
William P. Clark, Westchester, *Chairman*
James H. Cosgriff, Jr., Erie
Richard N. Pierson, Jr., New York
Charles R. Salamone, Monroe

Public Health and Education

Accident and Injury Prevention
Aging and Nursing Homes
Alcoholism
Cancer
Cardiovascular Disease
Child Abuse
Drug Abuse
Emergency Health Services
Environmental Quality
Health Care in Correctional Institutions
Maternal and Child Health
Medical Aspects of Sports
Mental Health
Metabolic Diseases
Physical Medicine and Rehabilitation
Preventive Medicine
School Health

Continuing Medical Education
Forensic Medicine
Information Technology in Medicine
Physicians' Committee
Scientific Program
Ralph E. Schlossman, Queens, *Chairman*
Matthew J. Kuhn
Dattatraya G. Lanjewar, The Bronx
Nathaniel B. Messinger, Suffolk
Frederick J. Michel, Schoharie

Medical Services

Cost Containment
Health Manpower and Rural Medical Service
Health Systems Agency Coordinating Committee
Hospital and Professional Relations
IPA-HMO
Interspecialty
Medicaid
Medical Care Insurance
PSRO
Socioeconomics
Workers' Compensation and Occupational Health
Duane M. Cady, Onondaga, *Chairman*
Charles S. LaMonte, New York
Felix R. Rosenhain, Queens
Tamarath K. Yolles, Suffolk

Governmental Affairs and Legal Matters

Ethics
Judicial Council
Federal Legislation
State Legislation
New York State Association of the Professions
Professional Medical Liability Insurance and Defense Board
Ad Hoc Committee to Meet with the Association of Trial Lawyers

Samuel M. Gelfand, Nassau, *Chairman*
Joyce M. McChesney, Monroe
Victor A. Panaro, Erie
Seymour R. Stall, Dutchess
M. Theodore Tanenhaus, Kings

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Carl E. Marlow, Onondaga
Bentley D. Merrim, Kings
James R. Nunn, Erie

Sergeant at Arms

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Fred N. Flatau, Queens
Edmond J. Gicewicz, Erie
Thomas W. Greenlees, Schoharie
Donna Brayton O'Hare, New York

REFERRAL OF ANNUAL REPORTS, SUPPLEMENTARY REPORTS, AND RESOLUTIONS

. . . On motion of Secretary Tofany, the annual and supplementary reports of Officers, the Board of Trustees, the New York Delegation to the American Medical Association, District Branches, Council committees, Standing Committees, and special committees, and resolutions that had been printed and distributed to the members of the House were referred to the appropriate reference committees without reading.

---

* Medical Student Membership Delegate.

ADDRESSES TO THE HOUSE

*PRESIDENT-ELECT**

Mr. Speaker, members of the House of Delegates, distinguished guests, ladies and gentlemen — greetings.

I would like you to join me for a few minutes in a bit of a fantasy — and don't be confused by my use of the past tense.

On November 9, 1982 — that's next year, 1982 — a news story appeared in newspapers around the State with a headline that read:

> **Medical Society**
> **of the State of New York Dissolved;**
> **Doctors Charge**
> **Failure to Solve Every Problem**

What follows is the genesis of that newspaper account.

In the 1982 House of Delegates, four almost identical resolutions were introduced by Districts 1, 2, 8, and 9. The thrust of the resolutions was that the Medical Society of the State of New York cease to function as a State organization, and that its affairs be terminated within sixty days of the passage of the resolutions. This would be accomplished by making the Society insolvent, the only legal basis for dissolution, through mass resignations by the physicians in the districts involved, an action they had previously affirmed in their local forums.

The "whereases" of the resolutions were replete with the reasons for the action to be taken. Among others, it was charged, the Society was not aggressive enough, it did not communicate enough, litigate enough, demonstrate enough, educate enough — plus a few additional "enoughs." Its lobbying efforts were a dismal failure, and its creation of a captive insurance company, they said in hindsight, was a gross error.

Testimony before the Reference Committee played to a packed house. The debate was strident and bitter, the House debate even more acrimonious. But in the end a resolution was adopted. It called for the cessation operation by the Medical Society of the State of New York within sixty days; and for the appointment of a caretaker group consisting of the last duly elected officers and the Council to oversee the distribution of the Society's assets.

In short order mass resignations, as was anticipated, were submitted by the physicians in the districts that had proposed the resolutions. This made it clear that the Society faced insolvency, and steps were taken in the Supreme Court of the State to dissolve the Society.

Within a week the caretaker group met to comply with the resolution. Preparations were made to dispose of the headquarters at Lake Success through auction. The building and property, which had recently been appraised at somewhat over $7,000,000, was disposed of at a distress sale to an agent representing an unknown buyer for half the price. It was later learned that the buyer was the New York State Association of Chiropractors. In an interview with the press, the president of that association was quoted as saying, "We finally manipulated the physicians; however, adjustments will have to be made in the building's structure."

For several months calm and serenity prevailed. But then things began to happen. On January 10, 1983, the Chairman of the Workers' Compensation Board, with the blessings of the Governor, sponsored a bill in the Legislature that would mandate its fee schedule as the maximum fee schedule. (A year before, a similar bill had been bottled up in committee through the efforts of the State Medical Society.) Now, with no organized opposition, the bill was passed. Shortly thereafter the Chairman of the Workers' Compensation Board announced a new schedule pegged at 90% of the fee schedule in place as of January 1980. A hastily formed ad hoc doctors group asked for a meeting with him, but he respectfully declined on the ground that he was legally required to deal only with the President of the Medical Society of the State of New York, and that no longer existed.

Over the next eighteen months other things began to happen:

The "No-Fault" suit was dropped for lack of funds and lack of a sponsor.

The Department of Social Services reintroduced its plans for "deferrable surgery" and for mandated second opinions and preadmission certification. It was also giving an attentive ear to those seeking the names of physicians who performed abortions under the Medicaid Title XIX program.

Many other things happened, but I won't bore you with the details.

The physicians of the State, however, were far from bored. All of the actions I described, plus others, they soon recalled, had been fought — and defeated — by the now dead Medical Society of the State of New York. So they grumbled, and they complained bitterly, and agreed that something had to be done. They formed "crisis" committees. One was a Coalition Crisis Committee of Concerned Physicians, another the Coalition of Physicians Concerned with Crisis — and one with a long title, the Coalition of Physicians and Concerned Citizens to Combat the Collapse of Quality Medical Care in the State of New York.

Need I go on? I think my point is clear. But instead of stopping in the middle of my fable, I owe it to you to let you know what happened as these groups tried to meet (never with more than 100 physicians in attendance), to collect campaign funds (with little success), to decide on a course of action (with the same results as at the Tower of Babel), and to create a coalition of the various coalitions for a joint effort in their common interest. That never got off the ground.

As with most fairy tales, however, my story has a happy ending. In May, 1985, a group of physicians in the areas previously designated as Districts 1, 2, 8, and 9 met. They had just one item on their agenda. What they accomplished was reported in small type in one news account:

---

* Dr. Rosenberg addressed the House on Wednesday morning during the Annual Meeting of the Medical Society of the State of New York.

PHYSICIANS UNDERTAKE REESTABLISHMENT OF
STATE MEDICAL SOCIETY;
CALL IT "INDISPENSABLE" TO HEALTH CARE AND
PRACTICE OF MEDICINE

It would be nice to be able to add the line that ends most fairy tales, "And they lived happily ever after." But that didn't happen, because it seldom happens, and I even think there are real benefits when it doesn't happen too easily.

While all this may sound like a chapter from Fantasy Island or the silly musing of a newly elected President, something like what I have just unfolded actually took place almost a hundred years ago, in February of 1884, when a schism of such magnitude occurred among the physicians of this State that there actually existed side by side, two State societies! One was the Medical Society of the State of New York, and the other called itself the New York State Medical Association.

The reason for that break pales into insignificance when compared to the problems besetting us today. Yet it was not until 1905 — more than twenty years later — that physicians with both vision and frustration understood from bitter experience the destructive influence of factionalism, and they once again joined in a single voice in the embodiment of the Medical Society of the State of New York.

But as I look ahead and around me, there's something that disturbs me. And I would be less than candid if I did not bring it forward. But I do so not so much in criticism — for I do not exclude myself from this self-criticism — but in the hope and belief that it will help to bring us all together to work constructively and effectively for our common good. For what is at stake is our common good — and that of the public we serve.

We are now in the midst of a very serious problem — what the McGill Commission said could lead to the "imminent breakdown" of our medical liability system. I think we're close to that. But we've had problems before, and we'll have them in the future. And what bothers me is that I see symptoms of reactions which, if unchecked, could lead to debilitation rather than strength, divisiveness rather than unity, disenchantment and factionalism rather than the joint and vigorous action that only a strong, collective voice can produce.

Make no mistake. No "splinter group" or "single issue" group, however well intentioned, has ever survived in the long history of medicine in this State, and "quick fixes" or "instant solutions" generally wind up as instant sellouts that are usually costly and nonproductive.

Yes, we can criticize — and by all means let's do so — and we can argue and disagree, but I think we must all recognize a simple truth — that no single group of physicians in the State with narrow parochial interests can possibly have the financial wherewithal, the organizational backup, the broad-based program, the specialized personnel, the varied resources, the continuity — in short, the clout — available to the State Society and with the positive impact on medical affairs and the health care system of New York that the Society has exerted.

If these words have a touch of pessimism, which is usually not part of my nature, I prefer to look upon them as an expression of optimism as I weigh our present positive attributes, and as I look even at our weaknesses and frustrations and, on occasion, failures. But I know that by joining ranks we can with determination, collaboration and reasoned debate and consensus attain the objectives we all seek for our profession, for ourselves, and the people of this State.

There is much for us to do — together. We must communicate better, educate better, broaden our involvement in the community around us, be more responsive to our membership, listen more. And that relationship must be a two-way street. A marvellous potential exists within this Society and in our ranks.

And those ranks must be expanded and strengthened. Attrition can be as deadening as divisiveness. In the last decade there has been a decrease of 3,000 active members in our Society, at a time when the State Department of Education estimates that 3 to 4,000 new physicians are certified every year and the State Society, through its membership development and computer divisions, has been able to identify 34,000 nonmember physicians.

If there has ever been a time when we need all of the physicians of the State in our ranks — and when they need us — it is now. And if there is any single organization or common denominator that can speak and act for all of the physicians in this State, regardless of their special or individual interests and whether or not they belong to organized medicine, it is the Medical Society of the State of New York. This is the message we must bring to our unaffiliated colleagues, and this is a task we must undertake with particular vigor this year — by all of us as individuals, and through our county and State societies.

Each one of us has a vested interest, and the State Society can help us; we need not apologize for that. Each one of us also has a professional, ethical interest, and through our Society we have been able — and shall continue — to translate that into the best medical and health care system in the world for the benefit of the people of this State. Of that we can be proud.

My time of office is short. I will not indulge in pious platitudes or assume a mantle of false modesty. I was elected, I assume, for a purpose. That purpose is to expend whatever energy I possess to fulfill the responsibility of the presidency on behalf of *all* our members and the continuation of quality medicine in this State. And also to do all I can to make certain that when I leave this office one year hence, the State Society will be stronger than ever; that its active membership rolls will be enhanced; that its objectives and undertakings, as enunciated by this House, representing your constituencies, will be articulated and achieved; that its deficiencies will be ameliorated; so that the House of Delegates in 1982 or any time thereafter will never have to grapple with the resolutions I have fantasized.

There's a job to be done — *by* all of us, and *for* all of us. Let's get on with it!

. . . The House rose and applauded as Dr. Rosenberg left the podium . . .

PRESIDENT OF THE MEDICAL LIABILITY MUTUAL INSURANCE COMPANY*

. . . Speaker Shanaphy introduced Arthur Mannix, Jr., M.D., President of the Medical Liability Mutual Insurance Company, who addressed the House as follows:

Mr. Speaker, Mr. President, members of the House. I consider it a singular, although not unique, honor to address the House of Delegates today.

I make no apologies for those who bemoan the fact that there are interlocking directorships between our company and this Society. It is fitting and proper that we have a very close relationship because our aims are the same and the company had its genesis in this House of Delegates in 1975.

I should like to bring you an updated report on the status of premiums and where we stand. It is common knowledge that we are filing and have filed for a 52 percent increase in premiums. We are currently in a stipulation with the Insurance Department wherein they have certified, in writing, that they will on, or prior to, November 1, either approve our premium filing or disapprove it, with reason. Should they approve it, then it is retroactive to the first of July and this company will, at the earliest possible moment, bill for the unbilled portion of the premium represented by the 52 percent increase. This will enable those of you who are interested in planning for tax abatement in policy year 1981 to have an opportunity to make your premium completely current before the end of fiscal 1981.

Should they disapprove our filing and not allow a 52 percent increase, for whatever reason, then we will have to sit down and have long and hard negotiations with the Insurance Department. The Superintendent of Insurance does indeed know, to his woe, that there is a malpractice crisis.

I should like to tell you of several things which came about in the conduct of the Insurance Department's hearings. First of all, the conduct of all physicians testifying there was exemplary. One of the features of the hearing was perhaps an attempt to have organized medicine speak against this company. Instead, almost to a man, the physicians testifying directed themselves to the true problem of malpractice in this state, and would not agree to engage in diversive attacks on this company.

The unalterable fact remains as follows: That in 1975 it was deemed necessary to insure 18,000 doctors and that a pool of monies totaling 88 million dollars be amassed to meet losses for policy year 1975. In a State which has the highest standards of medical care in the world the same price tag now is between 350 and 500 million dollars, depending upon whether you believe our actuary, Alan Kaufman, at 350 or Mr. Presley at 500 million dollars. There was not one degree of evidence at the Insurance Department hearings which negated those two figures. It was rather on the picayune things of what we can do to adjust arithmetic to meet that price. The Superintendent of Insurance wanted no discussion of tort reform. Tort reform is the answer.

There must be a massive upheavel of interested physicians and people in this State who recognize it is absurd beyond all measure to feel that the quality of care is so deteriorated as to put a price tag on 350 million to 500 million dollars on the physicians for policy year 1981–1982. And I would remind you that is not the total price. It includes just 18,000 physicians in this company. It does not include physicians who are insured elsewhere, either by reason of their employment or by choice going to the Joint Underwriters Association. It does not include the money set aside by hospitals. One hospital alone sets aside four million dollars a year for its self-insurance program. So we are looking at a pool of money which has the potential to approach one billion dollars for policy year 1981 and yet, the trial lawyers stand to run away with one third of that money as their fee.

The Insurance Department prides itself in the hope of solving a problem in offering a claims made form of insurance. This House, by its resolution this morning, sees through that hoax. It is an opportunity for those in high places to "cop out" of their executive and legislative duties for four to five years. I am proud of the action of the House this morning in condemning claims made policies as being nothing more than a hoax and a sham and trust that physicians will have a clear-cut picture of exactly what it is, despite the fact that the price tag for the first and second years might look attractive, especially to the physician just starting out.

What was very distressing in the course of those hearings was to hear the Insurance Department attack one of the fundamental concepts of this company. If you go back to the stormy days in Lake Success in 1975, you will find that one of the hallmarks of this company's founding was predicated on the assumption that we would defend all cases which are without merit. The Insurance Department would seek to eliminate the consent to settle from the physician's policy in the effort of expediting settlement of cases. What they failed to recognize is that this is not a stumbling block, it does not create the large amount of monies necessary. Dollars and cents are not on the line, but a professional reputation. Our track record of cases which have gone to trial and to a courtroom conclusion reflect 80 percent vindication of the physicians, and only 20 percent defeat of our fundamental concept. We cannot afford, either legislatively or administratively, to have that taken away from us.

There is one other very important aspect of claims made policies. At the hearings representatives of the Federation of Jewish Philanthropy Hospitals indicated that their hospitals would not look upon a doctor insured with a claims made type of policy as having coverage necessary to meet their standards.

Those of you who sit on the Medical Boards of your hospitals might ask your hospital and its carrier their position with regard to claims made policies, so that we can do everything possible to enhance legislative activity now and not, in the words of one Insurance Department official, "Put off a decision for four or five more years." I think perhaps the greatest statement opposing claims made was made by the Superintendent of Insurance, Mr. Thomas Harnett, some four years ago when the Insurance Department rejected the concept of claims made. I would ask that the Society, in its efforts and in its resolutions condemning claims made, embrace the language of Mr. Thomas Harnett when he rejected it as not being suitable insurance.

Premium increases represent merely the temperature. It's a thermometer of the sickness of the situation in the State of New York. Every single member of the Board of Directors who has voted for an insurance premium increase, with the exception of two, are policyholders and pay that premium. So it's with an extraordinarily heavy sense of responsibility that we have at any time voted for a premium increase.

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* Dr. Mannix addressed the House at the Tuesday morning session.

We would call your attention to the absolute necessity for extensive tort reform, not this small bandaid type of legislation which has been passed. As some legislators have so nicely put it, "We gave you something last year." Next year, 1982, is an election year. Every single legislator stands for election, as does the Governor. It is not just by coincidence that the annual meeting of this company will be held in Albany the first week in March of 1982. We seldom have more than 20 or 30 people at an annual meeting. We think that it would be most meaningful if we had a massive turnout of doctors to address themselves to the concept of tort reform and demand what is necessary to correct the situation which has seen the gross total of premiums go from 88 million dollars to 350 million dollars, an increase of almost 400 percent in five years.

It is not just physicians who ask this. Everybody should ask for it. Seek involvement. I listened to your resolution which designates the people who should be included in the coalition for tort reform. Each and every one of us are on a first name basis with influential people in our community and members of hospital Board of Governors. Physicians alone are stigmatized as a special interest group. We must have extraordinarily broad based support, not to fund these premiums out of our pocket, but to bring into some sense of proportion the devastating and run-away situation which we have in the State of New York.

It is akin to the cartoon in the *New York Times* of a few weeks ago in which the Foreman of the Jury stood up and announced to the Judge, "Your Honor, we award the Plaintiff all the gold in Fort Knox." What he didn't say was that the lawyers would take one third of that as their fee.

I do thank you for the privilege of addressing you once again. I hold in my heart a very special relationship to this State Society, which put this company together. We must always remain close and interlocking.

. . . The House applauded as Dr. Mannix left the podium . . .

PRESIDENT OF THE AUXILIARY TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK*

. . . Speaker Shanaphy recognized Mrs. Edgar P. Berry, President of the Auxiliary to the Medical Society of the State of New York, who addressed the House as follows:

Dr. Schwartz, Dr. Rosenberg, Dr. Shanaphy, Council members, distinguished delegates, guests, and friends. It is indeed a pleasure for me to appear before you today. I welcome the opportunity to report to you on the activities of the Auxiliary to your Medical Society.

Founded in 1936, with five counties, it is now in its 45th year with thirty-two counties. To admit that I was awed by the length of my itinerary in my report to the Auxiliary, is in itself proof that I must have been enjoying every aspect of this past year. And so I was.

In summary, our State membership count is 3,449, and represents twenty-nine counties heard from, seventeen of which I was privileged to visit. The few invitations I was unable to honor were due to one county's program conflicting with that of another. Counties not visited by me were visited by Mrs. Prezio, the President-Elect, or by our nine district councilors.

Occasions for these visits were programs — fundraising and health promotional, annual luncheons, and installations. Mrs. Prezio and I attended the Pennsylvania Auxiliary's annual convention in Philadelphia. The four meetings I attended in Chicago were: the Auxiliarys' Conference in October, its cluster meeting in February, followed immediately by the AMA Leadership Conference, and the AMA Annual Convention in June.

I attended all ten Council meetings of the Medical Society of the State of New York in Lake Success, and most of the meetings in my own county of New York. I also attended two legislative meetings in Albany.

Beyond the realm of the Auxiliary, I addressed briefly the legislative forum in Albany and the American Association of Medical Assistants' convention at the Rye Town Hilton. Further forays abroad were regretted due to conflicting events in our own state.

The spring conference in Rochester, hosted by the Auxiliary to the Medical Society of the County of Monroe and chaired by Mrs. William Sheehey, was a rousing success, and we are deeply grateful to the Monroe County Medical Society for their generosity and warm hospitality.

Reports of all the chairmen and those of the councilors from the counties were impressive. The continuation and extension of the overall goals of our organization in supplementing our spouses' efforts to diagnose and treat disease by preventing illness through health education, provides a strong incentive. Particularly on the local level, such endeavors as immunization, anti-smoking and alcoholism, cancer-detection campaigns, CPR courses, and bicycle, traffic and infant car seat safety are but a few involving our volunteers. Fundraising for AMA-ERF and for scholarships and loans in all health-related fields is ongoing.

Due to the untiring efforts of Mrs. William Homan, the AMA-ERF chairman, the Auxiliary to MSSNY came second in per capita contributions in the eastern region, with $46,209.52 raised for AMA-ERF. This effort involved multiple projects, auctions, ethnic gourmet dinners and tennis tournaments, combining exercise with nutritionally balanced luncheons to reflect the National Auxiliary's shape-up for life theme. The sum of more than $35,000 was raised for more than forty scholarships in health-related fields of study.

The Physicians' Home is in good health, having received an infusion of $5,261 from the Auxiliary through the auspices of Mrs. Harry Secky, its chairman.

There is a need for an ongoing statewide project that would unify all of our counties. Dismayed by the deteriorating image of the modern physician, particularly maligned in the media, Mrs. Ezra Wolff, conceived the idea of a self-adhesive stamp that could be used universally on mailings, bills; anyplace where it would be visible. A Norman Rockwell cartoon, depicting a physician examining a young patient, was selected. The quote, "Your partner in health," is printed above the design and the "Auxiliary to the Medical Society of New York," is printed below.

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* Mrs. Berry addressed the House at the Sunday afternoon session.

Samples were mailed to all the county auxiliaries which in turn distributed them to individual members for ordering at a minimal rate of two cents each for orders in large quantities. The first one hundred thousand stamps have been sold, and a profit has been realized. A second order has been placed.

The project was not conceived for profit, but only for positive public relations. It has been well received by county medical societies and friends of physicians. It is the hope of the New York State Auxiliary that the physicians' recognition stamp may be adopted by other states in the Federation, as the name of the sponsoring state may be easily changed. This project has been submitted to AMA, the project bank of our national auxiliary, and has been noted in the AMAA publication "FACETS."

Strides have been realized in a close relationship between the MSSNY and its Auxiliary. A major breakthrough is having our mailing list added to the computer at Lake Success. This results in efficient follow-up of our members at great savings for the staff and other mailings. It is proving most successful, and the Auxiliary is grateful to MSSNY for providing the benefits of this modern miracle.

The chairman of the Auxiliary Legislation Committee has been invited by your President, Dr. Schwartz, to attend the meetings of the MSSNY State Legislation Committee, and our members are becoming increasingly aware of the role they may play in this important area.

The membership chairman of the Auxiliary, similarly, has been invited to assist the membership efforts of the MSSNY. A campaign is being mounted to obtain new members and retain present ones, and cooperation between our two organizations can only be beneficial.

At the cluster meeting of the AMAA in Chicago, in February, I conducted a very informal survey of the relationship between the auxiliaries of the state societies of other states of our relative size. It revealed that many states enjoy a great measure of cooperation. One enhances the endeavors of the other.

Perhaps the highlight of the year for the Auxiliary to MSSNY is the installation of our past president, Mrs. Torrence P. B. Payne, as President-Elect of the National Auxiliary. In our 45 year history New York State has had only one president and that was in 1947. So you can see that enthusiasm ran high at our Chicago convention in June. Officers of MSSNY attended the installation and it was a proud moment for our whole delegation.

At my inauguration last September I quoted the final lines of a poem by Robert Frost, entitled "The Gift Outright." Mr. Frost first read this poem at the meeting of the Phi Beta Kappa Society at William and Mary College, December 5, 1941, and later at the inauguration of President John F. Kennedy on January 20, 1961. It epitomized for me my feeling for volunteerism, and particularly the spouses of physicians, with whom it has been my pleasure to work these last few years.

Women and men who involve themselves in voluntary efforts acquire an extra dimension to their lives. The title of this poem became my theme for this year. The few lines that I'm going to quote read as follows:

> "Something we were withholding made us weak
> Until we found out that it was ourselves
> We were withholding from our land of living.
> And forthwith found salvation in surrender.
> Such as we were, we gave ourselves outright . . ."

In closing, I wish to express my appreciation to the members of the Council of MSSNY who displayed every courtesy to me, to Dr. Schwartz and Dr. Siegel for their encouragement and cooperation, and to Dr. Zimring for his guidance. The patient assistance I received from Ms. Skelly and Ms. Maichin was invaluable, as well as that from Ken Hall and Ms. Ruth Altman of my own County Medical Society of New York.

Lastly, I am most grateful for the support of the wonderful officers and board members of the 1980–81 Auxiliary and the members of the Auxiliary of the Medical Society of the County of New York.

And, I guess, as my husband said, once you start to thank everyone, you're going to leave someone out, and I almost left out my husband. Thank you.

. . . The House applauded as Mrs. Berry left the podium . . .

*PHYSICIANS' HOME** ·

. . . Speaker Shanaphy recognized Perrin B. Snyder, M.D., President of the Physicians' Home, who addressed the House as follows:

Mr. Speaker, Mr. President, members of the House of Delegates, and guests. The annual report of Physicians' Home will be published with the proceedings of the House of Delegates.

Rather than repeat much of the historical data, I would like to emphasize what seem to me the important facts about the Physicians' Home, and present to you what I consider to be a unique opportunity to help our elderly associates.

For example, the Physicians' Home has supplemented the income of elderly, needy physicians, including their widows and dependent children, for over sixty years. There are always between 75 and 100 guests or beneficiaries. On the basis of the past nine months of our fiscal year, these guests will receive approximately $220,000 this year, which will average over $2,000 per year per guest.

The unique appeal for your financial support lies in the following facts.

1. The help given is in the form of a monthly check.
2. The assistance permits the guests to remain in their own homes.
3. Our assistance is unique in that there is complete privacy during the investigation of the applicant.

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* Dr. Snyder addressed the House at the Sunday afternoon session.

4. During this inflationary period, the Physicians' Home has been able to increase at least annually the monthly check to each guest.

We are actively encouraging increased fundraising by appeal letters which you all received. Active membership in the Physicians' Home is attained by a check of $25 per year.

In summary, there is no way your direct financial support can better provide urgently needed assistance to our own physician associates than by increasing your contribution to the Physicians' Home. May I remind you that we encourage applications from every county in the State. We need your help at the county level. Not only to seek out needy applicants, but also to encourage wider acceptance of the voluntary assessment noted on the billing for your annual dues to the Medical Society of the State of New York. Thank you very much.

. . . The House applauded as Dr. Snyder left the podium . . .

*PRESIDENT OF THE AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, NEW YORK STATE SOCIETY**

. . . Speaker Shanaphy recognized Ms. Margaret Retoske, CMA-AC, President of the American Association of Medical Assistants, New York State Society, who addressed the House as follows:

Speaker Shanaphy, President Schwartz, Officers, members of the House, and guests. The New York State Society of the American Association of Medical Assistants is grateful to have this opportunity to personally greet you and extend to you best wishes for a productive meeting, and express our deep appreciation to the entire staff of the State Medical Society for their assistance. We are indeed grateful, and we thank each and every one of you for being so supportive throughout the year.

Two weeks ago I attended our annual meeting, at which time we celebrated our 25th Anniversary. Medical assistants across the nation gathered not only to conduct the business of the Association, but also to direct the future of our profession.

I thought how fortunate we are to have chosen such a worthwhile profession, one so important, its need increases every day. We strive to keep the rights of our profession by practicing it, educating it, and protecting it with our enthusiasm for it.

We best practice our profession by rededicating ourselves to a free commitment to our physician employers, and in return seek a confirmation of their continual support. The dedication, total commitment, and friendship of those we serve, you our physicians, is the very foundation of our progress up the ladder of professionalism. Our performance in the care of your patients is far above that required by legal definition and licensure. If we truly subscribe to our objectives, and we do, to provide educational opportunities, to upgrade our skills and build upon our careers by attaining certification, then we can only become the highest professional ancillary to you, the physician.

You have a right to expect those who assist you in the practice of health care to be competent. You have to continue your education, and you should expect the same commitment from your staff. We must take time to stress career development by enforcing our credibility through continuing education to sustain high standards of performance and to maintain the highest level of competency.

Certification for medical assistants is providing a threshold for many. We must continue to work for these opportunities in education, so that every medical assistant can make independent career decisions. The demand for proof of competency is a way of life today. We are proud that the American Association of Medical Assistants has the means to test the medical assistant's competency, and we are proud that our certification and revalidation programs are voluntary, as opposed to compulsory licensing.

Our mutual concerns to direct the future of our professions for their very salvation, yes, I said salvation, are synonymous. Inflationary problems rage uncontrollably, while diminished funds, due to decreased membership, leave us in a holding pattern of suspended privileges. But in spite of this, we need to go on, and we will go on to meet the challenge of the malpractice crisis, the day by day changes in governmental regulations and the unfounded and cruel criticisms of the misinformed patient.

And so I challenge you, the physician employer, to accept with open minds what the American Association of Medical Assistants has to offer. Encourage your medical assistant to join their local chapter, and participate in continuing education and certification as a responsibility of their chosen profession. Help them feel the same commitment you feel towards your profession. With your help in these three specific areas, our commitment and value to the medical profession can only increase a hundredfold during the coming years.

I thank you sincerely for this honor to address your House of Delegates.

. . . The House applauded as Ms. Retoske left the podium . . .

*NEW YORK MEDICAL POLITICAL ACTION COMMITTEE (NYMPAC)**

. . . Speaker Shanaphy recognized John H. Carter, M.D., Chairman of the New York State Political Action Committee, who addressed the House as follows:

Mr. Speaker, Officers and members of the House. It is my pleasure to address you again concerning NYMPAC, the New York Medical Political Action Committee.

This is the fourth year that this PAC has been in existence. To briefly reiterate what happened, some four years ago the House of Delegates voted that there would be a statewide PAC, and a PAC system was set up for both the State and federal levels. Each year with your dues notice there is a request for a voluntary contribution to the PAC. Of the $100 that is requested, $65 goes to the State PAC (NYMPAC) and $35 goes to the AMA part of the federal PAC (EMPAC).

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* Ms. Retoske addressed the House at the Sunday afternoon session.

* Dr. Carter addressed the House at the Sunday afternoon session . . .

The State PAC is run by doctors and its purpose is to influence State legislation and State legislators. Each district has representatives on the Board of Directors of NYMPAC. Each district with 2,000 members of the New York State Medical Society is entitled to one board member. The board meets periodically during the year to discuss political problems and to make decisions on political contributions for the coming year.

During the last year, an election year, we spent $64,000 in the Senate and $123,000 in the Assembly. Eighty-seven percent of the legislators we supported won elections, which means that eighty-seven percent of the people in the New York State Legislature are aware of who we are. How are they chosen?

The board meets periodically and reviews the voting record of each political candidate. The board looks at their opponents, looks at the incumbents, and then makes decisions. Half of the money which is collected for the State PAC is in the hands of the county medical societies. We call on the county medical society for recommendations as to how the money should be spent for their local legislators. County medical societies can spend their half any way they see fit. The other half, which is allocated to the State PAC, is spent on a statewide basis. For instance, money from Brooklyn might go to Rochester because there was a particularly important legislative fight going on in Rochester, and we wanted to be sure that our man won or the other man lost.

The monies that the local county medical societies do not use is returned to the State PAC and again the board makes a decision as to how the monies are going to be used. I think we made some wise decisions during last year, an election year. As I said before, eighty-seven percent of those we supported won. Eighty-seven percent of the people in the New York State Legislature are aware of who we are.

I think some of you are probably cynical that all the bills recommended by the McGill Commission haven't passed. Things don't seem to be happening in the Legislature, but I'd like to point out to you that that's not so, we are quite successful in the Legislature.

All of you have before you, or have available to you, the 1981 Health Legislation pamphlet. The pamphlet outlines all the bills under consideration by the New York State Legislature last year that had anything whatsoever to do with medicine. It outlines those bills that were passed, and those that were defeated. It outlines those bills that the State Medical Society supported and those that the State Medical Society opposed.

I'd like to give you an indication of the importance of these bills. The Uniform Health Claim Form Bill, which you may not think is particularly important, was sponsored and passed last year. I can tell you the medical assistants that help in your office think it is very important. It cuts down on the work they have to do.

The most important bill that was passed last year, of course, was the Collateral Source Bill. The Collateral Source bill reduces the award for a malpractice claim by the amount indemnified from other sources, and any premiums paid for insurance benefits for two years prior to the malpractice action.

I don't believe most of you realize how important that particular bill is. It saved 25 million dollars in premiums. Our insurance company was able to reduce its expected increase in premium from 71 percent to 52 percent as a result of the passage of that bill. A good deal of effort was expended by doctors in the State Medical Society to accomplish passage of this bill. Part of the success, in fact a good deal of the success, for the passage of that important bill has to be attributed to the PAC.

Another important bill last year, the Professional Corporation Tax Law proposal, which unfortunately did not pass this year came closer to passage than ever before. This bill would permit contributions paid on behalf of shareholders of a Professional Service Corporation to a Pension Plan to be accorded the same tax treatment as is accorded to shareholders of other corporations. It didn't pass, but it will pass soon. The reason I say that is because last year the sponsors of the bill were Mr. Arthur Kremer, who is Chairman of the Ways and Means Committee in the Assembly, the important financial committee in the Assembly, and Mr. John Marchi, Chairman of the Finance Committee in the Senate. Both of these gentlemen, both of these powerful legislators, had their names on that bill, and we're confident that in the near future we will see some positive action.

The allied health professions, from chiropractors to optometrists are trying every year to expand their role and infringe on the practice of medicine to the detriment of the public health. Last year we were again successful in defeating all of these attempts to expand the practice of allied health professions.

Thanks in no small part to the efforts of your Medical Society the Generic Drug Bill was defeated last year. The bill attempted to reduce the physician role in prescribing drugs.

Of great importance during the coming year will be the Medical Catastrophe Fund Bill. This measure provides for a broader, shared funding basis under which defendants in malpractice actions would be responsible for payment of the first $100,000 of an award and any amount in excess of that figure would be paid out of the fund.

We have many other bills which address malpractice reform, all of which are summarized in the 1981 Health Legislation report.

Next year will be a very important year for two big reasons. One reason is the malpractice legislation crisis; next year something has to be done. The other reason is that next year will be an election year. Every assemblyman, every senator, and even the governor has to run for election, and the importance of the PAC next year cannot be over-emphasized.

Sadly, it is my duty to report to you that, as of the present time, there are only 2,002 members of the New York State Medical Society who have made contributions to the PAC. Even more sadly, I have to report that last year at this time, there were 2,500 members of the New York State Medical Society who were members of the PAC. One half of the delegates to this House of Delegates, the medical leaders, are not members of the PAC.

I cannot emphasize enough to you how important it is for all of you to spend that $100 and join the PAC, nothing can be more important. Please do it, and please encourage your colleagues on the local level to join. This is a watershed year, an important year. Thank you.

. . . The House of Delegates applauded as Dr. Carter left the podium . . .

EMPIRE MEDICAL POLITICAL ACTION COMMITTEE (EMPAC) *

. . . Speaker Shanaphy recognized William C. Stein, M.D., Chairman of the Empire Medical Political Action Committee, who addressed the House as follows:

Mr. Speaker, Mr. President, fellow delegates, ladies and gentlemen. I will be brief and to the point.

As I have said in previous years, the vast majority of our problems are not only made but resolved at the medical political interface; be it at the federal or the state level. Though our lobbyists do a lot for us at both the federal and the state level, never lose sight of the fact that we are the people who elect these representatives. Do we in the grass roots know who our representatives are, and what their political philosophy is? Will they listen to our side of the story in Washington and Albany? We have to depend on you in the grass roots to send representatives who will give our views a fair hearing.

Though many of our problems appear to be at the state level today, the coming cutbacks in entitlement programs at the federal level will have a profound effect on our ability to continue to provide the care of the people of New York State that they are accustomed to expect.

Early on it became apparent that it is extremely difficult to administer two PACs with two chairmen and two boards. For this reason, in 1979 the Joint Council on Political Action was formed in an attempt to correct this problem. It has become apparent to the leaders of both PACs that this has not been effective and efficient. The most effective PACs are in those states which administer all Political Action, both federal and state, through one committee which has the total and complete backing of the State Medical Society. In view of this, the Joint Council for Political Action, at a meeting at Lake Success on the 24th of September, with full representation from both EMPAC and NYMPAC boards, unanimously voted to recommend to MSSNY that the two PACs be amalgamated into one. This resulted in the introduction of Resolution 81-55, *Combining of NYMPAC and EMPAC into a Single Political Action Committee*, which is before this House for consideration. This resolution merits the full support of this House of Delegates. Thank you.

. . . The House applauded as Dr. Stein left the podium . . .

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* Dr. Stein addressed the House at the Tuesday morning session.

AWARD PRESENTATIONS*

. . . Speaker Shanaphy recognized President Schwartz, who made the following presentations:

PRESIDENT'S CITIZENSHIP AWARD

. . . President Schwartz recognized George Lim, M.D., who accepted the award on behalf of Karl W. Gruppe, M.D. . . .

President Schwartz: It is now my pleasant duty to present a very special award.

The President's citizenship award was established in 1961 to be presented annually. The award is given to a physician who has performed prolonged, outstanding community service, with no remuneration, entirely unrelated to his or her medical practice.

Having the privilege of making this award is one of the pleasures of my office. But making the selection was no easy task. Only one winner could be chosen from several very deserving nominees.

Fortunately, upon examining the backgrounds of these nominees, one stood out. He is Dr. Karl W. Gruppe of Sauquoit, who was nominated by Dr. Francis Chanatry, President of the Medical Society of the County of Oneida.

Dr. Gruppe has been a lifelong advocate of environmental causes. He is a founding member of the Utica chapter of the Izaak Walton League and has been extremely active in the Sierra Club, the Audubon Society, the Mohawk Flood Plain Association, and Citizens for Moss Island. Both the State's Department of Environmental Conservation and the Federal Government's Environmental Protection Agency have cited Dr. Gruppe for his outstanding efforts to protect and improve the environment.

One of Dr. Gruppe's most outstanding accomplishments was the saving of Moss Island, a beautiful and geologically significant island located in the Mohawk Valley. The island was the proposed site of a State thruway interchange. As founder and co-chairman of the citizens for Moss Island, Karl Gruppe engaged in an old-fashioned environmental battle. He contributed large amounts of his own money to retain a lawyer and for other needs of the group, and he prepared a slide show to let others in the State see the unique beauty of Moss Island. The result of these efforts was that the State chose another route for the interchange.

It would not be proper to present this award without a mention of Dr. Gruppe's late wife, Statira, who was his loyal co-worker until her death five years ago. A memorial scholarship set up by Dr. Gruppe in honor of his late wife provides assistance to undergraduate students in the School of Nursing in the University of Rochester School of Medicine and Dentistry.

Karl and Statira Gruppe are both honored by a plaque in a preserved area of Utica lauding them "for their tireless efforts on behalf of mother earth."

Although his medical career has nothing to do with the reasons for the presentation of this award, it might be of interest to note that Dr. Gruppe is an ear, nose, and throat specialist who started his practice in Utica in 1933 and earned a high reputation as a microsurgeon. In 1950 he organized a hearing and speech center at Children's Hospital and Rehabilitation Center in Utica which now bears his name.

In the words of Dr. Chanatry who nominated him for this award, "Dr. Gruppe is a perfect example of an individual able to rise to prominence in both his vocation and avocation." I am honored to present the 1981 President's Citizenship Award to Dr. Karl W. Gruppe, good citizen of Sauquoit, New York.

. . . Dr. Gruppe could not be present, as he was ill and confined to the hospital. Dr. Lim accepted the award for Dr. Gruppe and expressed his thanks to the State Medical Society. He stated that Dr. Gruppe's colleagues in Oneida County and the Fifth District are extremely proud of his efforts in distinguished service to the community, in addition and unrelated to his professional practice. The House applauded as Dr. Lim left the podium . . .

REDWAY AWARD

. . . President Schwartz recognized Samuel Rahbar, M.D. . . .

Dr. Schwartz: The *New York State Journal of Medicine* is happy to extend to Samuel Rahbar, M.D., the nineteenth annual Redway Award and Certificate for his article "Glycosylated Hemoglobins: History, Biochemistry, and Clinical Implications," published in the March, 1980, issue of the *Journal.*

This important contribution deserves our recognition and special commendations.

This nineteenth annual Redway Award is given to Samuel Rahbar, M.D., at the City of Hope Medical Center in Duarte, California, for his article on "Glycosylated Hemoglobins: History, Biochemistry, and Clinical Implications," which appeared in the March, 1980, issue of the *New York State Journal of Medicine.*

Glycosylated hemoglobin has been proved to be a useful indicator for assessing the control of diabetes mellitus. Investigation and knowledge of their structure and function has great potential for future clinical studies and treatment.

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* The President's Citizenship Award, the Redway Award, the William Hammond Award for Distinguished Service to the Journal, the Fifty Year Citations, and Certificate of Appreciation to Mr. Guy D. Beaumont were presented on Sunday at the opening session. The Henry I. Fineberg, M.D. Award for Distinguished Service was presented at the Tuesday morning session.

. . . Dr. Rahbar thanked the State Medical Society for the honor of being a recipient of this award. He expressed gratitude for the help given him during the last two years by Dr. Alfred Angrist. The House applauded as Dr. Rahbar left the podium . . .

WILLIAM HAMMOND AWARD FOR DISTINGUISHED SERVICE TO THE JOURNAL

Dr. Schwartz: In presenting the William Hammond Award for Distinguished Service to Lytt I. Gardner, M.D., we are honoring both the *Journal* and Dr. Gardner. For many years a member of the associate editorial board, Dr. Gardner has made great contributions as a consultant; his support and suggestions have been invaluable.

It is a privilege for the *New York State Journal of Medicine* to offer this token of our appreciation for significant assistance and many contributions of Lytt Irvine Gardner, M.D.

Dr. Gardner has served the *New York State Journal of Medicine* for a number of years most diligently and has also helped in obtaining and selecting manuscripts in his field of expertise.

. . . Dr. Gardner was unable to be present to receive the award. The House applauded . . .

HENRY I. FINEBERG, M.D. AWARD FOR DISTINGUISHED SERVICE

. . . Speaker Shanaphy introduced Paul M. DeLuca, M.D., Chairman of the Board of Trustees, who addressed the House as follows:

Dr. DeLuca: In 1980, the Board of Trustees, in honoring Dr. Fineberg for his many long years of service to this organization, created the annual Trustees' Award of the Medical Society of the State of New York and called it, appropriately, the Henry I. Fineberg, M.D. Award for Distinguished Service. This award honors any individual, physician or otherwise, who has performed a distinguished service.

Since the award this year is to be given to a person who is very close to Dr. Fineberg, I have asked him to present this year's award.

Dr. Fineberg: Mr. Speaker, members of the House, ladies and gentlemen. It is a distinct honor and great pleasure for me to have been asked to participate in this ceremony.

I couldn't think of a finer man to be honored than Alfred A. Angrist, M.D. I have known this superb individual for over 50 years. And if you were to ask me how would I characterize his career, I would briefly have to say that it has been brilliant. I have never seen such dedication. Not only was he a superb student in his undergraduate days, Phi Beta Kappa, but he also had an outstanding record in medical school.

Dr. Angrist was a wonderful house officer for many years before going into the practice of medicine as a pathologist deluxe. I knew him very intimately at the time when he was a pathologist at the Queens Hospital Center, where he developed a reputation of understanding and achievement.

I remember also that he was a beautiful teacher. I used to attend his Monday afternoon conferences every week and people would come from far and near to listen to his wisdom and sit at his feet and learn. His disciples are spread all over the country.

He left Queens Hospital to become head of the Department and a Professor of Pathology at the new school, the Albert Einstein College of Medicine. Beloved by everybody, he was voted each year the outstanding professor of the school. Dr. Angrist became a superb teacher, an expert in forensic medicine, a researcher, and a scientist.

When Dr. Angrist became its editor, the *New York State Journal of Medicine* developed into one of the finest state medical journals in this country.

And so, ladies and gentlemen, I am highly honored on behalf of the Board of Trustees of the Medical Society of the State of New York, to present this award to Al Angrist.

. . . Dr. Angrist thanked the Society for bestowing this award on him and stated that it represents the most treasured honor of all since it represents recognition by his peers.

He acknowledged a change in academic medicine. In the past it was believed that research and experiment counted above all else. While this is still high on the list of priorities, the care of the patient is equally stressed at this time. The House applauded as Dr. Angrist left the podium . . .

CERTIFICATE OF APPRECIATION

Guy Beaumont

. . . Speaker Shanaphy recognized Charles Cattano, Chairperson of the Medical Student Membership, who addressed the House as follows:

Mr. Cattano: On behalf of the medical student members of MSSNY I am very pleased to present this award, a decorative scroll, to Mr. Guy Beaumont for his excellent advice and his gentle prodding of the medical student membership over the past years.

The scroll is inscribed to read: "The Medical Student Membership of the Medical Society of the State of New York presents this Certificate of Appreciation to Guy D. Beaumont, in grateful recognition of his dedicated assistance, guiding counsel, and steadfast advocacy in its behalf." It is signed by the officers of the medical student membership.

. . . The House applauded as Mr. Beaumont left the podium . . .

FIFTY YEAR CITATIONS

President Schwartz: It is now my privilege to carry on a pleasant and long-established tradition that involves a group of very special physicians.

Each year, the Medical Society of the State of New York honors its members who are celebrating their golden anniversaries in the practice of medicine.

This year there are 298 physicians who enjoy this distinction.

Time does not permit presentation of the citations or mentioning each of their names at this time. But each of these physicians will be named in the minutes of this 175th annual meeting.

Also, engraved citations will be sent directly to each recipient soon after this convention. In some cases, the presentation will be made at a county medical society meeting.

On behalf of the Society, and this House, I would like to extend to each of these 292 physicians our sincere congratulations and appreciation for a half century of dedication to medicine and our best wishes for many more years of good health and happiness.

. . . The House applauded . . .

The list of recipients follows:

Albany

H. Pelham Glasier
Albert Hall Harris
Joseph William Harris
Walter B. Macomber

Allegany

Kurt Zinner

Bronx

Edward P. Bergin
Paul P. Birkenholz
Hyman Blume
Nicholas S. Cea
Malvin Marlow Coren
Laurence Bruce Felmus
Hyman M. Finkelstein
Victor Goodside
Maurice Roy Goodwin
Nathan M. Greenstein
Abraham Karger
Harry H. Kaufman
Sophie Polonska Levin
Herman Michel Levine
Eusebius J. Murphy
Julius H. Pollock
Anthony T. Privitera
Paul S. Romano
Keeve Rosenthal
Herman Rothman
Manuel Joseph Scham
Samuel P. Schwartzfarb
David Steinberg
Joseph Charles Zumpano

Broome

Alvin R. Carpenter
Stephen Major
Martin Joseph Ryan

Cattaraugus

Angelo Serafe D'Eloia
Ellwyn Emery Heier
Francis P. Keefe

Cayuga

David S. Eisenberg

Chautauqua

Alfred D. Heinemann

Chemung

Walter William Impert

Clinton

Ruth Foljambe Copeland

Delaware

Jerome Kogan

Dutchess

Edward Bastiks
Marcel Friedman
Frank E. Hacker

Erie

Michael Horace Barone
Virgil Henry F. Boeck
Thomas S. Bumbalo
Theodore F. Ciesla
Gustave Armand Daluiso
Donald Edward Donovan
Joseph D. Godfrey
Lawrence Edgar Hummel
Samuel C. Johnson
Francis E. Kenny
James Edward Long
James C. McGarvey
Angelo S. Naples
Harold T. Schweitzer
Joseph C. Tedesco
Henry E. Vogel
Roland J. Walker
Walter S. Walls
Walter D. Westinghouse
Alice Unger

Fulton

Armand Joseph D'Errico
Louis Tremante

Genesee

Samuel Joseph Gerace

Greene

William V. Wax

Jefferson

Paul Melbourne Read

Kings

Lawrence Ames
Jacob Saunders Barb
Benjamin Bender
Morris Birnbaum
Charles Edward Brennan
Bernard Brill
Joseph James Calcagno
Ward Vertrees Ceilly
Theodore David Cohn
Joseph Valentine Cresci
Henry Eisenstein
Sigmund Erber
Lena Finkelstein
Mildred Isabel Foley
Saverio Charles Franco
Benjamin Ginsberg
Hilda Carole Goldbach
Sidney F. Grant
Barnet Halperin
Jean Pierrе́ Hartman
Irving Nathan Holtzman
Jacob William Kahn
Aaron Kramer

Milton Krinsky
Edward Royal Henry Kurz
David Robert Levine
Abraham Harry Levy
Matthew Zachary Levy
Murray M. Marcus
Henry Mason
John William Messineo
John Joseph Mollica
George Nadler
Abraham Arnold Richman
Isaac Hyman Richter
George Rose
Emilio Natale Russo
Maxwell Schram
Frederick Sheer
Irving Silver
George Szecsey
Nathaniel Tatkow
John Vaccaro
Elizabeth Wilen

Livingston

George Emanuel Lynch
Gerald Bennett Manley

Monroe

Burtis Burr Breese
Fred Joseph Fumia
Nolan L. Kaltreider
Richard Nauen

Montgomery

Roman R. Violyn
Raymond E. Wytrwal

Nassau

H. Hermann Bonheim
Tiiu Maavere Chakkar
Louis N. Frankel
John M. Galbraith
Izydore Gottlieb
Frank H. Jaklitsch
Jack Morton Lesnow
Julius Marcus
Alexander H. Rosenthal
Louis Stix
Frederik Van Assendelft
Karl N. Wechtel
Aladar Wroth

New York

Neuman Arberfeld
Kamila Czeslawa Balk
Harry Barowsky
Edgar Hodgins Bates
Morris Boris Bender
David Birnbaum
Murray Max Braaf
Harold Brandaleone
Nathaniel Joseph Breckir
Israel A. Brunstein
Stanley Mercer Bysshe
William Henry Cassebaum
John A. Cinelli
Hyacinth Amanda Davis
Michael Angelo Diana
John W. Draper
Perfecto Andino Espejo
Benjamin Esterman
Bernard Shaw Feinberg
Samuel A. Feldman
Irving J. Feuer
Frances Gould Finder
Julia Fischler
Edwin Joseph Foley
Ferdinand N. Forbes
Ludwig L. Forschheimer
Sidney Albert Fox
Richard Lionel Frank
Marthe Loyson Gassmann
Henry Taylor Gaynin
Claudio Gerbi
Arthur Winfield Glick
Aaron M. Gold
Elizabeth Goodman
David Mathews Grayzel
Benjamin B. Greenberg
August Herman Groeschel
Cranston W. Holman
Merl M. Jackel
Emanuel P. La Motta
Erwin Levy
Hyman Levy
Nina L. Rayevsky Lief
Alfred Lilienfeld
Joseph Markel
Cecil George M. Marquez
Robert Meidler
Royal M. Montgomery
Harry Most
George Hunter O'Kane
Ulrich Ollendorff
Roman Osinchuk
Americus J. Paganelli
Leo Solomon Palitz
Solomon Perlroth
Peter Michael Saitta
Albert Christy Santy
Trude Joan Schiff
Daniel Edward Schneider
Albert M. Schwartz
Albert Segenreich
Donald Johnson Simons
Bryon Chapleese Smith
Frederick Stern
Max M. Stern
Elizabeth D. Strauss
Philip Strax
William Dorus Stubenbord
Frederick H. Theodore
Frederick R. Thompson
Morris Turell
Robert Wallach
Ernest A. Weymuller
Mosetta C. White
Chester H. Whitney
Leopold H. Wienick
Abraham S. Wilner
Morris J. Wolf
Bernard Zuger

Niagara

Fred D. Stone
John S. Witknowski

Oneida

Edward Doty Dake
A. Richard Hatfield
Joseph Kazak
Rocco Joseph Martoccio
Joseph Raymond Mascaro
Keith Burdick Preston
Herman J. Segaul
George Volow

Onondaga

Willis A. Strong

Ontario

Ludwig Mayer
Francis V. Oderkirk

Orange

Sol Richard Friedman
Paul M. Traub
Eugene F. Wolff

Oswego

Harold F. McGovern

Putnam

Jacob H. Buchbinder

Queens

Alfred Joseph Barra
John Peter Burghardt
Morris Dickstein
Robert Feldman
Benjamin S. Gordon
Max Lionel Hart
Erwin Jessel
Harry Kalenscher
Samuel C. Karlan
Frederick F. Kortlucke
Irving Kowaloff
Albert Lesser
Emanuel Levokove
George Francis Long
Allan Putterman
Anthony C. Reiger
James Rudel
Edward Santora
Irma J. Schwartzbart
Joseph D. Schwartzman
Hyman Silverman
Samuel Gordon Smartt
Charles Spark
Edward F. Tartaglione
William Emil Francis Warner
Henry Wigderson

Rensselaer

John J. Pohl

Richmond

Thomas Theodore Bowman
Henry Briggin
Mortimer Benjamin Genauer
Harry Sussman

Rockland

Leonard William Benedetto
Robert Lee Yeager

Schenectady

Jacob Frumkin

Steuben

Irving Feldberg
John R. Kuhl
William J. MacFarland

Suffolk

Robert Aguayo
Hyman S. Barahal
Morris Freund Heller
Mary Brickett Holt
Morris Louis Rakieten
Henry Rubenstein
Samuel Teich
S. Henry Thaler
David J. Wexler

Tompkins

Joseph Gustave Rothenberg

Ulster

David Wainapel

Warren

Philip T. Schlesinger

Westchester

J. Vincent Flack
Walter Peter Gage
Reid Russell Heffner
Santo Immordino
Lewis Jacobs
James M. Jones
Victor Kugajevsky
Mary Marshall Man
James R. Montgomery
Jacob George Sharnoff
Irwin Daniel Stein
Richard Henry Taft
Robert E. Tschorn

Introduction of Guests

. . . Speaker Shanaphy introduced the following guests, who addressed the House and were applauded . . .

Arthur Faris, M.D., President of the Vermont State Medical Society

Thomas Foley, M.D., Official Representative of the New Hampshire Medical Society

Leroy A. Gehris, M.D., President of the Pennsylvania Medical Association

. . . William B. Munier, M.D., Executive Vice-President of the Massachusetts Medical Society was introduced at the dinner dance on Sunday evening.

Introduction of Past-Presidents

. . . Speaker Shanaphy introduced the following past-presidents who were in the House: James M. Blake, Lynn R. Callin, George L. Collins, Jr., G. Rehmi Denton, Henry I. Fineberg, Carl Goldmark, Jr., Walter T. Heldmann, Norman S. Moore, Edward Siegel, and George T. C. Way.

HOUSE COMMITTEE ON BYLAWS

To the House of Delegates, Ladies and Gentlemen:

The members of the House Committee on Bylaws are as follows:

Daniel F. O'Keeffe, M.D., *Chairman*	Warren
Edgar P. Berry, M.D.	New York
Rodman D. Carter, M.D.	Otsego
George L. Collins, Jr., M.D.	Erie
James M. Flanagan, M.D.	Wayne
Carl Goldmark, Jr., M.D.	New York
Allison B. Landolt, M.D.	Westchester
George Lim, M.D.	Oneida
Vincent I. Maddi, M.D.	Broome
Milton Rosenberg, M.D.	Suffolk
M. Theodore Tanenhaus, M.D.	Kings
Ralph M. Schwartz, M.D., *President, ex officio*	Kings
Victor J. Tofany, M.D., *Secretary, ex officio*	Monroe
Joseph F. Shanaphy, M.D., *Speaker, ex officio*	Richmond

A meeting of the Reference Committee on Bylaws was held at the Grand Hyatt Hotel in New York City on September 29, 1980. The Reference Committee was appointed to receive input from delegates as to their thoughts of the resolutions referred to the House Committee on Bylaws. The input received from the meeting of the Reference Committee on Bylaws proved to be of great assistance to the House Committee in its deliberations.

In all, thirteen resolutions asking for amendments to the Bylaws were referred to the Committee for consideration.

The following actions were taken with respect to the resolutions referred to this Committee.

Resolution 79-27, Age Qualification for Entitlement to Life Membership for Practicing Physicians

Introduced by Medical Society of the County of Queens

Whereas, The Bylaws of the Medical Society of the State of New York were changed to raise the age limit for life membership from seventy to seventy-five for "practicing" physicians; and

Whereas, The motivating factor for this change was the increase in the ratio of nonpaying members to the paying members; and

Whereas, Many practicing physicians over seventy years of age have a very limited practice, with limited income; and

Whereas, The increase in life membership age from seventy to seventy-five for these physicians is causing them to resign in bitterness; and

Whereas, Physician members with decreasing income are resigning from membership and the intended change in raising the age limit for life membership is, therefore, having the reverse effect; and

Whereas, Many of those resigning have been loyal, dues paying members for 30–40 years or more, and now feel betrayed, and are resentful, thus creating a poor image for MSSNY; and

Whereas, The Bylaws of the Medical Society of the State of New York should be amended to accommodate this change; therefore be it

Resolved, That Article II, Section 1, paragraph 6 of the Bylaws of the Medical Society of the State of New York be changed by deleting the word "seventy-five" and inserting the word "seventy" after the phrase "prior to the attainment of the age of."

Article II, Section 1, paragraph 6 would then read as follows:

> "An active member in good standing who has completely withdrawn from the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy years or an active member in good standing who continues the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy years, or an active member in good standing for ten consecutive years or more who is permanently disabled, may apply for life membership. The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership."

and

Resolution 79-39, Life Membership

Introduced by Nassau County Medical Society

Whereas, The Medical Society of the State of New York amended its Bylaws in 1978 concerning life membership; and

Whereas, The Nassau County Medical Society, in considering the changes in the MSSNY life membership category, believes there is no justifiable reason why a physician should not be entitled to life membership at the age of 70 rather than 75; and

Whereas, NCMS also believes that a physician who retires from the active practice of medicine, irrespective of age, and has been an active member in good standing for ten consecutive years should also be entitled to life membership; therefore be it

Resolved, That Article II, Section 1, paragraph 6 of the Bylaws be amended by deleting the phrase "prior to the attainment of the age of seventy years" after the words "ten consecutive years" and deleting the word "seventy-five" after the phrase "attainment of the age of" and inserting the word "seventy."

Article II, Section 1, paragraph 6 would then read as follows:

> "An active member in good standing who has completely withdrawn from the active practice of medicine and who has been a member in good standing for ten consecutive years or an active member in good standing who continues the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy years, or an active member in good standing for ten consecutive years or more who is permanently disabled may apply for life membership. The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership."

Resolutions 79-27 and 79-39 were referred back to the Committee by the House of Delegates. Because of the similarity of content, Resolutions 79-27 and 79-39 were reviewed at the same time.

The Committee firmly believes that the provisions relating to Life Membership should not be changed at this time. It is believed that the Bylaws adequately provide for those situations involving financial hardship or other extenuating circumstances. Attention is directed to Article II, Section 1, paragraph 6 of the Bylaws which provides, "The House of Delegates or the Council may waive the requirements [for Life Membership] in a proper case where there appear to be extenuating circumstances."

The Committee, therefore, recommends **DISAPPROVAL** of Resolutions 79-27 and 79-39.

The House of Delegates considered a substitute resolution for Resolutions 79-27 and 79-39 which reads as follows:

Whereas, The Bylaws of the Medical Society of the State of New York require 50 hours of CME credit per year to remain active members; and

Whereas, If a physician is retired he may not have the opportunity to obtain CME credits or if he is disabled he cannot obtain them and the expenses for these CME courses are high and not deductible if retired; therefore be it

Resolved, That Article II, Section 1, paragraph 6 of the Bylaws of the Medical Society of the State of New York be amended to read as follows:

An active member in good standing who has completely retired from the practice of medicine or is totally disabled and who has been a member in good standing for a minimum of ten years prior to the attainment of the age of seventy years is entitled to apply for life membership. Those who have attained the age of seventy years and above but continue the practice of medicine and have been members in good standing for the below prescribed number of years may have their dues reduced according to the schedule outlined below.

Schedule

Age	Prescribed Years Good Standing	% of Reg. Dues
70	25	80%
71	22	60%
72	19	40%
73	16	20%
74	13	20%
75 + above	10	0%

The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership.

EXPLANATORY NOTES

In 1970 the active members numbered 24,261
In 1980 the active members numbered 21,431
This is a decrease of 11.6% or 2,830

In 1970 the life members numbered 2,791
In 1980 the life members numbered 4,348
This was an increase of 55.8% or 1,557

Proportion of life members to active members in 1970, 11%
Proportion of life members to active members in 1980, 20.3%
Proportion of life members to total members in 1970, 10%
Proportion of life members to total members in 1980, 16.86%

If our total membership had remained from 1970 to 1980, 16%
If our membership had increased an average of 1% per year, 15.4%

Our concern should be to recruit more younger physicians from the 22,000 that do not belong to the State Medical Society.

■

⟹. . . *The House, after discussion,* **REFERRED** *Resolutions 79-27, 79-39, and the substitute resolution back to the House Committee on Bylaws . . .*

Resolution 80-1, Reduced Dues for Young Physicians Entering Practice

Introduced by Medical Society of the County of Kings

Whereas, Most residencies take five years, during which time these young physicians have a very limited income; and

Whereas, Start up expenses during the first two years of solo practice are enormous; and

Whereas, It is obviously of the utmost importance to attract these individuals to our ranks as early as possible; therefore be it

Resolved, That the Medical Society of the State of New York grant young physicians in solo practice an additional two years of reduced dues for a total of seven years, instead of the present five years (not counting military service) from the year of graduation; and be it further

Resolved, That Article XV "Dues," paragraph 3 of the Bylaws of the MSSNY be amended by the deletion of the word "five" and the insertion of the word "seven" in the first sentence, and the deletion of the word "seven" and the insertion of the word "nine" in the last sentence of the paragraph.

Article XV, paragraph 3 would then read:

"The dues and assessments of those active members who have been graduated from medical or osteopathic college not more than seven calendar years, not counting active service in the armed forces of the United States or in the United States Public Health Service, shall be one third the amount levied on all other active members. The dues and assessments of those active members who have not completed their continuous residency training shall be one tenth the amount levied on all other active members. In no case may an active physician continue to pay such reduced dues more than nine years after the date of graduation from medical or osteopathic school."

PAST HOUSE ACTION: Resolution 79-14

The House Committee on Bylaws recommends that a substitute resolution be approved which will entitle active members entering solo practice for the first time to pay half-dues for the first two years of solo practice. As recommended, such active member would qualify for half-dues status if he does not otherwise qualify for one-third dues status. In addition, the House Committee recommends that once an active member reaches full dues paying status, he cannot subsequently qualify for half-dues status even upon entering solo practice for the first time. The House Committee on Bylaws believes that this substitute resolution more equitably addresses the situation of the limited financial resources of young physicians entering solo practice.

The House Committee on Bylaws, therefore, voted to substitute Resolution 80-1 with a new resolution to read:

Resolved, That the Medical Society of the State of New York amend its Bylaws so that the dues and assessments of active members entering solo practice for the first time, who are not otherwise eligible for reduced dues as provided by Article XV, paragraph 3, shall be one half the amount levied on all other active members, for the first two years of solo practice; and be it further

Resolved, That Article XV, paragraph 3 be amended by adding two new sentences to read: "The dues and assessments of those active members entering solo practice for the first time, who are not otherwise eligible for reduced dues as set forth in prior provisions in this paragraph, shall be one half the amount levied on all other active members, for the first two years of solo practice; full dues shall be paid after the first two years of solo practice. Once an active member pays full dues, he shall no longer qualify for half-dues status."

Article XV, paragraph 3 would then read as follows:

"The dues and assessments of those active members who have graduated from medical or osteopathic college not more than five calendar years, not counting active service in the armed forces of the United States or in the United States Public Health Service, shall be one-third the amount levied on all other active members. The dues and assessments of those active members who have not completed their continuous residency training shall be one-tenth the amount levied on all other active members. In no case may an active physician continue to pay such reduced dues more than seven years after the date of graduation from medical or osteopathic school. The dues and assessments of those active members entering solo practice for the first time, who are not otherwise eligible for reduced dues as set forth in prior provisions in this paragraph, shall be one half the amount levied on all other active members, for the first two years of solo practice; full dues shall be paid after the first two years of solo practice. Once an active member pays full dues, he shall no longer qualify for half-dues status."

Accordingly, the Committee recommends **APPROVAL** of the substitute resolution, for Resolution 80-1.

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⇒. . . The House voted to **ADOPT** the substitute resolution for Resolution 80-1 . . .

Resolution 80-11, Bylaws Amendments to Provide Staggering of Dues-Paid Deadlines at each Level of the Federation

Introduced by Medical Society of the County of Erie

Whereas, The Bylaws of the Medical Society of the State of New York provide that any active member, whose component county medical society and State Society dues are unpaid after May 1 of any current year is not in good standing and shall be deemed to be in arrears; and

Whereas, These Bylaws also provide that a member whose dues are unpaid after June 1 of any current year shall be dropped from the roles of membership of his component county medical society and the Medical Society of the State of New York; and

Whereas, The Constitution and Bylaws of the American Medical Association provide that a member is delinquent if his dues and assessments are not received by the

American Medical Association by April 30 of the year for which they are prescribed, and shall forfeit his membership if dues and assessments are not received within thirty days after notice of delinquency has been mailed to the member's last known address; and

Whereas, It is administratively impossible for members' dues to be received, processed, and transmitted from the County to the State, and hence to the AMA to meet identical deadlines presently stipulated in the abovementioned bylaws when the member submits his dues payment within the prescribed period, but close to the May 1 or June 1 deadlines; therefore be it

Resolved, That Article XV — "Dues," paragraphs 6 and 7 of the Bylaws of the Medical Society of the State of New York be amended by the deletion of the words "and State Society" after the word "society," and the deletion of the words "May 1" and the insertion of the phrase "March 1, and State Society dues are unpaid after April 1" after the phrase "are unpaid after" in paragraph 6; the insertion of the words "county society" after the word "whose" and the deletion of the words "June 1" and insertion of the phrase "April 1 or whose State Society dues are unpaid after May 1" after the phrase "are unpaid after" in paragraph 7; to provide that, a member failing to pay component county dues by March 1 and State Society dues by April 1, shall be deemed to be not in good standing and in arrears; and that a member who fails to pay County dues by April 1 and State Society dues by May 1 shall be dropped from membership in the County and State Societies.

Article XV — "Dues" paragraph 6 and 7 of the Bylaws of the Medical Society of the State of New York would then read as follows:

"Any member, except a member who is eligible for and has applied for life membership, whose component county medical society dues are unpaid after March 1, and State Society dues are unpaid after April 1 of any current year or whose assessments are unpaid by the specified time is not in good standing and shall be deemed to be in arrears.

"A member whose county society dues are unpaid after April 1 or whose State Society dues are unpaid after May 1 of any current year or whose assessments are unpaid one month after the specified date shall be dropped from the roles of membership of his component county medical society and the Medical Society of the State of New York upon reasonable notice to such member by his component county medical society or the State Society, and without further action on the part of either the component county medical society or the State Society, and on such date he shall automatically cease to be a member of the component county medical society and State Society."

and be it further

Resolved, That Article II, Section 2, paragraphs 9 and 11 of the Bylaws of the Medical Society of the State of New York be amended by the deletion of the words "and the Medical Society of the State of New York" after the word "society," and the deletion of the words "May 1" and the insertion of the phrase "March 1, and State Society dues are unpaid after April 1" after the phrase "dues are unpaid" in paragraph 9; the insertion of the words "county society" after the word "whose" and the deletion of the words "June 1" and the insertion of the phrase "April 1 or whose State Society dues are unpaid after May 1" after the phrase "are unpaid after" in paragraph 11; so as to effectuate these changes. Paragraphs 9 and 11 would then read as follows:

"Any member, except a member who is eligible and has applied for life membership, whose component county medical society dues are unpaid after March 1, and State Society dues are unpaid after April 1 of any current year or whose assessments are unpaid by the specified time is not in good standing and shall be deemed to be in arrears."

"A member whose county society dues are unpaid after April 1 or whose State Society dues are unpaid after May 1 or whose assessments are unpaid one month after the specified date shall be dropped from the rolls of membership of his component county medical society and the Medical Society of the State of New York upon reasonable notice to such member by his component county medical society, or the State Society, and without further action on the part of either the component county medical society or the State Society, and on such date he shall automatically cease to be a member of both the component county medical society and the State Society."

and be it further

Resolved, That Article XVIII, Section 3 of the Bylaws of the Medical Society of the State of New York be amended so as to substitute the word "April" for the word "May" in paragraph 3, line 8 thereof. Paragraph 3 as amended would then read as follows:

"The treasurer of each component county medical society shall forward to the treasurer of the Medical Society of the State of New York the amount of the State Society per capita dues and/or assessments and the amount of all American Medical Association dues collected from members of his component county medical society as promptly as possible but in any event before the first day of April of each year."

PAST HOUSE ACTION: Resolution 76-1

The House Committee on Bylaws does not believe that it is possible to establish separate dates in which a member is deemed in arrears or terminated from membership in the component county medical society from the date in which a member is deemed in arrears or terminated from membership in the State Medical Society. This is because membership in the Medical Society of the State of New York and component county medical society is coterminous.

The House Committee on Bylaws, therefore, voted to amend Resolution 80-11 to read:

Resolved, That Article XV, paragraphs 6 and 7 of the Bylaws of the Medical Society of the State of New York be amended to provide that a member whose component county medical society and State Society dues are unpaid after April 1 of any current year, shall not be in good standing and deemed to be in arrears; and that a member whose dues are unpaid by May 1 of any current year shall be dropped from the rolls of his county medical society and the Medical Society of the State of New York; and be it further

Resolved, That Article XV, paragraph 6 be amended by deleting the word "May" and inserting the word "April" in its place. Article XV, paragraph 6 would then read:

"Any member, except a member who is eligible for and has applied for life membership, whose component county medical society and State Society dues are unpaid after April 1 of any current year or whose assessments are unpaid by the specified time is not in good standing and shall be deemed to be in arrears."; and be it further

Resolved, That Article XV, paragraph 7 be amended by deleting the word "June" and inserting the word "May" in its place, and by inserting a new sentence to read: "In the case of nonpayment of dues, the reasonable notice to be provided shall commence on April 1, or as soon as possible thereafter, upon the determination that such member is in arrears."

Article XV, paragraph 7 would then read:

"A member whose dues are unpaid after May 1 of any current year or whose assessments are unpaid one month after the specified date shall be dropped from the roles of membership of his component county medical society and the Medical Society of the State of New York upon reasonable notice to such member by his component county medical society or the State Society, and without further action on the part of either the component county medical society or the State Society, and on such date he shall automatically cease to be a member of the component county medical society and State Society. In the case of nonpayment of dues, the reasonable notice to be provided shall commence on April 1, or as soon as possible thereafter, upon the determination that such member is in arrears."; and be it further

Resolved, That Article II, Section 2, paragraphs 9 and 11 of the Bylaws of the Medical Society of the State of New York be amended so as to effectuate these changes by deleting the word "May" and inserting the word "April" in its place in paragraph 9; by deleting the word "June" and inserting the word "May" in its place and by inserting a new sentence to read: "In the case of nonpayment of dues, the reasonable notice to be provided shall commence on April 1, or as soon as possible thereafter, upon the determination that such member is in arrears," in paragraph 11. Article II, Section 2, paragraphs 9 and 11 would then read as follows:

"Any member, except a member who is eligible and has applied for life membership, whose component county medical society and Medical Society of the State of New York dues are unpaid after April 1 of any current year or whose assessments are unpaid by the specified time is not in good standing and shall be deemed to be in arrears . . ."

"A member whose dues are unpaid after May 1 or whose assessments are unpaid one month after the specified date shall be dropped from the rolls of membership of his component county medical society and the Medical Society of the State of New York upon reasonable notice to such member by his component county medical society, or the State Society, and without further action on the part of either the component county medical society or the State Society; and on such date he shall automatically cease to be a member of both the component county medical society and the State Society. In the case of nonpayment of dues, the reasonable notice to be provided shall commence on April 1, or as soon as possible thereafter, upon the determination that such member is in arrears."; and be it further

Resolved, That Article XVIII, Section 3 of the Bylaws of the Medical Society of the State of New York be amended so as to substitute the word "April" for the word "May" in paragraph 3, line 8. Article XVIII, section 3 would then read:

"The treasurer of each component county medical society shall forward to the treasurer of the Medical Society of the State of New York the amount of the State Society per capita dues and/or assessments and the amount of all American Medical Association dues collected from members of his component county medical society as promptly as possible, but in any event before the first day of April of each year."

The Committee was in agreement that the resolution, as amended, would expedite the flow of dues and/or assessments collected by the component county societies to the State Society and/or AMA, as promptly as possible. In addition, as amended, clarification is made that May 1 shall be the final date before a physician automatically ceases to be a member for nonpayment of dues.

The Committee, therefore, recommends **APPROVAL** of Resolution 80-11, as amended.

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⟹. . . The House voted to **ADOPT** Resolution 81-11 as **AMENDED** . . .

Resolution 80-14, Distribution of Expense Money by the Medical Society of the State of New York to Each District Branch

Introduced by First District Branch

Whereas, Each district branch received $1,000 from the Medical Society of the State of New York to defray its expenses; and

Whereas, The First District Branch has over 12,000 members, while three district branches have less than 1,000 members, three district branches have less than 2,000 members, and two district branches have between 2,000 and 3,500 members; and

Whereas, The distribution of expense money is disproportionate in relation to the number of members in each district branch, and as such represents inequities; therefore be it

Resolved, That the Medical Society of the State of New York amend Article XVI, paragraph 7 of its Bylaws by the deletion of the phrase "not to exceed $1,000" and the insertion of the phrase "in proportion to the number of members in the district branch, $1,000 to district branches of less than 2,000 members; $2,000 to district branches of more than 2,000, but less than 4,000 members; $5,000 to district branches of more than 4,000 members" after the word "sum."

Article XVI, paragraph 7 of its Bylaws to read as follows:

"Each district branch shall be entitled to receive a sum in proportion to the number of members in the district branch, $1,000 to district branches of less than 2,000 members; $2,000 to district branches of more than 2,000, but less than 4,000 members; $5,000 to district branches of more than 4,000 members, exclusive of the work done by the Medical Society of the State of New York regarding notices, programs, and so on, to defray the expenses of such district branch, provided a proper statement of such expenses shall have been presented to the secretary."

Fiscal Note: $1,000 to district branches of less than 2,000 members; $2,000 to district branches of more than 2,000, but less than 4,000 members; $5,000 to district branches of more than 4,000 members. Total amount at current membership listings, $15,000.

PAST HOUSE ACTION: Resolution 68-55

The Committee amended the resolution so that the phrase "in accordance with" is substituted for the phrase "in proportion to," and that the phrase "The maximum allowable amount shall be" is inserted before "$1,000." The paragraph now reads:

"Each district branch shall be entitled to receive a sum in accordance with the number of members in the district branch. The maximum allowable amount shall be $1,000 to district branches of less than 2,000 members; $2,000 to district branches of more than 2,000 but less than 4,000 members; $5,000 to district branches of more than 4,000 members, exclusive of the work done by the Medical Society of the State of New York regarding notices, programs, and so on, to defray the expenses of such district branch, provided a proper statement of such expenses shall have been presented to the secretary."

The Committee, therefore recommends **APPROVAL** of Resolution 80-14 as amended.

The House of Delegates considered an amendment to amended Resolution 80-14 which read as follows:

Resolved, That the Medical Society of the State of New York amend Article XVI, paragraph 7 of its Bylaws to read as follows:

"Each district branch shall be entitled to receive a sum in accordance with the number of members in the district branch. The maximum allowable amount shall be $1,000 to district branches of less than 1,000 members; $2,000 to district branches of more than 999 but less than 2,000 members; $3,000 to district branches of more than 1999 but less than 4,000 members; $5,000 to district branches of more than 3999 members, exclusive of the work done by the Medical Society of the State of New York regarding notices, programs, and so on, to defray the expenses of such district branch, provided a proper statement of such expenses shall have been presented to the secretary."

FISCAL NOTE AS OF AUGUST 20, 1981

$1,000 to district branches of less than 1,000 members:

Districts	III.	983 members
	IV.	803 members
	VI.	728 members

$2,000 to district branches of more than 999 but less than 2,000 members:

Districts	V.	1509 members
	VII.	1424 members

$3,000 to district branches of more than 1999 but less than 4,000 members:

Districts	VIII.	2003 members
	IX.	2825 members
	II.	3418 members

$5,000 to district branches of more than 3999 members:

District	I.	11,812 members

Total amount at current membership listings, $21,000

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⇒. . . *The House, after discussion, voted to* **ADOPT** *Resolution 80-14 as* **AMENDED** *and* **AMENDED** . . .

Resolution 80-20, Deletion of Article XI, Section 4, Committee on Prize Essays

Introduced by Edward Siegel, M.D., as an Individual

Whereas, Article XI, Section 3 of the Bylaws of the Medical Society of the State of New York states that it shall be the duty of the Committee on Prize Essays to receive all essays offered in competition for prizes which may be offered by the Medical Society of the State of New York; and

Whereas, There is only one award given for a prize essay; and

Whereas, The reasons for creating a committee for this one item are no longer valid; and

Whereas, There is presently a Council Committee on Awards and Prize Essays; therefore be it

Resolved, That the Committee on Prize Essays be abolished, that its function be transferred to the Council Committee on Awards and Prize Essays, and that Article XI, Section 4 of the Bylaws of the Medical Society of the State of New York be deleted.

Article XI, Section 4 of the Bylaws reads as follows:

"A Committee on Prize Essays shall be appointed by the president with the approval of the Council. It shall consist of three members, including the chairman. It shall be the duty of this committee to receive all essays offered in competition for prizes which may be offered by the Medical Society of the State of New York. The committee shall make all necessary rules and regulations for the awarding of prizes, subject to the term of the deeds of gift, and shall report the results at the next annual meeting of the House of Delegates. It shall give notice through the official publication of the State Society or by other methods of the amount of the prize and when the essays shall be submitted to the committee."

The House Committee on Bylaws believes that this is a housekeeping item.

The Committee, therefore, recommends **APPROVAL** of Resolution 80-20.

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⟹. . . The House voted to **ADOPT** Resolution 80-20 . . .

Resolution 80-30, Privileges of Student Members

Introduced by Richard N. Pierson, Jr., M.D., as an Individual

Whereas, Student members are encouraged to read the New York State Journal of Medicine; and

Whereas, Sending the New York State Journal of Medicine to all student members, whether or not requested by the student member, may be an unnecessary expense; therefore be it

Resolved, That Article II, Section 2 of the Bylaws of the Medical Society of the State of New York be amended by deleting paragraph 4 and by inserting a new paragraph 4 to read: "Student members shall be entitled to receive the *News of New York.* Each student member shall only be entitled to receive the *New York State Journal of Medicine* upon his individual written request. Student members shall not be entitled to receive the *Medical Directory of New York State.*"

Article II, Section 2, paragraph 4 of the Bylaws would then read as follows:

"Student members shall be entitled to receive the *News of New York.* Each student member shall only be entitled to receive the *New York State Journal of Medicine* upon his individual written request. Student members shall not be entitled to receive the *Medical Directory of New York State.*"

PAST HOUSE ACTION: Substitute Resolution for Resolutions 73-54, 73-89, and 73-103

The House Committee on Bylaws amended the resolution to add the phrase "on an annual basis" after the word "request," and to add the words "free of charge" at the end of the paragraph.

Article II, Section 2, paragraph 4 would then read as follows:

"Student members shall be entitled to receive the *News of New York.* Each student member shall only be entitled to receive the *New York State Journal of Medicine* upon his individual written request, on an annual basis. Student members shall not be entitled to receive the *Medical Directory of New York State* free of charge."

The Committee, therefore, recommends **APPROVAL** of Resolution 80-30, as amended.

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⟹. . . The House, after discussion, voted to **ADOPT** Resolution 80-30 as **AMENDED . . .**

Resolution 80-31, Resident Membership in the Component County Medical Societies and the Medical Society of the State of New York

Introduced by Richard N. Pierson, Jr., M.D., as an Individual

Whereas, The constitution and/or bylaws of the component county medical societies regarding membership of graduates of medical or osteopathic schools who are in continuous residency training are not uniform; and

Whereas, Some residents are unable to join component county medical societies because some component county medical societies either do not provide for membership for residents or expressly exclude residents; and

Whereas, Some deserving residents are therefore deprived of the benefits of membership by being excluded from membership by these bylaws; and

Whereas, The Medical Society of the State of New York is deprived of membership when a component county medical society excludes residents from membership; and

Whereas, Residents deprived of MSSNY membership in this manner may join the American Medical Association directly; and

Whereas, The AMA has in the past year successfully recruited approximately 3,000 "direct resident members" with dues at $35, indicating that there is interest among residents in organized medicine; and

Whereas, Less than 100 residents are members of MSSNY; and

Whereas, The AMA has agreed no longer to solicit or accept direct resident memberships if MSSNY component societies uniformly accept resident members; therefore be it

Resolved, That the Bylaws of the Medical Society of the State of New York be amended to require each county medical society to have in existence in its constitution and/or bylaws provisions to admit residents for membership; and be it further

Resolved, That Article XVIII, Section 2 of the Bylaws of the Medical Society of the State of New York be amended by adding paragraphs 5 and 6 to read:

"Every component county medical society shall provide for membership for graduates of recognized medical or osteopathic schools who are in continuous residency training. The constitution and/or bylaws of the component county medical society shall provide that residents shall be eligible for membership whether or not they are duly licensed and registered to practice in the State of New York. The resident members will have all the rights and privileges of active membership. Dues and assessments for the members in continuous residency training shall be no more than one tenth the amount levied on all other active members."

"Except by the approval of the Council, no resident may be a member in a component county medical society other than that of the county where he is in residency training or where he maintains his legal residence"; and be it further

Resolved, That Article II, Section 1, paragraph 1 of the Bylaws of the Medical Society of the State of New York be amended by deleting the word "four" and by adding the word "five" and by adding the phrase "(e) resident."

Article II, Section 1, paragraph 1 would then read as follows:

"The membership in the Medical Society of the State of New York shall be divided into five classes: (a) active, (b) life, (c) honorary, (d) student, and (e) resident; and be it further

Resolved, That Article II, Section 1 be amended by adding a new paragraph 9 to read:

"Resident memberships shall be limited to graduates of recognized medical or osteopathic schools who are in continuous residency training and who are resident members of a component county medical society. Any resident denied membership in the component county society (societies) not withstanding the provisions of Article XVIII, Section 2, paragraphs 5 and 6 of these Bylaws shall be eligible to join the Medical Society of the State of New York directly as a resident member"; and be it further

Resolved, That Article II, Section 2 of the Bylaws be amended by adding a new paragraph after paragraph 4 to read:

"The dues and assessments of resident members shall be no more than onetenth the amount levied on all other active members. The resident members shall be accorded all the rights and privileges of active membership. They shall be entitled to receive the *New York State Journal of Medicine* and the *News of New York,* but the *Medical Directory of New York State* only on request."

and be it further

Resolved, That Article XV, paragraph 3 of the Bylaws of the Medical Society of the State of New York be amended by deleting the sentence:

"The dues and assessments of those active members who have not completed their continuous residency training shall be one tenth the amount levied on all other active members."

Article XV, paragraph 3 will then read:

"The dues and assessments of those active members who have been graduated from medical or osteopathic college not more than five calendar years, not counting active service in the armed forces of the United States or in the United States Public Health Service, shall be one third the amount levied on all other active members. In no case may an active physician continue to pay such reduced dues more than seven years after the date of graduation from medical or osteopathic school."

The House Committee on Bylaws amended Resolution 80-31 in order to put into effect the following:

1. Create a resident class membership in which concurrent membership in a component county medical society is not required;
2. Include a grandfather clause so that residents who are currently members of any component county medical society will not have their membership status changed;
3. Create a procedure in which the residents are provided representation in the House of Delegates; and
4. Provide for dues for resident members.

Resolution 80-31, as amended, will now read:

Resolved, That the Bylaws of the Medical Society of the State of New York be amended to provide for resident membership in the Medical Society of the State of New York; and be it further

Resolved, That Article II, Section 1, paragraph 1 of the Bylaws of the Medical Society of the State of New York be amended by deleting the word "four" and by adding the word "five," and by adding the phrase "(d) resident."

Article II, Section 1, paragraph 1 would then read as follows:

"The membership in the Medical Society of the State of New York shall be divided into five classes: (a) active, (b) life, (c) honorary, (d) resident, and (e) student; and be it further

Resolved, That Article II, Section 1 be amended by adding a new paragraph 9 to read:

"Resident membership shall be limited to graduates of recognized medical or osteopathic schools who are in continuous residency training. Concurrent membership in a component county medical society is not a requirement for resident membership. This provision shall not affect the status of any individual currently in continuous residency training who became a member of a component county medical society prior to October 1981"; and be it further

Resolved, That Article II, Section 2 of the Bylaws be amended by adding a new paragraph 4 to read:

"The resident members shall be accorded all the rights and privileges of active membership. They shall be entitled to receive the *New York State Journal of Medicine* and the *News of New York*, but the *Medical Directory of New York State* only on request."; and be it further

Resolved, That Article III, Section 1, paragraph 1 be amended by adding the phrase "(e) duly designated delegate(s) from the resident membership."

Article III, Section 1, paragraph 1 would then read as follows:

"The House of Delegates shall be composed of (a) duly designated delegates from the component county medical societies; (b) officers of the Medical Society of the State of New York, councilors, and trustees; (c) a duly designated delegate from each district branch; (d) a duly designated delegate from each scientific section; (e) duly designated delegate(s) from the resident membership; (f) duly designated delegates from the student membership; (g) the Commissioner of Health of the State of New York or a deputy designated by him, provided that any representative shall be a member of the State Society; (h) past presidents of the State Society and any past president of the American Medical Association, provided that individual is a member of the Medical Society of the State of New York, who shall be a member for life; and (i) a representative from each of the medical schools in New York State, provided said representative is a member of the Medical Society of the State of New York."; and be it further

Resolved, That Article XV, paragraph 3 of the Bylaws of the Medical Society of the State of New York be amended by deleting the sentence: "The dues and assessments of those active members who have not completed their continuous residency training shall be one tenth the amount levied on all other active members."

Article XV, paragraph 3 would then read as follows:

"The dues and assessments of those active members who have been graduated from medical or osteopathic college not more than five calendar years, not counting active service in the armed forces of the United States or in the United States Public Health Service, shall be one third the amount levied on all other active members. In no case may an active physician continue to pay such reduced dues more than seven years after the date of graduation from medical or osteopathic school."; and be it further

Resolved, That Article XV be further amended by the insertion of a new paragraph following paragraph 3 to read:

"The dues and assessments of resident members shall be one tenth the amount levied on active members."; and be it further

Resolved, That Article III, Section 1 be amended by adding a new paragraph 9 to read:

"At least sixty days prior to the annual meeting of the House of Delegates, the resident members shall meet for the purpose of electing the delegate(s) and alternate delegate(s) to which they shall be entitled in accordance with their membership rolls. The resident membership shall be entitled to one delegate and one alternate delegate and, according to the rolls of the Medical Society of the State of New York, sixty days prior to the annual meeting, one additional delegate for each additional 400 resident members. The maximum number of eligible delegates shall be three."

The House Committee on Bylaws fully believes that Resolution 80-31, as amended, will encourage membership and participation by residents in the Medical Society of the State of New York.

The Committee, therefore, recommends **APPROVAL** of Resolution 80-31, as amended.

The House postponed action on Resolution 80-31 at the Sunday session, pending further study and clarification.

The House Committee on Bylaws held an open meeting on Monday, October 12, 1981. After hearing further testimony, it was the unanimous decision of the committee, in Executive Session, to submit the following substitute resolution. The substitute was considered by the House at the Tuesday session.

Resolved, That the Bylaws of the Medical Society of the State of New York be amended to provide for resident membership in the Medical Society of the State of New York; and be it further

Resolved, That Article II, Section 1, paragraph 1 of the Bylaws of the Medical Society of the State of New York be amended by deleting the word "four" and by adding the word "five" and by adding the phrase "(d) resident." Article II, Section 1, paragraph 1 would then read as follows:

"The membership in the Medical Society of the State of New York shall be divided into five classes: (a) active, (b) life, (c) honorary, (d) resident, and (e) student; and be it further

Resolved, That the Bylaws of the Medical Society of the State of New York be amended to require each county medical society to have in its constitution and/or bylaws provisions to admit residents for membership; and be it further

Resolved, That Article XVIII, Section 2 of the Bylaws of the Medical Society of the State of New York be amended by adding paragraphs 5 and 6 to read:

"Every component county medical society shall provide for membership for graduates of recognized medical or osteopathic schools who are in continuous residency training. The constitution and/or bylaws of the component county medical society shall provide that residents shall be eligible for membership whether or not they are duly licensed and registered to practice in the State of New York. The resident members will have all the rights and privileges of active membership. Dues and assessments for the members in continuous residency training shall be no more than one tenth the amount levied on all other active members."

"Except by the approval of the Council, no resident may be a member in a component county medical society other than that of the county where he is in residency training or where he maintains his legal residence"; and be it further

Resolved, That Article II, Section 1 be amended by adding new paragraphs 9 and 10 to read:

"Resident memberships shall be limited to graduates of recognized medical or osteopathic schools who are in continuous residency training and who are resident members of a component county medical society. Any resident who is unable to join the component county society (societies) not withstanding the provisions of Article XVIII, Section 2, paragraphs 5 and 6 of these Bylaws shall be eligible to join the Medical Society of the State of New York directly as a resident member.

"This provision shall not affect the status of any individual currently in continuous residency training who became a member of a component county medical society prior to October 1981"; and be it further

Resolved, That Article II, Section 2 of the Bylaws be amended by adding a new paragraph after paragraph 4 to read:

"The dues and assessments of resident members shall be no more than one tenth the amount levied on all other active members. The resident members shall be accorded all the rights and privileges of active membership. They shall be entitled to receive the Medical Directory of New York State only on request."

and be it further

Resolved, That Article XV, paragraph 3 of the Bylaws of the Medical Society of the State of New York be amended by deleting the sentence:

"The dues and assessments of those active members who have not completed their continuous residency training shall be one tenth the amount levied on all other active members."

Article XV, paragraph 3 will then read:

"The dues and assessments of those active members who have been graduated from medical or osteopathic college not more than five calendar years, not counting active service in the armed forces of the United States or in the United States Public Health Service, shall be one third the amount levied on all other active members. In no case may an active physician continue to pay such reduced dues more than seven years after the date of graduation from medical or osteopathic school."

The committee, therefore, recommends **APPROVAL** of the substitute resolution for Resolution 80-31.

The House Committee on Bylaws further recommended that the substitute resolution for Resolution 80-31 be amended by the deletion of the last resolved.

The House voted to amend the substitute resolution by the deletion of the second resolved.

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⇒. . . *The House, after considerable discussion, voted to* **ADOPT** *the substitute resolution for Resolution 80-31 as* **AMENDED** . . .

Resolution 80-32, Student Membership

Introduced by Richard N. Pierson, Jr., M.D., as an Individual

Whereas, Article II, Section 1, paragraph 4 of the Bylaws of the Medical Society of the State of New York provides that whenever a student member ceases to be enrolled in a recognized school of medicine he shall be considered to have resigned from membership from the Medical Society of the State of New York; and

Whereas, It should be clarified that this clause does not apply to members who are no longer enrolled by reason of graduation; therefore be it

Resolved, That Article II, Section 1, paragraph 4 of the Bylaws be amended by inserting the phrase, "other than by reason of graduation" after the words "Doctor of Medicine" in the last sentence of paragraph 4.

Article II, Section 1, last sentence of paragraph 4 would then read as follows:

". . . When a student member ceases to be enrolled in a recognized school of medicine in the State of New York pursuing a course of study leading to a degree of Doctor of Medicine, other than by reason of graduation he shall be considered to have resigned from membership in the Medical Society of the State of New York";

and be it further

Resolved, That Article II, Section 1 be amended by adding a new paragraph after paragraph 4 to read:

"Upon graduation from medical school, the student member shall not be considered to have resigned from the Medical Society of the State of New York if he shall within a reasonable period apply for active membership or any other class of membership in which he shall be eligible."

The House Committee on Bylaws agrees that the first "Resolved" in Resolution 80-32 clarifies the fact that a student member is not deemed to have resigned from membership upon graduation from medical school. The Committee recommends that Resolution 80-32 be amended, however, by deleting the second "Resolved," since it is not necessary.

The Committee, therefore, recommends **APPROVAL** of Resolution 80-32 as amended.

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⇒. . . The House, after discussion, voted to **ADOPT** Resolution 80-32 as **AMENDED** . . .

Resolution 80-33, Membership for Students Enrolled in Osteopathic Schools

Introduced by Richard N. Pierson, Jr., M.D., as an Individual

Whereas, Under Article II, Section 1, paragraph 2 of the Bylaws of the Medical Society of the State of New York active membership is limited to graduates of recognized medical or osteopathic schools; and

Whereas, Under Article II, Section 1, paragraph 4 of the Bylaws of MSSNY student membership is limited to those members enrolled in recognized medical schools in the State of New York, who are pursuing a course of study leading to a degree of Doctor of Medicine; therefore be it

Resolved, That Article II, Section 1, paragraph 4 of the Bylaws of the Medical Society of the State of New York be amended by inserting the words "or osteopathic" after the word "medical" in line two; by inserting the words "or Doctor of Osteopathy" after the words "Doctor of Medicine" in line four; by inserting the words "or school of osteopathy" after the word "medicine" in line twelve; and by inserting the words "or Doctor of Osteopathy" after the words "Doctor of Medicine" in line fourteen.

Article II, Section 1, paragraph 4 would then read as follows:

> "Student members shall be those members enrolled in recognized medical or osteopathic schools in the State of New York who are pursuing a course of study leading to the degree of Doctor of Medicine or Doctor of Osteopathy. Eligible students may become members of the Medical Society of the State of New York. Concurrent membership in a component county society and the American Medical Association is not a requirement for student membership. They shall apply for student membership on a form supplied by the secretary together with such dues as are fixed by the House of Delegates. When a student member ceases to be enrolled in a recognized school of medicine or school of osteopathy in the State of New York pursuing a course of study leading to a degree of Doctor of Medicine or Doctor of Osteopathy, other than by reason of graduation, he shall be considered to have resigned from membership in the Medical Society of the State of New York"; and be it further

Resolved, That Article II, Section 1, paragraph 5 be amended by adding the words "or osteopathic" after the word "medical."

Article II, Section 1, paragraph 5 would then read as follows:

> "A student member who is suspended from the rights and privileges of his medical or osteopathic school shall likewise be suspended for the same period from the Medical Society of the State of New York."

The House Committee on Bylaws agrees that since a graduate of an osteopathic school may qualify for active membership in the Medical Society, there is no reason why the student membership should not include students enrolled in recognized osteopathic schools in the State of New York. In addition, the House Committee on Bylaws has been advised that this resolution is not opposed by the student membership.

The Committee, therefore, recommends **APPROVAL** of Resolution 80-33.

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⟹. . . The House, after discussion, voted to **ADOPT** Resolution 80-33 . . .

Resolution 80-48, Unified Membership in County, MSSNY, and AMA

Introduced by New York County Medical Society

Whereas, The State of New York has a physician population of 48,000; and

Whereas, Only 26,100 (55%) are members of the Medical Society of the State of New York; and

Whereas, Of these 26,100 only 13,855 are members of the American Medical Association; and

Whereas, The AMA is the only "medical organization of medical organizations"; and

Whereas, The need for a unified membership becomes essential because of the encroachment of medicine by government and all other third parties; therefore be it

Resolved, That the Medical Society of the State of New York institute a campaign directed to all physicians in the State of New York advising them of the need for support and of the benefits which physicians derive by joining MSSNY and the American Medical Association; and be it further

Resolved, That membership in the county medical societies and MSSNY include unified membership in the AMA.

While the first "Resolved" in Resolution 80-48 does not request a change in the Bylaws, and therefore, is not properly brought before the consideration of the House Committee on Bylaws, it is nevertheless noted by the Committee that the substance of the first "Resolved" was adopted in Resolution 79-1. It has come to the attention of this Committee that the matter is currently being addressed as part of the Medical Society membership promotion campaign.

Although the Medical Society encourages AMA membership, the House Committee on Bylaws believes that AMA membership must remain voluntary. In the opinion of the Committee, mandatory membership in the AMA may cause the Medical Society to lose membership.

The Committee, therefore, recommends **DISAPPROVAL** of Resolution 80-48.

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⟹. . . The House, after discussion, voted to **NOT ADOPT** Resolution 80-48 . . .

Resolution 80-51, Introduction of Resolutions

Introduced by Joseph F. Shanaphy, M.D., as an Individual

Whereas, Article III, Section 3, paragraph 4 of the Bylaws of the Medical Society of the State of New York provides that resolutions of the House of Delegates may only be submitted by members of the House of Delegates as individuals, or as delegates representing component county medical societies, district branches, and scientific sections, or by component county medical societies, district branches, and scientific sections; and

Whereas, The current Bylaws of the Medical Society of the State of New York does not provide any manner in which a delegate representing the student membership or a delegate representing a medical school may submit a resolution other than as an individual; and

Whereas, This situation has arisen solely through an oversight, and there is no good reason why a student delegate should not be permitted to submit a resolution as a representative of the student membership or why a representative from a medical school may not introduce a resolution as a representative of his medical school, or why a resolution may not be submitted in the name of the student membership; therefore be it

Resolved, That Article III, Section 3, paragraph 4 of the Bylaws be amended by adding the words "the student membership and medical schools" following the words "scientific sections" in line 4 and by adding the words "the student membership" following the words "scientific sections" in line 6. Article III, Section 3, paragraph 4 of the Bylaws would then read as follows:

"Resolutions may be submitted to the House of Delegates only by members of the House of Delegates as individuals, or as delegates representing component county medical societies, district branches, scientific sections, the student membership, and medical schools, or by component county medical societies, district branches, scientific sections, and the student membership."

The House Committee on Bylaws believes that the manner of introducing resolutions is needlessly redundant under Article III, Section 3, paragraph 4 and would remain so under Resolution 80-51. The Committee, therefore, recommends that Resolution 80-51 be amended as follows:

Resolved, That Article III, Section 3, paragraph 4 of the Bylaws of the Medical Society of the State of New York be amended by deleting the phrase "or as delegates representing component county medical societies, district branches, and scientific sections;" and by inserting the phrase "the student membership and medical schools" after the words "scientific sections."

Article III, Section 3, paragraph 4 would then read:

"Resolutions may be submitted to the House of Delegates only by members of the House of Delegates as individuals, or by component county medical societies, district branches, scientific sections, the student membership, and medical schools."

Note: If Resolution 80-31, relating to resident membership, is adopted, Article III, Section 3, paragraph 4 would read:

"Resolutions may be submitted to the House of Delegates only by members of the House of Delegates as individuals, or by component county medical societies, district branches, scientific sections, resident membership, the student membership and medical schools."

The Committee, therefore, recommends **APPROVAL** of Resolution 80-51, as amended.

After discussion, the House voted to amend Resolution 80-51 by the addition of the word "delegates" after the words "section," "student membership," and "medical school." The Resolved portion of Resolution 80-51 would then read as follows:

"Resolutions may be submitted to the House of Delegates only by members of the House of Delegates as individuals, or by component county medical societies, district branches, scientific section delegates, student membership delegates, and medical school delegates."

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⟹. . . The House, after discussion, voted to **ADOPT** Resolution 80-51 as **AMENDED** . . .

Resolution 80-27, Proposed Revisions of the Principles of Professional Conduct

Introduced by Clifford L. Spingarn, M.D., as an Individual

Whereas, The Speaker of the House of Delegates has requested that a review of the PRINCIPLES OF PROFESSIONAL CONDUCT be made by the House Committee on Bylaws; and

Whereas, The fact that this study of the PRINCIPLES OF PROFESSIONAL CONDUCT has been called to the attention of the Committee on Ethics; and

Whereas, In the spirit of being cooperative with this study, the Council Committee on Ethics has proposed the attached update and revision of the PRINCIPLES OF PROFESSIONAL CONDUCT; therefore be it

Resolved, That the attached draft of the revised PRINCIPLES OF PROFESSIONAL CONDUCT be considered by the House Committee on Bylaws in accordance with Article XX of the Bylaws.

PROPOSED REVISIONS

PRINCIPLES OF PROFESSIONAL CONDUCT

DRAFT

CHAPTER I — *General Principles*

Section 1: The prime object of the medical profession is to render competent medical service with compassion and respect for human dignity.

Section 2: These Principles of Professional Conduct shall apply to doctors of medicine as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, partnerships, corporations or groups, by whatsoever name they may be known.

Section 3: The Medical Society of the State of New York does not prohibit the use of advertising when used in making certain information known to the public, which is entitled to know the names of physicians, the types of their practice, the location of their office, their office hours, fixed fees for specified routine professional services, and biographical data that will enable people to make a more informed choice of a physician.

The physician may furnish this information through the accepted local media for advertising; i.e., office signs, professional cards, dignified announcements, telephone directory listings, reputable directories and news media, which are open to all physicians on like conditions.

Solicitation of patients not in the public interest, directly or indirectly by a physician, by groups of physicians, clinics, institutions or organizations is unethical. Solicitation shall include:

(1) The not always obvious devices of furnishing or inspiring, by use of public relations firms or the news media, comments concerning cases in which the physician, group or institution has been or is concerned;

(2) the use of statements or claims intended or likely to create inflated or unjustified expectations of favorable results;

(3) the use of statements or claims that are self-laudatory and imply that the physician's skills are superior to other physicians engaged in his field or specialty of practice;

(4) offering gratuitous services or discounts in connection with professional services.

Section 4: Doctors of Medicine may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers, which have been published, and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. When any sort of medical information is released to the public, the promise of radical cures or boasting of cures or extraordinary skill or success, is unethical.

Section 5:

(a) The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of the patient is unethical.

(b) When a patient is referred by one doctor of medicine to another for consultation or treatment, the offering, giving, soliciting or receiving any fee or other consideration is unethical.

(c) The prescription or dispensing by a doctor of medicine of secret medicines or other secret remedial agents, of which he does not know the composition or the manufacture or promotion of their use is unethical.

(d) A doctor of medicine shall not have any financial interest in or own a pharmacy or an optical dispensing facility, unless it is established to the satisfaction of the local county medical society that such participation or ownership is necessary to meet the needs of the community.

(e) Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient or in areas where they are not available.

CHAPTER II

Section 1: A doctor of medicine is free to choose whom he will serve. He should respond to any request for his assistance in an emergency.

Section 2: Once having undertaken a case, the doctor of medicine should not neglect the patient, nor should he withdraw from the case without giving notice to the patient and/or his relatives or his guardian sufficiently long in advance of his withdrawal to allow them to secure another medical attendant.

Section 3: The doctor of medicine should safeguard the confidences which he may receive from his patient; this obligation extends beyond the period of professional services. None of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by doctors of medicine except when required by state law or by the courts.

Section 4: All voluntarily associated activities with cultists are unethical. Such activities lower the honor and dignity of the profession; in the same degree, it elevates the honor and dignity of the cultist.

CHAPTER III

Section 1: Every doctor of medicine should aid in safeguarding the profession against admission to it of those who are deficient in moral character or education.

Section 2: A doctor of medicine should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession.

CHAPTER IV

Section 1: Doctors of medicine should request consultations in perplexing cases, and the attending doctor of medicine should cheerfully consent to a consultation when desired by the patient or his representative.

Section 2: All due respect should be observed toward the doctor of medicine in charge of the case and no statement or remark should be made which would unjustly impair the confidence reposed in him.

Section 3: As soon as possible after the consultant has seen the patient, he should address the doctor of medicine in charge and advise him of the results of his investigation. Statements then may be made to the patient and/or his family or guardian in presence of all doctors of medicine concerned or unless another arrangement has been consented to by all physicians involved.

Section 4: The doctor of medicine in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such change is warranted. However, after such a change, it is best to call another consultation; then the doctor of medicine in charge should state his reasons for departing from the course decided at the previous conference. When an emergency occurs during the absence of the doctor of medicine in charge, a consultant may assume authority until the arrival of the doctor of medicine in charge.

Section 5: It may happen that the attending doctor of medicine and the consultant cannot agree in their views of the case or of the treatment to be pursued; with the consent of the patient another consultant may be called.

Section 6: When a doctor of medicine has acted as consultant in an illness, he should not become the doctor of medicine in charge in the course of that illness, except with the consent of the doctor of medicine who was in charge at the time of the consultation, unless the patient insists on the change.

Section 7: When a doctor of medicine makes social calls on another doctor of medicine's patient, he should avoid conversation about the patient's illness.

Section 8: A doctor of medicine should not take charge of, or prescribe for, another doctor of medicine's patient during any given illness (except in an emergency) until the other doctor of medicine has relinquished the case or has been formally dismissed.

Section 9: When a doctor of medicine does succeed another doctor of medicine in charge of a case, he should not disparage, by comment or insinuation, the one who preceded him. Such comment or insinuation tends to lower the confidence of the patient in the medical profession and so reacts against the patient, the profession, and the critic.

Section 10: When a doctor of medicine is called in an emergency because the personal or family doctor of medicine is not at hand, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the personal or family doctor of medicine. However, he should first report to the personal or family doctor of medicine the condition found and the treatment administered.

Section 11: Whenever a doctor of medicine requests another doctor of medicine to attend his patients during his temporary absence from his practice, professional courtesy requires the acceptance of such appointment if consistent with his other duties. The doctor of medicine acting under such an appointment should give the utmost consideration to the interests and reputation of the absent doctor of medicine. All such patients should be restored to the care of the latter upon his return.

CHAPTER V

Section 1: A doctor of medicine should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patient concerned might be deprived of immediately necessary care.

Section 2: Contract practice as applied to medicine means the practice of medicine under an agreement between a duly licensed doctor of medicine or a group of doctors of medicine, as principals or agents, and a corporation, organization, political subdivision, or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for salary or for a fixed rate per capita. Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Professional Conduct or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered. Contract practice which allows diversion of fees for professional medical services to a hospital, organization, or political subdivision is unethical.

Section 3: It is not unethical for a fee to be prorated among two or more doctors of medicine when such physicians have actively participated in the medical and/or surgical care of a patient and each physician's fee is commensurate with the services he had rendered. The patient who has received such joint services shall be advised of the participation of each physician and shall receive a separate, itemized statement from each.

CHAPTER VI

Section 1: Doctors of medicine, as good citizens, possessed of special training, should promote the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations.

Section 2: Doctors of medicine should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases. At all times the doctor of medicine should notify the constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules, and regulations of the health authorities. When an epidemic prevails, a doctor of medicine must continue his labors without regard to the risk of his own life.

Enforcement of the Principles of Professional Conduct

Component county medical societies should cooperate with the properly constituted authorities in the enforcement of the laws to the State of New York and of their respective localities relating to the public health and to the practice of medicine and should report promptly to such authorities any evidence received by them indicating any violation of such laws. The commission of an act or acts by a doctor of medicine which would subject him to reprimand or discipline or which would subject his license to practice medicine to revocation, suspension, or annulment shall constitute a violation of these Principles of Professional Conduct.

Amendments or Alterations

Any component county medical society may adopt other or amend or alter these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Bylaws of the Medical Society of the State of New York.

Enforcement, Discipline, and Punishment

Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws provisions adopted in accordance with its own constitution and bylaws, and in accordance with the Bylaws of the Medical Society of the State of New York, shall (a) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (b) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction.

APPENDIX I

The Oath

I swear by Apollo the physician and Aesculapius and Hygeia and Panacea and all the gods and goddesses that according to my ability and judgment I will keep this Oath and this stipulation — to reckon him who taught me this Art equally dear to me as my parents — to share my substance with him and relieve his necessities if required — to look upon his offspring in the same footing as my own brothers and to teach them this Art if they shall wish to learn it without fee or stipulation — and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the Art to my own sons and those of my teachers and to disciples bound by a stipulation and oath, according to the Law of Medicine, but to none others.

I will follow the system of regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times. But should I trespass and violate this Oath, may the reverse be my lot.

Hippocrates
(460–357 B.C.)

Prayer

I begin once more my daily work. Be thou with me, Almighty Father of Mercy, in all my efforts to heal the sick. For without Thee, man is but a helpless creature. Grant that I may be filled with love for my art and for my fellowmen. May the thirst for gain and the desire for fame be far from my heart. For these are the enemies of Pity and the Ministers of Hate. Grant that I may be able to devote myself, body and soul to thy children who suffer from pain.

Preserve my strength, that I may be able to restore the strength of the rich and the poor, the good and the bad, the friend and the foe. Let me see in the sufferer the man alone. When wiser men teach me, let me be humble to learn, for the mind of man is so puny and the art of healing is so vast. But when fools are ready to advise me or to find fault with me, let me not listen to their folly. Let me be intent upon one thing, O Father of Mercy, to be always merciful to thy suffering children.

May there never rise in me the notion that I know enough, but give me strength and leisure and zeal to enlarge my knowledge. Our work is great and the mind of men presses forward forever. Thou has chosen me in thy grace, to watch over the life and death of Thy creatures. I am about to fulfill my duties. Guide me in this immense work so that I may be of avail.

Maimonides
(1135–1204 A.D.)

Declaration of Geneva

At the Time of Being Admitted as Member of the Medical Profession:

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due.

I will practice my profession with conscience and dignity.

The health of my patient will be my first consideration.

I will respect the secrets which are confided in me.

I will maintain by all means in my power, the honor and the noble traditions of the medical profession.

My colleagues will be my brothers.

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient.

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely, and upon my honor.

Adopted by the General Assembly of the World Medical Association at Geneva, Switzerland, September, 1948.

The House Committee on Bylaws decided to accept the proposed revisions to the Principles of Professional Conduct as submitted by Joseph G. Zimring, M.D., Chairman of the Committee on Ethics of the Medical Society of the State of New York as a substitute for Resolution 80-27. The proposed revisions provide:

PROPOSED REVISIONS
PRINCIPLES OF PROFESSIONAL CONDUCT

(Submitted by Joseph G. Zimring, M.D., Chairman, Committee on Ethics–4/19/81)

CHAPTER I–*General Principles*

Section 1: The prime object of the medical profession is to render competent medical service with compassion and respect for human dignity.

Section 2: These Principles of Professional Conduct shall apply to doctors of medicine as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, partnerships, corporations or groups, by whatsoever name they may be known.

Section 3: The Medical Society of the State of New York does not prohibit the use of advertising when used in making certain information known to the public, which is entitled to know the names of physicians, the types of their practice, the location of their office, their office hours, fixed fees for specified routine professional services, and biographical data that will enable people to make a more informed choice of a physician.

The physician may furnish this information through the accepted local media for advertising; i.e., office signs, professional cards, dignified announcements, telephone directory listings, reputable directories, and news media, which are open to all physicians on like conditions.

Solicitation of patients, directly or indirectly, by a physician, by groups of physicians, clinics, institutions or organizations is unethical. Solicitation shall include:

(1) The not always obvious devices of furnishing or inspiring, by use of public relations firms or the news media, comments concerning cases in which the physician, group or institution has been or is concerned;

(2) the use of statements or claims intended or likely to create inflated or unjustified expectations of favorable results;

(3) the use of statements or claims that are self-laudatory and imply that the physician's skills are superior to other physicians engaged in his field or specialty of practice;

(4) offering gratuitous services or discounts in connection with professional services.

Section 4:

(a) The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of the patient is unethical.

(b) When a patient is referred by one doctor of medicine to another for consultation or treatment, the offering, giving, soliciting or receiving any fee or other consideration is unethical.

(c) It is not unethical for a fee to be prorated among two or more doctors of medicine when such physicians have actively participated in the medical and/or surgical care of a patient and each physician's fee is commensurate with the services he had rendered. The patient who has received such joint services shall be advised of the participation of each physician and shall receive a separate, itemized statement from each.

Section 5:

(a) The prescription or dispensing by a doctor of medicine of secret medicines or other secret remedial agents, of which he does not know the composition or the manufacture or promotion of their use is unethical.

(b) A doctor of medicine shall not have any financial interest in or own a pharmacy or an optical dispensing facility, unless it is established to the satisfaction of the local county medical society that such participation or ownership is necessary to meet the needs of the community.

(c) Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient or in areas where they are not available.

(d) Contract medicine per se is not unethical. Contract practice which allows division of fees for professional medical services to a hospital, organization or political subdivision is unethical.

CHAPTER II

Section 1: A doctor of medicine is free to choose whom he will serve, except in the case of an emergency.

Section 2: Once having undertaken a case, the doctor of medicine should not neglect the patient nor should he withdraw from the case without giving adequate notice to the patient and/or relatives or guardian.

Section 3: The doctor of medicine should safeguard the patient's confidences within the constraints of the law.

Section 4: All voluntarily associated activities with anyone who violates the principle "of a method of healing founded on a scientific basis" are considered unethical.

Section 5: Doctors of medicine should request consultations when necessary or upon request of patient and/or family.

CHAPTER III

Section 1: The medical profession should safeguard the public and itself by exposing those physicians deficient in moral character or professional competence or who engage in illegal or unethical conduct.

Section 2: A doctor of medicine shall respect the rights of colleagues.

CHAPTER IV

Section 1: Doctors of medicine should strive continually to improve medical knowledge and skill. They can promote the health of their community by their contributions and by cooperating with the proper authorities in the administration of sanitary laws and regulations.

Amendments or Alterations

Any component county medical society may adopt other or amend or alter these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Bylaws of the Medical Society of the State of New York.

Enforcement, Discipline, and Punishment

Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws provisions adopted in accordance with its own constitution and bylaws and in accordance with the Bylaws of the Medical Society of the State of New York, shall (a) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (b) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction.

APPENDIX I

The Oath

I swear by Apollo the physician and Aesculapius and Hygeia and Panacea and all the gods and goddesses that according to my ability and judgment I will keep this Oath and this stipulation — to reckon him who taught me this Art equally dear to me as my parents — to share my substance with him and relieve his necessities if required — to look upon his offspring in the same footing as my own brothers and to teach them this Art if they shall wish to learn it without fee or stipulation — and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the Art to my own sons and those of my teachers and to disciples bound by a stipulation and oath, according to the Law of Medicine, but to none others.

I will follow the system of regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times. But should I trespass and violate this Oath, may the reverse be my lot.

Hippocrates
(460–357 B.C.)

Prayer

I begin once more my daily work. Be thou with me, Almighty Father of Mercy, in all my efforts to heal the sick. For without Thee, man is but a helpless creature. Grant that I may be filled with love for my art and for my fellowmen. May the thirst for gain and the desire for fame be far from my heart. For these are the enemies of Pity and the Ministers of Hate. Grant that I may be able to devote myself, body and soul to thy children who suffer from pain.

Preserve my strength, that I may be able to restore the strength of the rich and the poor, the good and the bad, the friend and the foe. Let me see in the sufferer the man alone. When wiser men teach me, let me be humble to learn, for the mind of man is so puny and the art of healing is so vast. But when fools are ready to advise me or to find fault with me, let me not listen to their folly. Let me be intent upon one thing, O Father of Mercy, to be always merciful to thy suffering children.

May there never rise in me the notion that I know enough, but give me strength and leisure and zeal to enlarge my knowledge. Our work is great and the mind of men presses forward forever. Thou has chosen me in thy grace, to watch over the life and death of Thy creatures. I am about to fulfill my duties. Guide me in this immense work so that I may be of avail.

Maimonides
(1135–1204 A.D.)

Declaration of Geneva

At the Time of Being Admitted as Member of the Medical Profession:

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due.

I will practice my profession with conscience and dignity.

The health of my patient will be my first consideration.

I will respect the secrets which are confided in me.

I will maintain by all means in my power, the honor and the noble traditions of the medical profession.

My colleagues will be my brothers.

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient.

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely, and upon my honor.

Adopted by the General Assembly of the World Medical Association at Geneva, Switzerland, September, 1948.

The House Committee on Bylaws feels that under the substitute proposal, the Principles of Professional Conduct will be more concise while the pertinent principles will remain intact.

The Committee, therefore, recommends **APPROVAL** of Resolution 80-27 as substituted.

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⟹. . . The House, after considerable discussion, **REFERRED** Resolution 80-27 back to the House Committee on Bylaws . . .

Your chairman would like to thank in addition to the members of the Committee and the physicians who testified before it, those members of staff who have greatly aided this Committee; J. Richard Burns, J.D., General Counsel, Donald R. Moy, J.D., Staff Attorney, Mrs. Joan Grimm and Ms. Barbara Lacey, who provided their secretarial assistance to the Committee.

Respectfully submitted,

Daniel F. O'Keeffe, M.D. *Chairman*

⟹. . . The House voted to **ACCEPT** the report of the House Committee on Bylaws as acted upon by the House . . .

REPORTS OF OFFICERS

PRESIDENT

Mr. Speaker, members of the House of Delegates, honored guests:

It is difficult for me to realize that just one year ago I stood before you with hope, admiration, and dreams for our Society, a medical organization that has lived and functioned effectively for 175 years. And now, one year later, I still have that admiration as I report to you the successes, the failures, and the frustrations we have experienced.

It was a challenging year and a demanding one. It was a year that saw changes in the top level administration staff, in the retirements of the Executive Vice-President and the Director of Communications. Fortunately, I had the able and sage counsel of our Emeritus Executive Vice-President, Henry Fineberg.

My term of office was a year of confrontations, negotiations, and discussions that covered a wide range of subjects and even a wide geographic area. It contained problems that varied widely and diversely, from the "off shore medical schools" to malpractice insurance, or as I prefer to call it, Medical Liability. Nevertheless, with all the trials and tribulations, it was a most rewarding event in my life.

I was given the opportunity to serve my professional colleagues and the health system of our State with every bit of ability, strength, and endurance I possess. It was demanding and involved sacrifice, but I shall always cherish that opportunity.

At the outset, we were presented with a serious problem that involved an old adversary — the Regents of the State of New York. It was their will to create a mechanism to enable students studying abroad in many instances in newly manufactured medical schools located mainly in the Caribbean area and run by entrepreneurs — to complete the third and fourth years of their clinical medical education in hospitals in New York State and to qualify to sit for licensure examinations. In this endeavor we were able to enjoy and utilize the relationship previously established with the Association of Medical Schools of New York. Despite a well planned cooperative effort with testimony at public hearings we were unable to influence the Regents to abandon or modify their proposal.

An exceptional event of the year was the long awaited meeting with the Governor. It was a lengthy session and covered many problems such as medical liability, Medicaid, a better concept to administer professional conduct, and the licensing of nurse practitioners to broaden their scope of activity. The meeting was cordial and productive and we now have opened an avenue of communication with the executive branch of government that will provide for discussions and resolution of mutual problems.

We have continued to maintain our relationship with the Commissioner of Health and his staff through frequent consultations and the annual seminar. The seminar is a working meeting hosted by the Public Health Commission of the Division of Scientific Activities to which all the department directors of the Health Department are invited. The resultant detailed discussions provide an exchange of ideas which assist in maintaining a close alliance with the Department.

Our Corporate Visitation Committee has continued to meet with industry and to expand its agenda. Formal goals and aims were set forth, and an outline was structured to incorporate the needs, expectations, and desires mutually agreed upon by both industry and medicine. It was most encouraging to know that this partnership can help to provide the leadership necessary to help curtail the ever increasing cost of maintaining the highest quality of health care. Industry, it is clear is interested in the problem of medical liability and the role it plays in cost containment.

The Medical Society of the State of New York has continued to explore new, innovative, and exciting areas for our membership, by reactivation of the Research and Development Committee. A two-day "think tank" session was held in September. It was a most productive and rewarding meeting. A detailed report will be submitted to the Council. I certainly do not wish to preempt the committee's report; however, mention must be made regarding the Demographic Survey of Physicians. It is a reality; it is a superb informational source and resource for our Society's endeavors; and will be available by the end of this year.

Special commendation must be given to the staff for the most comprehensive, detailed, complete analysis of nationwide malpractice legislation. It is the only one of its kind and is sought after, via requests for reprints, by thirty-six state organizations at the last count.

Our Division of Governmental Affairs was exceptionally active this year and worked very closely with the State Legislation Committee and our Albany lobbyists. Through their joint efforts a vital line of contact was kept alive with the legislators that resulted in many successful ventures. The most influential factor is the demonstration, through our Political Action Committee, that we physicians want — and must — become involved in political affairs if we are to be heard. One cannot emphasize too strongly what our PAC has accomplished, the influence it can attain, and the respect it has acquired in Albany. However, and most unfortunately, the poor response of this society's membership to participate in this most essential activity is a detriment to its potential effectiveness. Contributions of money are important, but of much greater import is the active involvement of a larger section of society members. It is this involvement and this support by many physicians that demonstrate to our legislators that we are as interested in their problems and political activity, as we want them to be in our problems. Such mutual interest is what pays off in the end.

The most impelling issue this year was, and unfortunately continues to be, the medical malpractice insurance problem, and the herculean efforts needed to attain a resolution of the problem. By far the greatest amount of time was devoted to this monster. Many trips were made to Albany for visits with the Superintendent of Insurance and conferences with the chairmen of key legislative committees of both Houses and other legislative leaders; there were numerous open discussions at county, district, and specialty societies; yes, even an evening with the Trial Lawyers. To assist us we engaged the services of a team of professional public relations people. And many of our members — not enough — were magnificent in their outpouring of letters to the Governor and legislators, and their participation in our march on Albany. As a result of our efforts we obtained the enactment of the Collateral Sources Bill, a beginning to our determination to alleviate this problem. However, and most important, we were able to arouse the interest of our law makers to the need for more meaningful instruments of legislation — the concept of Life Structured Awards and a Medical Catastrophe Act.

I am convinced that success is obtainable through such measures, and that we are on the right road but we must have patience. Such a drastic change in legislative thinking takes time to evolve. Unfortunately, there are no short cuts! We must — and will — continue our concentrated and unrelenting efforts; but this requires the support and the involvement of the entire medical profession to achieve our goal. This has been done in other states, and it can be done in New York. Throughout the year we had the close cooperation of our insurance company. No mention of the liability problem would be complete without words of gratitude and commendation for Don Fager and for his tireless, fearless, and splendid assistance.

One of the several innovations initiated this year was the inclusion of the Auxiliary of the Medical Society into the Society's activities. Members of the Auxiliary were appointed to participate in such committees as Legislation and Membership. I hope that this commitment will continue and that we will and should avail ourselves of this great untapped resource of willing, industrious, and intelligent persons.

The regionalization of the Workers' Compenstion Medical Fee Schedule went into effect as stated. Again, as many times in the past, we restated our basic premise of "usual and customary." We met with the Chairman several times. Unfortunately, in June, Chairman Arthur Cooperman died.

We had almost universal success in our legal challenges. A few examples are: a withdrawal of the Health Department Regulations to impose Hospital Utilization Review; invalidation of a regulation requiring the release of copies of records to patients; and a change in the laws initiated to reducing the cost of the Medicaid program which now provides reimbursement for surgery on the basis of "medical necessity" rather than "deferrability." That the so-called Donnelly Act (The State Anti-Trust Law) does not apply to the learned professions was indicated in the successful "amicus curiae" intervention by the MSSNY in the appeals involving the eight Long Island physicians; and the dismissal of the Chiropractic Anti-Trust Suit against MSSNY, Nassau County Medical Society, et al.

In other words, we are responding to the mandate of the House of Delegates to fight government encroachments whenever and wherever they appear.

I have mentioned but only a few of the highlights of a hectic, demanding, often frustrating, but most rewarding year as your President. It would have been an impossible task, and equally impossible to have survived, without the encouragement, assistance, and advice of Milt Rosenberg and "Buzz" Eberle, and the support of the super-excellent staff at Lake Success, especially the Executive Vice-President Ed Siegel and his most able Executive Associate, Irma Erickson.

One final note. The year 1982 will mark the 175th year of our Medical Society, the organization of the physicians in New York State. It has survived because it meets an important need and performs an important service, not only for the physicians of the State but also for its people. It will continue to survive for the same reason. Long may it live and long may it grow and prosper.

Respectfully submitted,

Ralph M. Schwartz, M.D. *President*

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee reviewed the annual report of the President, and was impressed by the number of activities, and the amount of energy and dedication he devoted to serving his colleagues. We particularly appreciate his efforts on behalf of the membership in the following areas: the medical liability insurance crisis and the Board of Regents rules relative to foreign medical schools. On behalf of the physicians in New York State, we thank Dr. Schwartz and note the development of a closer relationship with the New York State Legislature and the Governor. We hope that this trend will continue.

⟹ Your reference committee recommends that the report of the President be filed for information.

⟹ . . . *The report of the President was* **FILED FOR INFORMATION . . .**

SECRETARY (ANNUAL)

To the House of Delegates, Ladies and Gentlemen:

The Secretary reports as follows for the year 1980–1981.

House of Delegates. An edited version of the minutes of the 1980 House of Delegates' meeting was transmitted to the *New York State Journal of Medicine* and was published in the March, 1981, issue, Vol. 81, No. 4. Verbatim minutes of the 1980 annual meeting of the House are on file at the headquarters office. Matters referred by the House of Delegates to the Council were reported to the Council by the Secretary in October, 1980. Instructions of the House of Delegates were referred by the executive vice-president to the appropriate officers, committee chairmen, division directors, and other persons. A "Résumé of Instructions from the 1980 House of Delegates and Actions Thereon by the Council, Board of Trustees, Executive Committee, Officers, Council Committees, and Governmental Agencies" is being prepared and will be presented to the 1981 House of Delegates. It will record the final disposition of the instructions of the House as reported at the time of preparation of the annual reports.

Council, Executive Committee, and Board of Trustees. The Secretary has sent notices of the meetings of the Council, the Board of Trustees, and the Executive Committee and has also reported Executive Committee actions to the Council.

Membership. At its meetings in October and November, 1980, and January, February, March, April, May, and June, 1981, the Council approved requests by county medical societies, presented by the Secretary, for remission of dues of 148 members because of illness, financial hardship, and military service. Membership figures for the period ending August 31, 1981, will be presented in the supplementary report. They will reflect any additional dues remissions approved by the Council in September, 1981, as well as the 148 mentioned above.

The Medical Society of the State of New York received notices from county medical societies recommending that physicians be excused from fulfilling CME requirements. At the meetings of the Council in February, March, April, May, and June, 1981, the Council approved CME exemptions for 92 physicians because of illness or permanent disability.

From October, 1980, through June, 1981, the county medical societies submitted, and the Secretary presented to the Council, the names of 202 applicants for election to life membership, and the Council elected them at the meetings of October and November, 1980, and January, February, March, April, May, and June, 1981. The list of life members elected during the above stated period follows:

Haim Agus, New York
Roy C. Ainsworth, Utica
Robert M. Appel, New York
Ursula K. Arnsdorff, Rochester
Morris Axelrod, Delray Beach, Fla.

Marcel E. Back, Spring Valley
Frank E. Barnes, Jr., Auburn
Edward A. Barrett, Albion
Anny Baumann, New York
Frank A. Baumann, Binghamton
John Beck, Staten Island
Harry F. Benjamin, Altamont
William H. Berkman, Brooklyn
Alfred Berman, Bayside
Harold Bernstein, Rockville Centre
Margaret Bevans, New York
Harry A. Birnbaum, Brooklyn
Max Bleicher, New York
Clement J. Boccalini, Stony Brook
Chew Sek Boey, New York
Maria D. Bohm, New York
James L. Boyd, Port St. Lucie, Fla.
Murray M. Braaf, New York
James J. Brandl, Lancaster
Mitchell Brice, II, Ponte Vedra Beach, Fla.
Walter F. Bugden, Fayetteville
Seymour L. Bukanz, New York
William J. Burns, Schenectady

Lester J. Candela, Great Neck
Anthony T. Capello, Loudonville
William H. Cassebaum, Englewood, N.J.
Christy F. Castiglia, Tonawanda
Claude B. Cave, Brooklyn
Anthony J. Cerrato, The Bronx
Philip S. Chasin, Forest Hills
Benjamin J. Ciliberti, Yonkers
Joseph L. Cilmi, Brooklyn
Gerardo Cubelli, Bayside
Vincent S. Cunningham, Rockaway Beach

Joseph V. D'Agostino, Staten Island
John F. Daly, New York
Raul de Armas, Ithaca
Francis X. Dever, Glens Falls
Lewis Dickar, Bayport
M. Nathalie Dillont, Tarrytown
J. Edwin Drew, McLean, Va.
James F. Durkin, Olean

Howard A. English, Warnerville

Samuel J. Fairstein, Mt. Vernon
Morris Feller, Brooklyn
Benjamin Fink, Woodbury
Jerome H. Flatow, Syracuse
S. Charles Franco, Brooklyn
Norman N. Frenkiel, The Bronx
Emerick Friedman, Albany
Orel Friedman, Glens Falls
Harold T. Fuerst, New York

William J. Garvin, Irvington
Amler T. George, Glenmont
Edward W. Gilmore, Binghamton
Joseph A. Girard, New York
Alfred N. Godholm, New York
Nathan Goldberg, New York
Sanford Goodfriend, White Plains
Florence H. Gottdiener, Menlo Park, Calif.
Arthur V. Graham, Brooklyn
Louis Greenstein, Newtown, Ct.
Robert O. Gregg, Syracuse
Neville A. Griffith, Brooklyn
Herbert B. Guyer, East Meadow

Irving E. Hagadorn, Kenmore
Alfred W. Harder, Kingston
Nathan H. Hass, North Miami Beach, Fla.
Paul Hecht, New York
Allen W. Henderson, Clayton
Samuel T. Herstone, Lauderhill, Fla.
Erich Hirsch, Geneva
John H. Hirschfeld, Mohawk
William M. Hitzig, New York
Markus Hoffman, Yonkers
Joseph J. Hynes, Albany

Peter A. Ierardi, Palm Bay, Fla.
Renee K. Imberman, New York

Martin H. Jacobi, Norwich
Matthew H. Jaffe, Binghamton
Saul Jarcho, New York
Paul C. Jenks, Waterloo

Irving H. Kagan, Huntington
Harry C. Kaine, Brooklyn
Samuel Kantor, Slingerlands
Henry M. Karlan, Margate, Fla.

Joseph Kelemen, Congers
Sumner B. Kingsley, Ithaca
Abraham Klein, Brooklyn
Charles Klepetar, Delhi
Irving Klinger, The Bronx
Zdenka Kral, White Plains
Sidney Kreinin, Brooklyn

Baurice B. Laffer, Liverpool
Leone C. Laskin, Great Neck
Ewin F. Lathbury, Kenmore
M. Miller Lee, Albany
Saul P. Lehv, New York
Eli A. Leven, Rochester
Hyman Levy, New York
William R. Lewis, Lewiston
Caspar A. Lian, Scarsdale
Tera Lieblich, New York
Hirsch R. Liebowitz, Roslyn
David J. Locke, Albany
Ralph J. Low, Trumansburg
Heinz L. Luschinsky, New York
William G. Lynch, Glendale

William L. Madden, Prescott, Ariz.
Gerard C. Maglio, Jupiter, Fla.
Ladislaus J. Makarewicz, Buffalo
Brahim A. Mandour, Utica
Dante Manganelli, White Plains
Anthony E. Maniscalco, Greenwich, Ct.
Charles T. Mann, Lockport
Frederick M. Marek, New York
Bernard R. Margolius, Catskill
Benjamin F. Markowitz, Albany
George M. Masotti, Williamsburg, Va.
Preston G. McLean, New York
Cameron F. McRae, Richmond, Va.
Domenic S. Messina, Amherst
Justin W. Mignault, Baldwinsville
Daniel B. Muscatello, Fla.
Louis Muzzicato, Hopewell Junction

Herbert F. Newman, New York
Claude C. Nuckols, Albany

John D. O'Connor, Orchard Park
Robert W. O'Connor, Eggertsville

Vincent A. Palumbo, Rome
Ralph C. Parker, Jr., Pittsford
Charles A. Perera, New York
Martin Perlmutter, Great Neck
Paul T. Perugini, Bedford
Charles A. Poindexter, New York
Julius Pomeranze, New York
Thomas F. Prestel, Williamsville
Zygmunt Pruski, Plattsburgh

Ellis D. Rand, Huntington
Irving Rappaport, Middle Village
Harold Raynard, Nutley, N.J.
James J. Reardon, Plattsburgh
Steven Rich, New City
Edwin W. Roberts, Pulaski
Andre Rolo, Amityville
David M. Rosen, Sarasota, Fla.
Meyer Rosenberg, New York
Benjamin B. Rubinstein, New York
Henry S. Rubinstein, Boca Raton, Fla.
Fred Ryersbach, Bath

Majer Salz, Brooklyn
Nathan L. Samuels, New Hyde Park
Norman A. Samuels, New York
Joseph T. Sard, Great Neck
Gregory Sarr, Clifton Springs
Alfred J. Schmitt, Hollyday, Fla.
Miller H. Schuck, Buffalo
Elack Schultz, Lauderhill, Fla.
Philip J. Schultze, Brooklyn
Alois B. Schwarz, Forest Hills
Arnold G. Schwyzer, St. Paul, Minn.
Thomas R. Shannon, Jr., Poughkeepsie
Norton Shapiro, Niagara Falls
Harold C. Shulman, Binghamton
Manahiem Siegal, Floral Park
Sigmund A. Siegel, New York
Alexander Singer, Brooklyn
Anthony S. Sloand, Buffalo
Harold Sobel, Middletown
Alan H. Sorrell, New York
Joseph M. Spitzer, New York
E. Gerard Stache, Wantagh
Sidney S. Steckel, Yonkers
Frances E. Stein, New York
Joan Stein, Nyack
Francis A. Stephens, Glenmont
Carl A. Stettenbenz, Buffalo
Paul N. Stoesser, Kenmore
Howard L. Stoll, Sr., Little Valley
Kenneth J. Strully, New York

Sidney H. Taylor, Staten Island
Dante Tocco, Endicott
Anthony L. Tomao, Brooklyn
Paul T. Topkins, Valley Stream
Sylvia G. Traube, New York
Ivan J. Tremblay, Pittsford
Robert Tuby, Great Neck
Mary C. Tyson, New York

Robert Wallis, New York
Burrill Walters, Valley Stream
Jean D. Watkeys, Rochester
Stanley W. Widger, Rochester
Frederic S. Willner, Forest Hills
Gerda F. P. Willner, Forest Hills
Leo Wilson, Larchmont
Mark Kau-Hsi Wang, Loundonville

Howard D. Zipper, Lawrence

The Secretary's supplementary report will list life members elected in September, 1981.

Meetings. The Secretary has attended meetings of the Council, the Executive Committee, the Board of Trustees, and the Judicial Council, as well as meetings of the Professional Medical Liability Insurance and Defense Board. As an ex-officio member of all committees I attended many committee meetings throughout my tenure.

Other Matters. As required by the Bylaws, the Secretary has kept minutes of the House of Delegates, the Council, the Executive Committee, the Board of Trustees, and the Judicial Council, including verbatim records of the proceedings of the House of Delegates and the Judicial Council and a tape recording of the proceedings of the Council, and has also kept files of the correspondence resulting from the meetings of the House of Delegates, the Council, the Executive Committee, and the Board of Trustees. Records and correspondence relating to actions of the Judicial Council are kept in the office of the general counsel. The Secretary is custodian of the seal of the Society and has it affixed to appropriate documents.

Respectfully submitted,

Victor J. Tofany, M.D., *Secretary*

SECRETARY (SUPPLEMENTARY)

To the House of Delegates, Ladies and Gentlemen:

Membership. At the September, 1981, Council meeting, remission of 1981 dues was granted to 31 active members because of illness, financial hardship, and military service.

The Council also approved CME exemptions for 5 physicians because of illness, after receiving notices from county medical societies recommending that these physicians be excused from fulfilling CME requirements.

The following 46 persons were elected by the Council as life members in action taken at the Council meeting in September, 1981:

Henry R. Alderman, Lewiston
Russell L. Battaglia, Buffalo
Alexander Boroff, Waverly
Michel A. Bottalico, Boynton Beach, Fla.
John H. Brooks, Lowville
James A. Brussel, New York
Louis Bush, Pompano Beach, Fla.

John Cannon, Scarsdale
George E. Christmann, Valley Stream
Erwin Colin, Elmhurst
John T. Croft, New York

Armand J. D'Errico, Gloversville
Arthur B. DeGrandpe, Plattsburgh

Benjamin Esterman, Lawrence

Irving Feurer, New York
Dorothy Fogel, New York

Walter P. Gage, Peekskill
Sawie Gaston, Piedmont
Michael J. Gerbasi, Rochester
Ralph W. Getty, Auburn
Solon H. Gottlieb, New York
James H. Gray, Lockport
Jack H. Grobstein, Roslyn Heights

Robert M. Johnson, Tarrytown

Roy E. Kinsey, Peekskill

Jacob Leinwand, The Bronx

Joseph L. Mangiardi, Seaford
Bennie Mecklin, Watertown
Jacob A. Mishkin, Watertown
Thomas E. Murphy, Richmond Hill

James R. Oldham, Lockport

George E. Pittinos, Staten Island

Michael Rapak, New York
William H. Raymond, Johnstown
Daniel Rosenfeld, Rockville Centre
Albert Rosso, Buffalo

Max Schenk, New York
Murray Stolzer, Nyack
Thomas J. Syracuse, Buffalo

Elmer H. Tuttle, Pittsford

Robert Weinstein, Rye
Seymour Wimpfheimer, New York

Morton Yohalem, New York
Murray A. Yost, Buffalo

Dorothy D. Zic, Forest Hills
Judah Zizmor, New York

Our Physicians Records Department has supplied the following year-end figures:

1979 Membership (12-31-79)	26,098	
1980 New Members	756	
1980 Reinstated & Reelected Members	130	
		26,984
1980 Deaths	422	
1980 Resignations	362	−784
		26,200
1980 Delinquent Members (Dues)	421	−421
1980 Total Membership (12-31-80)		25,779

Remission of dues was voted for 192 members due to illness, financial hardship, or temporary military service.

Membership totals for the years since 1970 have been as follows:

	Active Members	Life Members*	Total	Net Gain or (Loss)
1970	24,261	2,791	27,052	(112)
1971	23,961	3,071	27,032	(20)
1972	23,988	3,257	27,245	213
1973	23,752	3,469	27,221	(24)
1974	24,057	3,581	27,638	417
1975	23,543	3,743	27,286	(352)
1976	22,752	3,903	26,655	(631)
1977	22,649	4,035	26,684	29
1978	22,071	4,279	26,350	(334)
1979	21,678	4,420	26,098	(252)
1980	21,431	4,348	25,779	(319)

** Life members are not subject to Medical Society of the State of New York dues and assessments, but are accorded all the rights and privileges of active membership.*

Respectfully submitted,

Victor J. Tofany, M.D., *Secretary*

■

⇒ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee considered the annual and supplementary reports of the Secretary and commends the Secretary for expanding the information provided to the House of Delegates relative to membership statistics. We note with regret the continuing loss of membership.

⇒ Your reference committee recommends that the annual and supplementary reports of the Secretary be filed for information.

⇒ . . . *The annual and supplementary reports of the Secretary were* **FILED FOR INFORMATION** . . .

TREASURER

To the House of Delegates, Ladies and Gentlemen:

Comment should be made on certain significant items contained in the financial statements of the certified public accountants, Fox and Company, for the year ended December 31, 1980.

Our net profit in the General Operating Fund was $461,765, which raises our surplus to $2,298,392. We now have a surplus which is considered sound for an organization of our type; that is, a surplus at least equal to one half of the expected expenditures for the coming year.

Concerning the other funds, on 12-31-80 the Legal Fund had a surplus of $1,130,175 and on the same date, the Special (Malpractice) Fund had a surplus of $853,581.

A more detailed explanation of the operation for 1980 will be included in the Annual Report of the Budget and Finance Committee.

While everything I have just reported shows a sound financial position, I must caution you that once again we had a net decrease in dues-paying members of approximately 300 members or $60,000. Considering the loss of membership and the fact that our revised budget projects a deficit for 1981, we must be concerned with future financial planning.

The Treasurer would like to thank Edward Siegel, M.D., Executive Vice-President, and Philip G. Keating, Director, Division of Finance, for all their help and for their daily management of finances in a sound and competent manner.

Respectfully submitted,

John A. Finkbeiner, M.D., *Treasurer*

■

⇒ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee notes with satisfaction that the long sought goal of achieving a surplus at least equal to one half of the annual budget has been reached. This is considered sound policy for an organization of our type and size. Your reference committee would like to thank Dr. Finkbeiner, Dr. Siegel, and Mr. Keating for overseeing the financial management of our Society.

⇒ Your reference committee recommends that the report of the Treasurer be filed for information.

⇒ . . . *The report of the Treasurer was* **FILED FOR INFORMATION** . . .

BOARD OF TRUSTEES

To the House of Delegates, Ladies and Gentlemen:

The Board of Trustees consists of the following members:

Paul M. DeLuca, M.D., *Chairman*	Broome
Lynn R. Callin, M.D.	Monroe
George L. Collins, Jr., M.D.	Erie
Arthur H. Diedrick, M.D.	Westchester
Ralph S. Emerson, M.D.	Nassau
Bernard J. Pisani, M.D.	New York
Carl Goldmark, Jr., M.D.	New York

The estimated budget for 1981, as submitted by the Budget and Finance Committee, was reviewed and approved on November 19, 1980. Revisions at March 31, 1981, and June 30, 1981, were also approved.

The annual report of the certified public accountants, Fox and Company, for the calendar year 1980, was presented to the Board in May, 1981. This report follows further on and forms an integral part of the Board of Trustees' report to the House of Delegates, as prescribed by our Bylaws. A summary of this report is included in the Treasurers report. A more detailed explanation of 1980 operations is included in the annual report of the Budget and Finance Committee.

Some significant activities since the annual meeting in September, 1980, are as follows:

Investment Committee. Dr. Arthur Diedrick was reappointed chairman of this committee, at the organizational meeting of October 29, 1980. Under his direction and with the advice of our investment advisors, we were once again able to take advantage of the high interest rates. Our interest earnings for the General and several other funds are listed below for the year ended 1980:

General	$381,132
Special	$ 85,204
Legal	$ 96,776

Action on Various Fiscal Matters During the Course of the Year.

a) At the meeting of October 29, 1980, approval was given to the following:

1. Bankers Trust Company was appointed Trustee for the Employee Thrift Savings Plan and also appointed was the Committee to Administer and Direct the Investments of the Thrift Savings Plan.
2. The transfer of $100,000 from the General Fund to the Repair and Replacement Fund.
3. The establishment of an annual Trustees Award of the Medical Society of the State of New York. The award will be called the Henry I. Fineberg, M.D. Award for Distinguished Service.

b) At the meeting of November 19, 1980, approval was given to the following:

1. The revised budget of 1980, and the estimated budget of 1981.

2. The mailing of the minutes of every meeting of the Council to the President of each specialty society represented on the MSSNY Interspecialty Committee, as well as its representative on the Interspecialty Committee.

c) At the meeting of January 21, 1981, approval was given to the following:

1. The expenditure of $4,836 for publishing the Position Papers in the *New York State Journal of Medicine*.

2. $2,000 was granted to the Medical Society of the County of Orange, Inc. for support with legal expenses.

3. The expenditure of $300 for dissemination of the suggestion for Hospital Cost Awareness Programs.

4. The contract with the Rye Town Hilton for the 1982 Spring CME Assembly.

d) At the meeting of February 18, 1981, approval was given to the following:

1. The expenditure of $1,200 for improvement of internal control and auditing procedures in the Division of Finance.

2. The contract for Edward Siegel, M.D., as Executive Vice-President for two years commencing on January 1, 1981, with the option to renew to be discussed six months prior to expiration of the contract.

e) At the meeting of March 18, 1981, approval was given to the following:

1. A new and expanded insurance coverage for the headquarters building and increased liability insurance coverage for Officers and Councilors, members of the Board of Trustees, Committee members, and staff while on State Society business.

2. The expenditure of $5,000 to help Orange County with legal expenses.

3. The expenditure of approximately $50,000 for a Membership Promotion Plan.

f) At the meeting of April 15, 1981, approval was given for the expenditure of $3,780 to Broome County Medical Society for legal expenses.

g) At the meeting of May 20, 1981, approval was given to the following:

1. The expenditure of $2,304 to help the Medical Society of Putnam County with legal expenses.

2. A new more comprehensive health insurance for MSSNY employees.

h) At the meeting of June 17, 1981, approval was given to the expenditures of funds from our Special (Malpractice) Fund for reimbursement to various County Medical Societies for their efforts in the Medical Liability Insurance premium crisis.

The Chairman expresses his appreciation to all who assisted him in his year as chairman. The individual trustees are to be commended for their valuable contributions. Special thanks are extended to Edward Siegel, M.D., Executive Vice-President, for his expert advice which is taken under serious consideration by the Board in their deliberations.

I would, also, like to express my gratitude to Philip G. Keating, Director, of the Division of Finance, J. Richard Burns, J.D., General Counsel; and Mrs. Irma Erickson, Executive Associate, for all their help in preparing information and reports crucial to the Board of Trustees in arriving at decisions regarding fiscal matters.

Respectfully submitted,
Paul M. DeLuca, M.D., *Chairman*

REPORT OF CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Trustees
Medical Society of the
State of New York
Lake Success, New York

We have examined the balance sheet of the Medical Society of the State of New York as of December 31, 1980, and the related statements of revenue, expenses and changes in fund balances, and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements designated above present fairly the financial position of the Medical Society of the State of New York at December 31, 1980, and the results of its operations and changes in its fund balances, and changes in its financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Our examination was made for the purpose of forming an opinion on the basic financial statements taken as a whole. The additional information listed on the contents page is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the examination of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Fox & Company

Hempstead, New York
March 30, 1981

MEDICAL SOCIETY OF THE STATE OF NEW YORK
BALANCE SHEET
December 31, 1980

		Restricted Funds				
ASSETS	General Fund	Special Fund	Bernstein Memorial Fund	Bernstein Award Fund	Plant Fund	Endowment Fund
Cash (includes time deposits of $259,480)	$ 154,445	$ 89,446	$ 932	$67,803	$ —	$44,534
Investments, at cost (approximates market)	3,417,103	744,147	123,000	—	—	—
Accounts receivable, net of allowance for doubtful accounts of $2,722	20,555	—	—	—	—	—
Accrued interest receivable	87,001	26,417	1,489	2.298	—	1,077
Due from other funds	16,583	—	—	—	—	—
Inventories	89,448	—	—	—	—	—
Prepaid expenses	21,000	—	—	—	—	—
Deposits	17,220	—	—	—	—	—
Employee advances	6,450	—	—	—	—	—
Other assets	12,447	—	—	—	—	—
Property and equipment, at cost, net of accumulated depreciation of $920,518	—	—	—	—	4,055.442	—
Total assets	$3,842,252	$860,010	$125,421	$70,101	$4,055,442	$45,611
LIABILITIES AND FUND BALANCES						
Accounts payable and accrued expenses	$ 210,378	$ —	$ —	$ —	$ —	$ —
Deferred membership dues	84,434	—	—	—	—	—
Due to other funds	—	6,429	391	8,562	—	1,200
Other liabilities	25,643	—	—	—	—	—
Total liabilities	320,455	6,429	391	8.562	—	1,200
Fund balances:						
Unrestricted:						
Designated by board for:						
Repair and replacement	93,230	—	—	—	—	—
Legal assistance	1,130,175	—	—	—	—	—
Undesignated	2,298,392	—	—	—	—	—
Restricted	—	853,581	125,030	61,539	—	—
Net investment in plant	—	—	—	—	4,055,442	—
Endowment	—	—	—	—	—	44,411
Total fund balances	3,521,797	853,581	125,030	61,539	4,055,442	44,411
Total liabilities and fund balances	$3,842,252	$860,010	$125,421	$70,101	$4,055,442	$45,611

The accompanying notes are an integral part of the financial statements.

MEDICAL SOCIETY OF THE STATE OF NEW YORK
STATEMENT OF REVENUE, EXPENSES AND CHANGES IN FUND BALANCES
Year ended December 31, 1980

		Restricted Funds				
	General Fund	Special Fund	Bernstein Memorial Fund	Bernstein Award Fund	Plant Fund	Endowment Fund
Revenue:						
Dues	$4,119,117	$ —	$ —	$ —	$ —	$ —
Advertising income	167,263	—	—	—	—	—
Interest	494,726	85,203	16,546	6,829	—	5,119
Directory circulation	106,969	—	—	—	—	—
Journal circulation and reprints	26,471	—	—	—	—	—
Booth rentals—annual convention	17,615	—	—	—	—	—
Dues collection fee—AMA	17,278	—	—	—	—	—
Other	13,887	265	—	—	—	—
Total revenue	4,963,326	85,468	16,546	6,829	—	5,119
Expenses:						
Program services:						
Membership services	1,455,690	2,509	4,843	2,075	27,831	—
Scientific and educational activities	230,656	—	—	—	1,146	—
Conventions and meetings	275,364	—	—	—	5,917	—
Scientific publications	718,882	—	—	—	3,668	—
Communications	483,117	—	—	—	2,006	—
Total program services	3,163,709	2,509	4,843	2,075	40,568	—
Supporting services						
General administration	1,187,851	2,236	777	132	82,663	—
Total expenses	4,351,560	4,745	5,620	2,207	123,231	—
Excess (deficiency) of revenue over expenses	611,766	80,723	10,926	4,622	(123,231)	5,119
Fund balances at beginning of year	2,935,327	772,858	114,104	56,917	4,153,377	39,292
	3,547,093	853,581	125,030	61,539	4,030,146	44,411
Transfers:						
Equipment acquisitions	(25,296)	—	—	—	25,296	—
Fund balances at end of year	$3,521,797	$853,581	$125,030	$61,539	$4,055,442	$44,411

The accompanying notes are an integral part of the financial statements.

MEDICAL SOCIETY OF THE STATE OF NEW YORK
STATEMENT OF CHANGES IN FINANCIAL POSITION
Year ended December 31, 1980

		Restricted Funds				
	General Fund	Special Fund	Bernstein Memorial Fund	Bernstein Award Fund	Plant Fund	Endowment Fund
Resources provided:						
Excess (deficiency) of revenue over expenses	$611,766	$80,723	$10,926	$4,622	$(123,231)	$5,119
Item that does not use (provide) resources:						
Depreciation	—	—	—	—	123,231	—
Decrease in accounts receivable	4,928	—	—	—	—	—
Decrease in accrued interest receivable	—	6,016	6,531	—	—	—
Decrease in inventories	7,484	—	—	—	—	—
Decrease in prepaid expenses	14,345	—	—	—	—	—
Decrease in employee advances	9,800	—	—	—	—	—
Decrease in amount due to other funds	—	2,000	—	2,207	—	—
Total resources provided	648,323	88,739	17,457	6,829	—	5,119
Resources used:						
Increase in investments	587,456	80,884	17,877	—	—	—
Increase in accrued interest receivable	6,107	—	—	11	—	209
Increase/decrease in amount due to/from other funds	3,828	—	380	—	—	—
Increase in deposits	7,033	—	—	—	—	—
Increase in other assets	8,045	—	—	—	—	—
Decrease in accounts payable and accrued expenses	18,030	—	—	—	—	—
Decrease in deferred membership dues	40,003	—	—	—	—	—
Decrease in other liabilities	18,018	—	—	—	—	—
Total resources used	688,520	80,884	18,257	11	—	209
Transfers:						
Equipment acquisitions	(25,296)					
Increase (decrease) in cash	$(65,493)	$ 7,855	$ (800)	$6,818	$ —	$4,910

The accompanying notes are an integral part of the financial statements.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Notes to Financial Statements

December 31, 1980

1. SUMMARY OF ACCOUNTING POLICIES

This summary of accounting policies of the Medical Society of the State of New York (Society) is presented to assist in understanding the Society's financial statements. These accounting policies conform to generally accepted accounting principles which have been consistently applied in the preparation of the financial statements.

Federal income taxes

The Society is a nonprofit organization as defined in Section 501 (c) (6) of the Internal Revenue Code and is exempt from Federal income taxes except on unrelated business income.

Investments

Investments are valued at cost. Gains or losses are recognized when the investment is sold. Income from investments is recorded on the accrual basis.

Inventories

Inventories which consist of paper for printing of publications and supplies are valued at the lower of average cost or market.

Property and equipment

Property and equipment are recorded in the Plant Fund at cost. Major additions and improvements are purchased by the General Fund and transferred to the Plant Fund. Maintenance and repairs that do not improve or extend the life of the assets are charged to expense. Depreciation of building and equipment is provided over the estimated useful lives of the respective assets on a straight line basis.

Employee retirement plan

The Society has a noncontributory employee retirement plan which covers substantially all employees. Pension costs charged to operations represent actuarially estimated amounts necessary to fund the current service costs of pensions and prior service obligations over approximately 30 years.

Membership dues

Membership dues are recognized as revenue in the applicable membership period. Dues in arrears are recognized when received.

2. PROPERTY AND EQUIPMENT

A summary of property and equipment as of December 31, 1980, and the estimated lives used in the computation of depreciation is as follows:

	Estimated life (years)	Cost	
Land	—	$	$ 762,197
Building	50	3,556,216	
Building improvement	10–41	14,241	
Equipment	5–20	643,306	
		4,213,763	
Less accumulated depreciation		(920,518)	3,293,245
			$4,055,442

3. EMPLOYEE RETIREMENT PLAN

The Society maintains a noncontributory retirement plan for the benefit of its employees. To be eligible to participate, employees must be 25 years of age but less than 65 and have had completed 12 months of continuous employment with the Society. The annual charge to operations includes the normal cost of the plan (the amount to be contributed during a year to fund the estimated cost of the plan attributable to operations of that year) plus an annual installment payment required to amortize prior service costs over the remaining 17 years of an original 30-year period. In 1980, $156,342 was charged to operations with respect to the plan.

A summary of plan benefits and plan net assets for the Society's defined benefit plan is presented on the following page:

Actuarial present value of accumulated plan benefits:	
Vested	$1,840,700
Nonvested	22,500
	$1,863,200
Net assets available for benefits	$1,885,400
Assumed rate of return	6%

4. FEDERAL AND STATE INCOME TAXES

The Society has charged against current operations New York State taxes of $250 on its unrelated business income for the year ended December 31, 1980. The Internal Revenue Service has examined Federal income tax returns through 1975.

5. SPECIAL FUND

The Special Fund was created in 1975 to pursue an equitable malpractice program and was financed by assessment of $100 to each active member of the Society.

6. REAL ESTATE TAXES

The Society has been assessed annually by the Village of Lake Success, New York, for real estate taxes since June 1, 1972. The amount of $35,704 was paid in 1980. The County of Nassau and the Town of North Hempstead have not assessed the Society for real estate taxes.

7. UNRESTRICTED FUND BALANCE DESIGNATED FOR LEGAL ASSISTANCE

The Fund, which was created by the House of Delegates at the 1977 annual meeting, is to be used for activities which necessitate the use of legal assistance for the members of the Medical Society. The fund was financed by allocating a portion of the dues income for legal assistance.

SUMMARY OF INVESTMENTS HELD AT DECEMBER 31, 1980

	Interest rate (percentage)	Maturity date	Par value	Cost	Market value
GENERAL FUND:					
U.S. Government obligations:					
U.S. Treasury bills	—	1/8/81	$ 65,000	$ 64,689	$ 64,998
U.S. Treasury notes	12.125%	11/30/81	100,000	99,801	98,625
U.S. Treasury notes	13.875	2/28/82	100,000	98,531	100,688
U.S. Treasury notes	9.25	5/15/82	200,000	200,265	190,250
U.S. Treasury notes	14.25	3/31/84	275,000	274,673	285,829
Federal agencies:					
Federal Home Loan Banks	9.55	5/26/81	200,000	200,438	195,000
Federal Home Loan Banks	11.25	8/25/82	160,000	162,050	155,200
Federal Home Loan Banks	11.25	8/25/82	250,000	241,531	242,500
Federal Home Loan Banks	9.35	8/26/85	125,000	106,406	109,687
Twelve Federal Land Banks	8.00	10/20/82	100,000	99,922	91,625
Twelve Federal Land Banks	8.10	7/22/85	100,000	80,719	83,500
Federal Farm Credit Banks	10.00	7/20/81	100,000	100,141	96,875
Federal Farm Credit Banks	10.00	7/20/81	200,000	202,125	193,750
Federal Farm Credit Banks	8.05	3/1/83	100,000	99,890	90,250
Federal Farm Credit Banks	10.90	4/20/83	100,000	100,719	95,875
Federal Farm Credit Banks	9.50	1/23/84	100,000	100,343	91,000
Federal National Mortgage Association	10.00	4/10/81	200,000	200,375	196,626
Federal National Mortgage Association	9.375	9/10/81	100,000	99,922	96,375
Federal National Mortgage Association	9.25	10/10/83	100,000	100,000	91,625
Federal National Mortgage Association	7.87	10/13/81	100,000	99,563	95,375
Commercial paper:					
Household Finance Corporation	16.875	1/5/81	106,000	106,000	106,000
General Motors Acceptance Corporation	17.75	1/7/81	105,000	105,000	105,000
Prulease, Inc.	17.125	1/12/81	129,000	129,000	129,000
Prulease, Inc.	18.125	1/19/81	100,000	100,000	100,000
Prulease, Inc.	16.50	1/28/81	51,000	51,000	51,000
General Electric Credit Corporation	18.125	1/30/81	75,000	75,000	75,000
Household Finance Corporation	15.00	1/30/81	119,000	119,000	119,000
				$3,417,103	$3,350,653
SPECIAL FUND:					
U.S. Government obligations:					
U.S. Treasury notes	13.875%	2/28/82	$100,000	$ 98,469	$ 100,688
Federal agencies:					
Federal Home Loan Banks	11.25	8/25/82	120,000	121,463	116,400
Federal Home Loan Banks	11.60	5/25/83	125,000	117,812	121,093
Federal Farm Credit Banks	10.00	7/20/81	258,000	260,580	249,937
Federal Farm Credit Banks	10.90	4/20/83	120,000	120,862	115,050
Federal National Mortgage Association	9.375	9/10/81	25,000	24,961	24,093
				$ 744,147	$ 727,261
BERNSTEIN MEMORIAL FUND:					
Commercial Papers:					
Sears Roebuck Acceptance Corporation	14.25	3/2/81	123,000	$ 123,000	$ 123,000

■

⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee reviewed the report of the Board of Trustees and notes that new and expanded insurance coverage for Officers and Councilors, members of the Board of Trustees, Committee members, and staff while on State Society business, was approved by the Board.

⟹Your reference committee recommends that the report of the Board of Trustees be filed for information.

⟹ . . . *The report of the Board of Trustees was* **FILED FOR INFORMATION** . . .

BUDGET AND FINANCE (ANNUAL)

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Budget and Finance are as follows:

Walter T. Heldmann, M.D., *Chairman*	Richmond
George L. Collins, Jr., M.D.	Erie
Paul M. DeLuca, M.D.	Broome
John A Finkbeiner, M.D.	New York
Milton Rosenberg, M.D.	Suffolk

The committee is responsible for reviewing and revising the estimated budget as prepared and presented to them by the Office of the Executive Vice-President. The committee then forwards their adjusted report to the Council, which after approval (with or without further adjustments) sends it to the Board of Trustees, which is responsible for the fiscal affairs of the State Medical Society.

Meetings were held on quarterly basis, as has been the practice for many years. At these meetings, the committee evaluates the actual income and expenditures for a particular period and makes necessary adjustments, based on experience, economic factors, and values.

The committee would like to inform the House of Delegates as to the status of the General Fund at December 31, 1980. The excess of income over expenditures amounts to $461,765. This sum was made possible because of the following developments which occurred during the course of the year:

1. *INCOME SECTION*

All of our projections in the income section of the budget were met as we had anticipated, except in the area of interest on investments. The original projection was $225,000, we actually earned $388,000, resulting in a net increase of $163,000. This was due to the fact that we were able to take advantage of the high interest rates available during 1980.

2. *EXPENDITURE SECTION*

a.) Division of Executive Vice-President—savings occurred in the areas of "Hot Line" Bulletin, District Branches annual allowance, Department of Research and Development, and computer related expenses. Total savings were approximately $50,000.

b.) Division of Governmental Affairs—a savings of approximately $15,000 occurred in this division due mainly in the areas of travel, Legislative Newsletter, and postage.

c.) Division of Scientific Publications—printing and paper costs of the New York State Journal of Medicine were $40,000 less than budgeted. It must be pointed out once again that figures projected for such items as printing and paper are difficult to estimate because of the variable sizes of our issues of the *Journal* and other unknown possible increase in costs.

d.) Division of Medical Services—a total of $25,000 was saved in this division, due to the fact, a budgeted employee was not hired.

e.) Division of Finance—a major savings of $65,000 occurred in this division. Part of the savings occurred due to the reorganization of the office of the Comptroller. The other areas of savings occurred in the Physicians Records Department, in the budgeted amount for postage on the Medical Directory. This reduction was due to a change in the postal rate which cut mailing cost of the Directory in half.

f.) Division of Management Services—there was a savings of approximately $6,000 in this division. The savings occurred in no one major budgeted area, but was due to small savings in many budget items.

g.) Division of Communications—a total of $17,000 was saved in this division mainly in the areas of printing costs for the News of New York, telephone, and professional relations projects.

h). Committees—primarily because the budget figures for committees are only rough estimates, a savings of $14,000 occurred.

i). Non Divisonal—savings of approximately $40,000 occurred in the following budget line items: Telephone, heating, equipment maintenance, taxes, and employee benefits.

At the November 6, 1980, meeting of the Budget and Finance Committee, an estimated budget for the year 1981 was prepared. This budget was approved by the Council and the Board of Trustees. This budget was revised at March 31, 1981, and once again June 30, 1981. The revised estimated budget at June 30, 1981, shows a deficit of $27,657 (see Table I following). The administration is confident that by the end of the year they will be able to turn this deficit projection into an actual surplus for the year 1981. We concur with that opinion.

In a supplementary report, the committee will present an estimated Budget for the calendar year 1982, with recommendations as to how we should proceed with our financial planning for the coming year.

The Chairman would like to commend Edward Siegel, M.D., Executive Vice-President, and Philip G. Keating, Director of the Division of Finance, for their prudent management of budgetary programs.

The Chairman would also like to thank Warren A. Lapp, M.D., our former Treasurer and a member of this committee. Dr. Lapp resigned as Treasurer on December 31, 1980.

Respectfully submitted,
Walter T. Heldmann, M.D., *Chairman*

TABLE I
MEDICAL SOCIETY OF THE STATE OF NEW YORK
Revised Estimated Budget @ 6/30/81

INCOME	Revised Estimated Budget @ 3/31/81	Received to 6/30/81	Revised Estimated Budget @ 6/30/81
Dues	4,100,000	2,050,000	4,100,000
Journal Advertising	175,000	80,880	175,000
Journal Circulation	3,000	1,809	3,000
Journal Reprints	18,000	6,169	18,000
Medical Directory — Sales	60,000	37,400	60,000
Scientific Convention — Exhibit Rentals	16,540	-0-	16,540
Interest on Investments — General Fund	200,000	120,013	300,000
What Goes On — Subscriptions	500	120	500
Dues Collection Fee — A.M.A.	15,000	17,363	18,000
CME Hospital Survey	2,000	1,394	2,000
Computer Sales	10,000	5,308	10,000
Health Care in Correctional Institutions	2,000	1,403	2,000
Miscellaneous Income	500	991	1,000
Total Income	4,602,540	2,322,850	4,706,040

EXPENDITURES	Sched. No.	Revised Estimated Budget @ 3/31/81	Expended to 6/30/81	Revised Estimated Budget @ 6/30/81
Office of Executive Vice-President	1–3	483,477	184,896	485,477
General Counsel	4	148,539	71,891	148,589
Governmental Affairs	5	197,243	96,064	196,643
Insurance and Membership Benefits	6	74,364	35,465	73,864
Scientific Activities Division	7	187,484	97,456	190,777
Scientific Publications Division	8	722,278	343,217	722,878
Medical Services Division	9	204,819	88,476	203,719
Finance Division	10–12	211,392	82,111	209,392
Computer Systems & Services Division	13–14	469,136	271,050	494,436
Advertising Sales & Meeting Services	15	136,001	58,615	136,301
Management Services Division	16–18	287,017	134,935	287,117
Communications Division	19	493,074	243,050	445,680
Membership Development	20	-0-	-0-	96,900
Annual Meetings	21–22	140,700	-0-	140,700
Officers, Board, AMA Delegation	23	203,900	92,227	207,900
House of Delegates — Spec. Committees	24	900	11	900
Council Committees	25–26	78,400	35,292	76,600
Legislative Counsel	27	65,000	34,871	65,000
Non-Divisional	28	541,400	291,057	550,824
Total Expenditures		4,645,124	2,160,684	4,733,697
Excess of Income over Expenditures		(42,584)	162,166	(27,657)

BUDGET AND FINANCE (SUPPLEMENTARY)

To the House of Delegates, Ladies and Gentlemen:

The annual report of the Committee on Budget and Finance contained all of the deliberations since the last annual meeting of the House of Delegates in September, 1980.

The committee subsequently has formulated a tentative projection of income and expenditures for the calendar year 1982. Table I is an estimate based upon divisional activities. Table II projects expenditures by account classification. These tables were compiled by utilizing present economic trends which, you are all aware, continue in an inflationary pattern.

The Board of Trustees and the Administration have followed through on action taken by the 1980 House of Delegates, whereby, the full $50.00 dues increase approved in 1977 be used for operations. This arrangement was approved for a one year period.

We are requesting at this meeting that the $50.00 dues increase approved in 1977 become a permanent part of our dues and no longer be considered for allocations to other areas. Taking this into consideration, the committee has built this into the tentative estimated budget for 1982 (Table I). By so doing, and taking into effect the present economic conditions and with no possibilities of additional revenue, our projected deficit for 1982 is $421,004. The committee feels that with various savings in certain areas we will be able to reduce the deficit but not eliminate it. We must caution the House of Delegates that, if we do not follow through with the committee recommendations and projected budget for 1982, there will be no alternative but to request a dues increase at this meeting. Even if our recommendation is approved, we will have to start using our surplus in 1982 and we see no way possible to avoid a dues increase for 1983.

The committee will meet sometime in November, at which time a more definitive estimated budget for 1982 will be formulated. This budget will be forwarded to the Council and Board of Trustees for their approval.

Respectfully submitted,

Walter T. Heldmann, M.D., *Chairman*

TABLE I

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Statement of Budgetary & Actual Operating Income & Expenditures

	Revised Estimated Budget 1980	Received to 12/31/80	Revised Estimated Budget @ 6/30/81	Received to 6/30/81	Tentative Estimated Budget 1982
INCOME					
Dues (Net)	3,862,500	3,863,529	4,100,000	2,050,000	4,100,000
Journal Advertising	175,000	166,948	175,000	80,880	175,000
Journal Circulation	3,000	4,020	3,000	1,809	3,000
Journal Reprints	22,000	22,452	18,000	6,169	18,000
Medical Directory — Sales	98,000	106,969	60,000	37,400	60,000
Scientific Convention — Exhibit Rentals	17,615	17,615	16,540	–0–	16,540
Interest on Investments — General Fund	225,000	388,132	300,000	120,013	250,000
What Goes On — Subscriptions	500	315	500	120	500
Dues Collection Fee — AMA	17,500	17,278	18,000	17,363	18,000
CME Hospital Survey	1,000	698	2,000	1,394	2,000
Health Care in Correctional Institutions	2,300	2,273	2,000	1,403	–0–
Computer Sales	10,000	10,005	10,000	5,308	10,000
Miscellaneous Income	500	911	1,000	991	1,000
TOTAL INCOME	4,434,915	4,601,145	4,706,040	2,322,850	4,654,040
		Expended to 12/31/80		Expended to 6/30/81	
EXPENDITURES					
Office of Executive Vice-President	607,184	557,712	485,477	184,896	530,727
General Counsel	121,695	120,818	148,589	71,891	163,448
Governmental Affairs	156,832	141,019	196,643	96,064	224,807
Insurance & Membership Benefits	62,266	60,762	73,864	35,456	81,250
Scientific Activities Division	185,799	183,143	190,777	97,456	202,082
Scientific Publications Division	660,786	620,196	722,878	343,217	795,091
Medical Services Division	229,418	203,080	203,719	88,476	224,091
Finance Division	521,395	456,937	209,392	82,111	230,331
Computer Systems & Services Division	–0–	–0–	494,436	271,050	460,729
Advertising Sales & Meeting Services	–0–	–0–	136,301	58,615	149,931
Management Services Division	239,893	233,099	287,117	134,935	315,828
Communications Division	448,458	431,896	445,680	243,050	447,918
Membership Development	–0–	–0–	96,900	–0–	117,310
Annual Meetings	83,506	83,158	140,700	–0–	154,770
Officers, Board, AMA Delegation	178,500	178,778	207,900	92,227	228,690
House of Delegates — Spec. Comm.	900	524	900	11	900
Council Committees	73,850	60,019	76,600	35,292	84,260
Legislative Counsel	65,000	65,290	65,000	34,871	65,000
Non-Divisional	783,304	742,949	550,824	291,057	597,881
TOTAL EXPENDITURES	4,418,786	4,139,380	4,733,697	2,160,684	5,075,044
Excess of Income over Expenditures	16,129	461,765	−27,657	162,166	−421,004

TABLE II

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Statement of Expenditures by Account Classification

	Revised Est. Budget 1980	Expended to 12/31/80	Revised Est. Budget @ 6/30/81	Expended to 6/30/81	Tentative Estimated Budget 1982
GENERAL DEPARTMENTAL EXPENSES					
Salaries	1,856,003	1,812,155	1,942,130	871,133	2,136,343
Payroll Taxes	115,450	106,399	134,100	71,474	147,510
Health Insurance	79,241	72,546	89,200	41,320	98,120
Other Employee Benefits	-0-	-0-	258,600	122,914	284,460
Travel	85,852	83,472	81,900	46,238	90,090
Telephone & Telegraph	87,933	74,576	88,750	36,422	97,625
Postage	37,653	27,025	50,950	23,995	56,045
Stationery & Supplies	46,428	41,130	49,850	23,175	54,835
Books & Publications	16,177	13,235	15,650	8,020	17,215
Provision for Doubtful Accounts	1,325	1,325	1,300	-0-	1,430
Miscellaneous	2,575	814	2,650	587	2,915
GENERAL HEADQUARTERS EXPENSES					
Headquarters Maintenance & Security	115,000	112,000	121,500	60,750	133,650
Equipment Repairs, Replace. & Main.	40,000	31,855	40,000	20,517	44,000
Electricity, Heating & Water	60,500	61,730	71,000	40,603	78,100
Village Taxes	35,704	35,704	42,424	42,424	46,666
Maintenance & Repair Co. Car	8,000	5,984	8,000	2,381	8,800
GENERAL NON-DIVISIONAL EXPENSES					
Supportive Services Student Section	3,200	3,986	-0-	-0-	-0-
Insurance	60,000	60,420	75,000	38,500	82,500
Audit	14,000	13,900	14,000	9,500	15,000
Investment Advisory Fee	10,000	9,049	10,000	5,667	11,000
Employee Benefit Plan	240,000	228,949	-0-	-0-	-0-
Payment to Co. Soc. for Dues Collect.	53,750	57,958	53,750	24,901	53,750
Auxiliary	3,000	2,537	3,000	588	3,000
NYS Assoc. of Professions	1,000	1,000	1,000	96	1,000
Cancer Newsletter	1,000	1,000	1,000	1,000	1,000
Pre-Employment Physical Exams	500	230	500	340	500
Dues & Contributions	2,500	1,075	2,500	200	2,750
Membership Campaign	10,000	788	-0-	-0-	-0-
Unrelated Business Income Tax	15,000	4,250	15,000	4,985	15,000
Employee Benefit Plan, Consultant Fees	30,000	27,514	12,000	4,500	13,000
Appraisal	-0-	7,500	-0-	-0-	-0-

PUBLICATIONS					
Journal — Print., Paper & Postage	466,000	425,129	507,500	239,338	558,250
Commissions & Discounts	51,086	42,830	49,900	18,191	54,890
Journal — Other Costs	17,400	18,486	19,500	8,994	21,450
Directory — Print., Paper & Postage	98,000	71,610	98,000	46,600	107,800
News of N.Y. — Print., & Postage	84,300	76,333	80,000	40,722	88,000
Hot Line — Print., & Postage	13,000	4,890	13,000	–0–	13,000
Legislative Newsletter — Print., Post.	32,000	26,043	36,000	24,338	39,600
Ad Rem — Print., Postage	3,000	1,728	2,500	790	2,750
Printing of Pamphlets	2,000	–0–	2,000	–0–	2,000
OFFICERS, BOARD & AMA DELEGATION	178,500	178,778	207,900	92,227	228,690
EXPENSES COMMON TO SPECIFIC DEPARTMENTS & DIVISIONS					
Data Entry Services	–0–	–0–	40,000	39,718	–0–
Payroll Service	2,000	2,211	2,500	1,211	2,750
Recording Service	3,000	7,275	–0–	–0–	–0–
Citations	2,000	1,379	500	84	500
Health Care in Correctional Inst.	4,500	4,979	6,793	6,793	–0–
Medicine & Religion Program	3,000	2,075	–0–	–0–	–0–
CME Council of N.Y.S.	–0–	–0–	3,000	17	3,000
CME Video Clinic	–0–	3,317	–0–	–0–	–0–
Selected Economic Statistics	6,000	–0–	–0–	–0–	–0–
Editorial Consultant	7,500	5,000	7,500	–0–	7,500
President and Area Conference	3,000	1,109	3,000	1,200	3,300
Medical Assistants	600	500	600	495	600
Redway Award & Medal	750	612	750	–0–	750
District Branches	10,500	5,551	10,500	404	10,500
House Committees	900	524	900	11	900
Legislative Counsel	65,000	65,290	65,000	34,871	65,000
Public Relations	1,800	2,219	1,800	710	1,980
Professional Relations	25,000	22,219	15,000	6,500	15,000
Computer Maintenance & Rental	35,000	31,425	35,000	15,198	35,000
Computer Audit	3,000	–0–	3,000	–0–	–0–
Computer Education	1,500	–0–	1,500	–0–	1,500
Software Packages	30,000	23,171	52,000	44,750	25,000
Source Program Development	40,000	37,038	–0–	–0–	–0–
Albany Legislative Office	–0–	–0–	15,000	–0–	25,000
Membership Campaign	–0–	–0–	50,000	–0–	25,000
ANNUAL MEETINGS					
Annual Convention	83,506	83,158	94,600	–0–	104,060
CME Spring Assembly	39,303	34,376	46,100	–0–	50,710
COUNCIL COMMITTEES	73,850	60,019	76,600	35,292	84,260
	4,418,786	4,139,380	4,733,697	2,160,684	5,075,044

■

⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee reviewed the annual and supplementary reports of the Committee on Budget and Finance.

⟹ Your reference committee recommends that the annual and supplementary reports of the Committee on Budget and Finance be filed for information.

⟹ . . . *The annual and supplementary reports of the Committee on Budget and Finance were* **FILED FOR INFORMATION** . . .

Your reference committee notes that in its supplementary report the Committee on Budget and Finance requests that at this meeting the $50.00 dues increase approved in 1977 become a permanent part of our dues and no longer be considered for allocations to other areas. The Committee on Budget and Finance states: "Taking this into consideration, the committee has built this into the tentative estimated budget for 1982. By so doing, and taking into effect the present economic conditions and with no possibilities of additional revenue, our projected deficit for 1982 is $421,004. The committee feels that with various savings in certain areas we will be able to reduce the deficit but not eliminate it. We must caution the House of Delegates that, if we do not follow through with the committee recommendations and projected budget for 1982, there will be no alternative but to request a dues increase at this meeting. Even if our recommendation is approved, we will have to start using our surplus in 1982 and we see no way possible to avoid a dues increase for 1983."

⟹ Your reference committee recommends that the $50.00 dues increase, approved in 1977, become a permanent part of our dues and no longer be considered for allocation to other areas.

⟹ . . . *The House voted to* **ADOPT** *the recommendation of the reference committee* . . .

Edward Siegel, M.D.

EXECUTIVE VICE-PRESIDENT

To the House of Delegates, Ladies and Gentlemen:

It is with great pleasure that I render my first report as Executive Vice-President to the House of Delegates. As you know, I started as Deputy under Doctor Fineberg on May 1, 1973, and eventually took over from that fine gentleman on January 1, 1981. The format for my presentation will be a slight departure from what the House has expected in the past. I have asked each division director to make his own report, and at the conclusion of each individual report I shall offer comments on that division.

Before we get into a discussion of each individual division, however, I should like to refer you to the MSSNY Staff "*Table of Organization*" which is appended to this report. This was revised as of January 1, 1981, but even in the first eight or nine months of this year there have been additional changes made. The major changes in the "*Table of Organization*" were made in the Divisions of Computer Services, Advertising Sales and Meeting Services, and Finance. Another major change in the "*Table of Organization*" took place in the Communications Division, wherein we separated and created a Membership Division. This left the Communications Division otherwise intact.

We shall now proceed with the reports of the individual divisions.

DIVISION OF ADVERTISING SALES AND MEETING SERVICES

Robert Miller, *Director*

This Division was established in December 1980, combining the Departments of Journal Advertising, Subscription and Reprint Billing, Technical Exhibit Sales, and Meeting Services for the Annual CME Assembly and the Annual Meeting of the House of Delegates.

Journal Advertising. Advertising space continues to be sold by our advertising representative, United Media Associates. Advertising revenue for the year 1980 was $168,447, a decrease of $27,944 from 1979. This is consistent with the drop in advertising in most state journals in recent years. Today, the medical marketing people rely mainly on computers that are programmed to show cost per thousand of advertising page exposure. Too frequently the quality of a journal is not considered, only the circulation figures. This makes it difficult for state journals to compete in advertising sales with the mass media journals and specialty journals. The *Journal* advertising rates will be increased effective with the January, 1982, issue.

Journal Subscriptions. There are approximately 1,334 paid subscribers. Of this figure, there are 229 foreign, 43 Canadian, 500 New York State, and the balance from all other states. As of January, 1982, the annual subscription rate will be increased from $3.50 to $10.00 (domestic), and $15.00 (foreign). A single copy from 50¢ to $1.00.

Journal Reprint Billings. Annually, there are about 200 requests from authors for reprints of articles totaling 36,000 copies. Many of our authors have requests for reprints from all over the world.

Technical Exhibit Sales. Revenue from the rental of 36 technical exhibits at the 1981 Annual CME Assembly amounted to $18,350.

CME Assembly Services. Advanced preparations for the 1981 meeting, held at the Niagara Falls International Convention Center, June 26–28, were made by this division in conjunction with the Division of Scientific Activities. There was a total attendance of 897, consisting of the following categories: 660 physicians, 94 allied professions, and 143 guests. Compared to the physician registration of 1,141 at the 1980 CME Assembly at the Rye Town Hilton, Port Chester, N.Y., this was a drop of 481 physicians.

COMMENTS

This is one of the newly created Divisions, and its function has been greatly implemented under Bob Miller's direction. As noted, he is now responsible for the Advertising Sales of the Journal and Meeting Services of the annual meetings which include both the Scientific Assembly and the House of Delegates. To refresh your memories, the CME Assembly and the House of Delegates have now been separated for two years and the benefits of this separation have not really solved the entire problem. Elsewhere in this report there is not total agreement, even in the Committee which is responsible for the CME Assembly, whether the separation should continue. As a matter of fact, there is still some difficulty with the location of the CME Assembly. It would seem that, although it is nice to have the Assembly in various parts of the State, the total attendance leaves a great deal to be desired when we go away from the large urban areas. This matter will have to be adjudicated in the future. There is also some sentiment to once again join the CME Assembly and the House of Delegates, but I do not feel that this will solve the basic problem.

The income derived from *Journal* advertising has certainly not increased and this remains another problem for the MSSNY, as well as all other state societies who maintain a journal. The income of these state journals has decreased throughout the country and remains a distinct area in which the competition with the throw away journals still persists. The MSSNY continues to be aware of the problem and we are looking for a means to alleviate it.

DIVISION OF COMMUNICATIONS

Guy D. Beaumont, *Director*
(Retired as of August 1, 1981)

The Communications Division is comprised of the Department of Professional and News Media Relations, the Department of Information, the Department of Membership News, and the Field Service of four regional representatives.

The Director, Mr. Guy D. Beaumont, in addition to supervising these four components of the Division, also staffs the Council Committees on Awards and Prize Essays and on Medical School Relationships, as well as the New York Delegation to the American Medical Association.

Since September of 1979, Mr. Mark J. Kafka, Assistant to the Director, has headed up the Department of Professional and News Media Relations, and has been responsible for news media relations, coordination and promotion of professional workshops, and the promotion of Continuing Medical Education clinics in upstate areas. He has also extensively assisted with membership promotion.

News Media Relations have been only modestly successful. So far this year, MSSNY has disseminated only seven news releases exclusive of the malpractice issue, which has been handled by outside consultants, and we have received only 43 media inquiries. At the 1979 and 1980 Annual Meetings, only a few reporters contacted our News Room. Interest in the actions of our House of Delegates is not great due to the lack of news-generating action in the House. The scientific sessions, now separated from the meetings of the House, generated relatively better coverage by representatives of the scientific media.

The Department of Information, consisting of one staff person, provides a vital service to the MSSNY membership, allied health organizations, and the public. The Department receives several hundred requests for advice and information each month. These requests originate not only from within the State of New York, but also from other parts of the nation as well. The Department of Information, in addition, provides extensive staff assistance to the Auxiliary to MSSNY and to the American Association of Medical Assistants, New York State Society, Inc. Miss Pamela Maichin assumed responsibilities as the Manager of the Department in May, 1981.

The Department of Membership News produces the "*News of New York*" 24 times annually. This publication remains MSSNY's principle means of communicating socioeconomic, legislative, and other nontechnical and nonscientific information to our membership.

Indications, responses for example to announcements of membership benefits and other services offered through the *News*, are that reader loyalty is high. During the year, in addition to carrying special supplements, promoting society meetings and continuing medical education seminars, three reports to the membership relative to the Medical Liability Mutual Insurance Company were carried in the *News*. In 1981 a new feature, the *Touchstone*, was introduced. This column of financial and tax news is prepared by Fox and Company, our society's auditors.

AD REM Bulletins continue as an important method for communicating "quick news" to the member and nonmember physicians of New York State. Approximately 370 *Ad Rem* bulletin boards are mounted in strategic locations in major hospitals throughout New York State.

The MSSNY Field Service is the Society's most effective means of liaison with its component county medical societies. The four regional representatives methodically circulate about the State contacting the officers and staff of local societies and district branches to gather and disseminate current information, and to assist with the programs of both the State Society and the local societies.

They attend the majority of the meetings of the county societies and district branches to convey information and interpret State Society policy. During the past year, these four men have continued to try to activate county-level membership promotion programs and were active in the accumulation of much of the needed information for communications and membership programs.

The regional representatives present a "new member kit" containing comprehensive information regarding MSSNY and AMA benefits and programs to each new member with a word of personal greetings. In 1980, the regional representatives again staffed the MSSNY exhibit during our annual convention and the MSSNY booth at the 1980 CME Assembly. They routinely staff the resident workshops and CME clinics held throughout the State.

In 1981 a dramatic demonstration of the CT Scanner will be exhibited by MSSNY at the New York State Fair. This exhibit will be staffed by regional representatives with the assistance of local medical students.

Membership Promotion is an area of continuing vital significance in the future of MSSNY.

During the past year, the principle efforts in this respect have continued to be the development of a thorough knowledge of MSSNY's membership situation and the development of an effective recruitment and retention program. The Council approved for 1981 the establishment of a Division of Membership Development and appointed Mr. Kafka as Director and Ms. Eunice Skelly, former Manager of the Information Department, as Associate Director. A new and expanded program to increase membership will be launched in cooperation with the county medical societies immediately after Labor Day, 1981. The new division plans to offer as many as 16 resident workshops in 1981–82. The workshop program continues to serve as an extremely effective vehicle for promoting membership among residents. The 10 workshops offered in 1980–81 generated 126 new members — 58% attendees. These workshops are self-liquidating. In fact, in 1980–81, they produced $3,000 in net income.

Staff of the Communications Division continue to study ways for the improvement of communications within MSSNY headquarters, between the State Society and the county components, with the individual members and, of course, with the public.

COMMENTS

As I stated before, the major change in this Division was the separation of a new Division on Membership. This new division is under the directorship of Mark Kafka, and he is ably assisted by Eunice Skelley. The Council set aside the sum of $50,000 for a Membership Recruitment Campaign, and this campaign is being implemented at the present time.

As part of this membership campaign the Councilors and the Trustees have seen fit for us to lease, with an option to purchase, a word processor which will give the MSSNY a greater capability to deal with the membership problem. This word processor is also available to other divisions and already we see its great potential in being able to help the other divisions in implementing their mission.

With Mr. Beaumont's retirement (as of August 1, 1981) a distinct void was created. This void is being temporarily filled by Mr. Jim McCloskey, who is assuming the duties of running the *News of New York* and the *Ad Rem Bulletins*. The Section on Information, previously headed by Eunice Skelley, is now being filled by Pamela Maichin. We look forward to these changes with great interest and feel that the Department will be well served. The four field men who used to work directly under Mr. Beaumont will now report directly to the Office of the Executive Vice-President. For the information of the House, I am looking to replace Mr. Beaumont, but have not as yet found the proper person. Mr. Beaumont's duties with the AMA Delegation are being taken over by one of our field representatives, Mr. Gerald Sullivan, who has great experience in this field. I'm sure that he will adequately fill the great void left by Mr. Beaumont's unusual contribution to this Society and to the AMA Delegation.

Division of Computer Services

Jay Garnock, *Director*

The Computer Service Department as of July, 1981, is right on target with its anticipated enhancements. The primary goal of management was and still is as follows:

A. Full documentation of all current operating applications, which includes weeding out all unnecessary and unknown programs giving us a complete and accurate library of only known operating programs.

B. Complete on-line environment. This provides the availability of entering data via the CRT (Cathrode Ray Tube) upon receipt of information. A complete audit is produced every day highlighting all changes, additions, and deletions made by any CRT operator. This means of entering data eliminates the antiquated method of keypunching.

C. New and more sophisticated methods of computerization.

1) Summarization of all MSSNY members' credits by category within a three (3) year period.

2) To keep our deceased physicians' records accurate, we now purge from our MSSNY master file and create a separate screen to be used for inquiry purpose. To go one step further, we added the availability of updating on this screen where the deceased physician records are being stored.

3) Various specialized reports and statistical analyses to be used by all county societies and other health related institutions. This information can and will be distributed to all concerned at our 1981 Annual Convention.

D. Additional Equipment. Additional disk storage capacity (8 times more than the current system) to be used for additional information captured by MSSNY plus the enhancement of our operating system. As of July, 1981, we will have an IBM Word Processor installed at MSSNY. The primary use initially will be for membership development, and then by all other divisions. We are pleased to announce that the Word Processor can be used by all our county societies.

E. Development of an accurate computer file containing all nonmember physicians practicing in New York State. This information will be utilized for the following:

1) Membership Development
2) Demographic Study
3) 1982–1983 Medical Directory
4) Various Staff Projects

Through many long hours of research and many dollars spent we now feel that MSSNY will have on their Computer files the most accurate New York State nonmember file by September of 1981. We hope to capture, via the Directory Questionnaire, any pertinent information not recorded yet in our files.

F. Complete service to all county societies interested in office computerization. At the last County Executive Directors' meeting held at MSSNY it was clearly stated that the services of the computer staff will be available to any county society interested in computerization of their office.

A few up and coming areas for computerization or enhancements to the now existing computerization are in the research and development stage.

They are as follows:

1) Accounts Receivable, Accounts Payable, and General Ledger.
2) Automatic Transfer of physician information from member status to nonmember status, or vice versa, with a push of a button.
3) Dues Paid reporting to Computer (strictly on-line).

COMMENTS

I believe that this Division on Computer Services has done more than any of our other Divisions to increase its efficiency and to render service to our membership. I recommend that you read Mr. Garnock's report in detail because you can by so doing realize the extent to which this Division has advanced.

At this time it would be well to allay some of the fears which occasionally arise wherein breaches of confidentiality may be created by the improper use of our computer services and the use of our tapes by extramural individuals. We do occasionally sell our tapes, but these are under the careful scrutiny of the Office of the Executive Vice-President, and with the concurrence of the Executive Committee and the Council. We shall continue to monitor all use of our computer services and promise to not violate confidentiality or in any way abuse our members' rights.

This Division is in the midst of compiling a master file which shall be introduced into our computer so that once and for all we may have a list of practicing physicians in New York State, whether they are members or not. This master file will be used to launch our new membership campaign and will also serve as a basis for the new directory which promises to be at least one and one-half times larger than the present one.

DIVISION OF FINANCE

Philip G. Keating, *Director*

The Division of Finance was reorganized as of January 1, 1981, and now has the responsibilities of Accounting, Budgeting, Purchasing, Pension, and Benefit Plans.

The following is a report on the various activities of the Division:

1. ***Accounting & Budgeting.*** The annual report from the certified public accountants, Fox & Co., for the year ending 1980, was concluded in April, 1981. The report shows a net income of $461,765 in the General Operating Fund, and a total surplus of $2,298,392. In addition to the General Operating Fund, the Legal Fund has a surplus of $1,130,175, and the Special Fund (Malpractice) has a surplus of $853,581.

In the area of budgeting, we are re-evaluating our current budget and have made various changes starting in 1981, and will continue to make changes to reflect current financial standards.

2. ***Pension & Benefit Plans.*** The Director and his staff have implemented the following changes in these plans:

a) Pension Plan — upgraded the plan to reflect the current economy.

b) Thrift Savings Plan — we have installed this plan which has become one of our major attractions in our Employee Benefit Package.

c) Health Insurance — a new contract went into effect in 1981, which gives far more comprehensive coverage to our employees and pensioners.

d) Travel Accident Insurance — was expanded to cover anyone traveling on MSSNY business.

e) Insurance Policies — reassessed all of our corporate insurance policies to get maximum benefits.

All of the above changes were a necessity for the growth of this Society. In some areas the cost to the Society was higher, and in other areas the benefits were increased with the cost being considerably lower. Therefore, the net cost to the Society was minimal.

COMMENTS

Mr. Keating replaced Mr. Eugene Dombrowski and has performed satisfactorily since taking over the position as Director of this Division. Previously this Division was responsible for advertising, technical exhibits, all of the Annual Meeting, as well as the Directory and Physicians' Records. The Division of Finance is now limiting itself to accounting and budgeting, as well as the pension and benefit plans of our employees. The other activities have been assigned to other divisions, most previously noted. The Directory and Physicians' Records have been properly allocated to the Division of Computer Services.

I should like to mention the Purchasing Department under Mrs. Florence Bambek's direction. For those of you who do not know Mrs. Bambek, she is the person who makes all of the plane reservations and who is also responsible for the purchasing of all items for the Medical Society. She has a great deal of knowledge, and I suggest that you utilize her services if there are any individual problems with travel or with the purchase of office supplies.

GENERAL COUNSEL

J. Richard Burns, J.D.

The activities of the Office of General Counsel fall into five categories:

I. Written Memoranda and Letters Which Have Involved Legal Research
II. Legal Matters
III. Committees
IV. Meetings
V. Miscellaneous

I. ***Written Memoranda and Letters:*** Since the last annual meeting of the Society, the General Counsel and his associate have prepared numerous memoranda on behalf of administration and various divisions and committees, as well as letters in response to inquiries from local component county medical societies and individual members throughout the State. The topics varied greatly, such as: The legal requirements to perform autopsies; anatomical gifts; the legal implications of terminating life support systems for comatose patients; medical malpractice panels; medical treatment of minors; professional medical conduct; impaired physicians; various mandatory reporting laws; the good samaritan laws; definition of the practice of chiropractic, physician's assistants, physical therapy, podiatry, etc., etc.

II. ***Legal Matters:***

(a) "*State of New York v. American Medical Association, et al.*" This is an anti-trust action brought by the State Attorney General which alleges that chiropractic has been illegally boycotted by the medical profession in this State. Originally, the action was prosecuted under the federal anti-trust law, the "Sherman Anti-Trust Act," and the State anti-trust law, the "Donnelly Act." Since the last meeting of the Medical Society, the claims based upon the "Donnelly Act" have been dismissed, and the action may now only proceed on the basis of the "Sherman Anti-Trust Act."

In April, 1980, Judge George C. Pratt, of the United States District Court, Eastern District of New York, dismissed the State's "Donnelly Act" claim on the basis of his interpretation of New York State Law. Previous state court decisions held that the "Donnelly Act" does not apply to the professions. At that time, the "Donnelly Act" claim was dismissed without prejudice to the State. This meant that the State could reassert its "Donnelly Act" claim against the Medical Society and the other defendants if it could successfully petition the New York

Court of Appeals to reverse the lower court decisions in *People v. Roth*. *People v. Roth* involves the indictment of eight physicians under the "Donnelly Act" for their alleged concerted effort to resign their authorization to treat nonemergency Workers' Compensation patients, and to refuse to treat nonemergency "No-Fault" patients. The Nassau County Court dismissed the indictments on the ground that the "Donnelly Act" does not apply to the professions. This was affirmed by the Appellate Division of the New York Supreme Court, Second Department.

In April, 1981, the New York Court of Appeals affirmed the prior court decisions in *Roth*. Because the New York State Court of Appeals, New York State's highest State court, has finally interpreted the "Donnelly Act" as not covering the learned professions, the Attorney General's action in *State of New York v. AMA, et al.*, can now only proceed on the basis of the "Sherman Anti-Trust Act." Under the "Donnelly Act" claims, the Medical Society could have been required to pay $1 million in damages, and Doctor Henry I. Fineberg, the one individual defendant in the action, could have been required to pay $100,000 in damages, if the State were successful in proving its case. With the "Donnelly Act" claims dismissed, the State is now only seeking injunctive relief, but no monetary damages.

In other developments, a motion to have the action against Doctor Fineberg dismissed has been filed. Doctor Fineberg was originally named as a defendant because he served on the AMA's Committee on Quackery from 1964 to 1974. On December 31, 1981, Doctor Fineberg retired from his position as Executive Vice-President of the Medical Society and was given the honorary title as Executive Vice-President Emeritus of the Medical Society. Since only injunctive action is presently contemplated in the lawsuit, and Doctor Fineberg is no longer in a position to exercise control over the affairs and activities of the Medical Society, it is not anticipated that the State will oppose the motion to drop Doctor Fineberg as a defendant.

While some of the original defendants have either reached a settlement or are pursuing a settlement with the State, the Medical Society of the State of New York intends to remain in this action in order to vindicate its position. While this action is still in the discovery stages, General Counsel for the Medical Society firmly believes that the Medical Society will ultimately prevail on the merits. The General Counsel has worked closely with our litigators, in all aspects of this case.

(b) *Medical Society v. Board of Regents*. This action involves the challenge of §29.2(a)(6) of the Rules of the New York State Board of Regents relating to the access of medical records by patients and succeeding practitioners. Pursuant to this section, unprofessional conduct includes:

> "upon a patient's written request, failing to make available to a patient, or, to another licensed health practitioner consistent with that practitioner's authorized scope of practice, copies of the record required by paragraph (3) (medical records) . . ."

The Medical Society contended that this regulation in requiring the physician to provide copies of medical records directly to the patient is inconsistent with accepted principles of medical practice, and is in conflict with statutory provisions which only require the physician to send copies of the medical record to succeeding physicians or hospitals designated by the patient.*

In June, 1979, the United States District Court of the Northern District of New York dismissed the Medical Society's challenge on the technical grounds that since no physician had been brought up on charges for allegedly violating the regulation, there was no "Actual Case or Controversy." Upon the dismissal in the federal district court, an action challenging the regulation was commenced in the New York Supreme Court, Albany County.

In December, 1980, the Supreme Court, Albany County declared §29.2(a)(6) of the Rules of the New York State Board of Regents to be invalid for its conflict with statutory provisions. While the State has filed a Notice of Appeal, to date, it has not gone forward on the Appeal.

(c) *Medical Society of the State of New York, et al. v. Carey, et al.* ("No-Fault" Lawsuit) This lawsuit involves the challenge of §678 of the Insurance Law which limits physicians' fees for services rendered to victims of automobile accidents to the fees established by the Chairman of the Workers' Compensation Board. In addition to the fundamental constitutional issues raised concerning the imposition of the fee schedule, the Medical Society has claimed that the fee schedule is irrational, unreasonable, arbitrary, and without any basis in fact. To pursue this claim, the Medical Society, in the Fall of 1980, engaged the services of the actuarial firm Market Opinion Research to obtain statistical data relating to patterns of practice and overhead business expense of physicians in the State.

(d) *People v. Roth et al.* As previously stated, this case arose over the indictment of eight physicians for their alleged conspiracy to resign their authorization to treat nonemergency Workers' Compensation patients, and to refuse to treat nonemergency "No-Fault" patients. In this matter, the Medical Society appeared as amicus curiae when this case was at trial (Nassau County Court, 1979) and in each stage of subsequent appeal (New York Supreme Court, Appellate Division, Second Department in 1980; and the New York Court of Appeals in April, 1981). Each time, the Medical Society argued that the State anti-trust law does not apply to the learned professions.

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* Section 17 of the Public Health Law provides:

§17. *Release of medical records*. Upon the written request of any competent patient . . . an examining, consulting or treating physician or hospital must release and deliver, exclusive of personal notes of the said physician or hospital, copies of all x-rays, medical records and test records including all laboratory tests regarding that patient to any other designated physician or hospital, . . . Either the physician or hospital incurring the expense of providing copies of x-rays, medical records and test records including all laboratory tests pursuant to the provisions of this section may impose a reasonable charge to be paid by the person requesting the release and deliverance of such records as reimbursement for such expenses.

(e) *Seinfeld v. Denton.* This action was commenced in June, 1980, by a member of the Medical Society, who at the time of his lawsuit against the Medical Society, was a defendant in a medical malpractice suit. The plaintiff sought to compel the Medical Society to pay all sums expended by him to defend the medical malpractice action, plus any and all additional sums which plaintiff could become obligated to pay on account of the malpractice action.

The plaintiff based his claim against the Medical Society on a provision of the Bylaws of the Medical Society in 1962 whereby the Medical Society would offer legal defense by Counsel to the Medical Society to its uninsured members if they were sued for malpractice. In 1973, the Medical Society amended its Bylaws to terminate the policy of offering this benefit. The plaintiff was insured in 1962. In 1977, the plaintiff was sued for malpractice which allegedly occurred in 1962. At that time, he learned that his insurance carrier had gone insolvent.

On March 31, 1981, the Supreme Court, Suffolk County, granted the Medical Society's motion to dismiss the plaintiff's complaint. The Court agreed with the position of the Medical Society that the plaintiff failed to state a valid cause of action because (1) Plaintiff was insured at the time of the alleged malpractice, and (2) plaintiff did not rely on the pre-1973 Bylaws to his detriment.

(f) *Matter of Eichner v. Dillon.* The Medical Society appeared as amicus curiae, or, "friend of the court" in the case before the New York State Court of Appeals involving the issue of withdrawing life support systems for permanently comatose, terminally ill patients. This case arose when Brother Charles Fox, an 83 year old member of a Catholic religious order, underwent an operation to correct a physical disorder. While the operation was being performed, he suffered cardiac arrest, with resulting loss of oxygen to the brain, which caused substantial brain damage. The attending physician informed Father Eichner, a member of the same religious order of Brother Fox, that there was no reasonable hope that Brother Fox would emerge from his vegetative state and that he would die in that condition. After two other physicians confirmed the diagnosis, Father Eichner requested the hospital to remove the respirator. The hospital refused to do so without court authorization. Following the refusal to withdraw the life support systems, Father Eichner applied for an order to direct withdrawal of life support systems, in the Supreme Court, Nassau County. Father Eichner contended that Brother Fox had previously expressed the wish that should he ever become permanently incapable of sapient thought, the use of extraordinary life support systems should be discontinued. When the Supreme Court, Nassau County, granted Father Eichner's request, the District Attorney, Nassau County, appealed to the Appellate Division, Second Department. Although Brother Fox died while the appeal was pending, the Appellate Division decided not to consider the case moot because of the case's significance. While the Appellate Division upheld the lower court order, it issued the following procedures to be followed in future cases involving removal of life support systems from comatose patients:

- — There must be a medical certification from the attending physician that the patient is terminally ill and that his condition is irreversible. A committee of at least three hospital physicians must confirm the prognosis.
- — The person who sought the prognosis must apply for appointment as committee of the incompetent with authority to withdraw the life supporting apparatus.
- — Notice must be given to the Attorney General and District Attorney. A guardian ad litem must be appointed for the patient.

As amicus in the appeal to the New York Court of Appeals, the Medical Society of the State of New York contended that the procedures set by the Appellate Division were unduly burdensome. The Medical Society contended that the decision as to whether life support systems should be withdrawn from a permanently comatose, terminally ill patient should be made by the patient's family or "committee" in consultation with the physician.

In March, 1981, the Court of Appeals modified the order of the Appellate Division by deleting the procedures outlined by the Appellate Division. According to the Court of Appeals, since the evidence showed that Brother Fox had expressed the wish not be be maintained on a respirator, the authorization to discontinue the use of the respirator was properly granted.

(g) *St. John's Episcopal Hospital Smithtown Medical Staff v. St. John's Smithtown Hospital.* This controversy arose when the Church Charity Foundation, which owns three hospitals — St. John's Episcopal Hospital, Brooklyn; St. John's Episcopal Hospital, South Shore Division; and St. John's Episcopal Hospital Smithtown; found itself in financial straits. Upon a request for an increase in their reimbursement rate for the three hospitals, the Office of Health Systems Management informed the Foundation that a combined rate could be given if the three hospitals were amalgamated into one. The amalgamation required a unified set of bylaws for the three separate medical staffs. The medical staff of St. John's Episcopal Hospital, Smithtown, voted against abrogating its current bylaws. An action for declaratory relief was instituted in the Supreme Court, Suffolk County. A motion for summary judgment was heard on March 24, 1981. The Medical Society was granted permission to appear as amicus curiae to argue that the bylaws of the medical staff represent a contract between the medical staff and the governing authority of the hospital, and as a contract, the bylaws may not be unilaterally abrogated by the hospital governing body. This case is presently pending.

(h) *Taub v. Medical Society of the State of New York, et al.* This is an action for an alleged accident that occurred in the parking lot adjacent to 410 Lakeville Road. Plaintiff has named as defendants all parties that she believes to have ownership or control of 410 Lakeville

Road. The Medical Society has furnished the Home Insurance Company with copies of deeds showing that the MSSNY does not own premises situated on 410 Lakeville Road. An Examination Before Trial is scheduled to determine the exact location where the alleged injury took place. If it is claimed that the accident occurred at 410 Lakeville Road, the claim against the MSSNY can be quickly disposed of.

Plaintiff has demanded $900,000 in damages and plaintiff's husband has claimed $100,000 as separate damages. The Medical Society is adequately insured. The General Counsel has worked closely with the Medical Society's insurance carrier in this matter.

III. ***Committees:*** The General Counsel has continued to provide staff support and legal advice to committees assigned to his division.

(a) *House Committee on Bylaws.* The assistance given to this committee is twofold. The General Counsel and his associate provide the necessary expertise to insure that the changes proposed with respect to the Bylaws of this Society are both legally permissible and are enacted in a proper fashion. In addition, this office provides the administrative services which are required.

(b) *Ethics Committee.* This office has continued to work with the Committee in regard to the formulation of ethical opinions concerning a myriad of subjects dealing with the practice of medicine.

(c) *Professional Medical Liability Insurance and Defense Board.* The General Counsel continues to sit monthly with the Board.

(d) *Judicial Council.* The General Counsel provides legal advice to the Judicial Council during all stages of appeal proceedings. During this past year, there was one appeal to the Judicial Council. This case arose when a county medical society refused to hear the complaint of one of its members against another member. The county medical society contended that it was not required to hold a hearing on the complaint because the physician had already filed a complaint with the New York State Board for Professional Medical Conduct. After due deliberation, the Judicial Council decided that the county medical society should hold hearings notwithstanding the fact that the complaint has already been filed with the State agency. The determination of the Judicial Council was based solely on its interpretation of the bylaws of the county medical society, which provides its members the right to be heard regarding complaints against fellow members.

(e) *Countersuits Subcommitee of the Professional Medical Liability Insurance and Defense Board.* This subcommittee has remained in a "holding pattern" by action of the Council in April, 1979.

IV. ***Meetings:*** The General Counsel attended a meeting of the Society of the Medical Association Counsel which was held at the Drake Hotel, Chicago, Illinois, on June 5 and 6. The participants included counsel from all areas of the country. In addition, the Meeting was attended by the General Counsel of the American College of Radiology and attorneys from the Office of General Counsel of the American Medical Association. Numerous topics were discussed concerning common problems among the state medical societies.

V. ***Miscellaneous:*** The Office of General Counsel reports directly to the Council regarding the status of proposed revisions to the constitution and bylaws of district branches and county medical societies. The General Counsel is charged with advising the Council that all revisions comply with the Bylaws of the Medical Society of the State of New York, as well as State and federal law.

The Office of General Counsel has corresponded with the local Postmaster for the United States Post Office and has received an approval for the Medical Society's application for special bulk third-class rates. Currently, the Medical Society is applying for special second-class rates.

The General Counsel has continued to work with the Frauds Bureau of the Nassau County District Attorney's Office concerning the irregularities in the operation of the Division of Computer Systems and Services which were discovered in February, 1979. The case has finally come to a close when the party involved agreed to plead guilty to attempted theft of services.

The Office of General Counsel has provided the administrative assistance to set up the numerous ad hoc committees of the Council to hear appeals from recommendations of the Professional Medical Liability Insurance and Defense Board. The General Counsel remains available to provide technical expertise to the committees when required.

COMMENTS

The Office of General Counsel, as you can see by its voluminous report, presents a multitude of interesting actions and I strongly recommend that you read carefully all of its activities. Mr. Burns is assisted in his work by Donald Moy, who has proved an excellent addition to our legal staff.

It is obvious that more and more of our activities are directed towards legal matters. This is ironic when one views the situation that the Medical Society of the State of New York must often resort to legal action to protect itself. There is no question that this is becoming a way of life in our society and one which we cannot accept with great relish.

DIVISION OF GOVERNMENTAL AFFAIRS

Martin J. Tracey, J.D., *Director*

General Overview. The Division has been very much involved in monitoring the developments and progress of health legislation in Albany, and in presenting MSSNY's views regarding the proposed new laws. It has been particularly active in cooperating in the conduct of our State Medical Society's all out campaign to achieve legislative solutions to the current medical liability insurance premium crisis. At the time this report is being submitted in late June, the New York State Legislature is about to recess until fall. At report time, the Governor has just signed the Collateral Sources Bill, which had passed both houses of the State Legislature with only one negative vote.

The Catastrophe Fund Bill has been introduced in both houses and the Structured Awards Bill is being considered by the leaders in the Senate and Assembly. The Legislature's leaders and individual members have been thoroughly informed concerning the issues, are well aware of the problems, and are awaiting the decision of the Superintendent of Insurance on the rate increase request before taking further action. Following the decision of the Superintendent of Insurance, expected by October 1, the legislative leaders are expected to review the situation at that time and take whatever action, if any, they deem appropriate. If the leaders in both houses agree at the post summerrecess in the fall on legislative solutions and submit them to individual members for action, the climate in Albany at the time this report is being submitted in late June indicates that the legislators in both houses probably would vote favorably on these measures presented to them at that time.

During the early months of the session, the Division was involved with negotiations with the Trial Lawyers seeking to develop legislation acceptable to both the State Society and the Trial Lawyers which would significantly address what was then perceived to be an impending malpractice crisis. Even before the new rate filing of the Medical Liability Mutual Insurance Company was announced, our annual State Legislation Conference of County Medical Society Representatives convened in Albany and our county medical society representatives were briefed on our 1981 State Legislation Program which included the Structured Awards Bill and the Collateral Sources Bill. After the briefing, our physician representatives contacted their local legislators in their offices to discuss issues of major concern to the medical profession, including malpractice.

The early part of the session also was marked by the introduction of our legislative package and the enactment of the Uniform Claims Form Bill which had been initiated and strongly supported by our Society. This bill, which became Chapter II of the Laws of 1981, includes the Blues in the statutory requirement that a standard claims form be utilized by insurance companies in this State.

After the announcement of the new medical liability insurance rates which were filed by MLMIC on April 1, this Division, through the Director and Albany representatives, participated in the development and promotion of legislation designed to achieve a resolution of the crisis. Through numerous meetings and communications with the attorneys for the insurance company and with legislative leaders and governmental officials, potential solutions to the problem were discussed, developed, and promoted. The Division also assisted in the preparation and dissemination of informational materials which were sent to the county medical societies and to the entire membership, including several *Hot Lines* and mailgrams, which were designed to inform them of the efforts which were being made to obtain legislative relief.

Carrying out the directives of our Executive Vice-President, our Division cooperated in making preparations for the emergency meeting of county medical society representatives and district branch and specialty society presidents concerning the malpractice crisis which was held in Albany in early May and in the highly successful physicians' rally on June 1, which brought approximately 1,000 physicians from around the State to the Capitol to bring public attention to the malpractice liability situation.

Although the main focal point of the Division's activity during most of the current session centered on the malpractice situation, several other vital issues had to be dealt with, including no-fault, generic drugs, the use of drugs by optometrists, and nurse practitioner legislation. Division staff also worked closely with the executive administration of the Society on preparing a statement regarding the Education Department's regulations on clinical clerkships and medical licensure in New York State for students and graduates of unregistered foreign medical schools.

Albany Operations. During the 1981 session of the New York State Legislature, the Director represented the State Medical Society at the State Capitol in Albany. Working closely with the Society's Legislative Counsel, the Director contacted key lawmakers and their staffs to discuss bills of interest to the medical profession and to promote the implementation of MSSNY's legislative program. Emphasis was placed on visiting the offices of every member of both houses of the Legislature for the purpose of informing them about the malpractice crisis, convincing them of MSSNY's views and persuading them to vote for the State Medical Society's legislative proposals.

While the Legislature is in session, the Director's answering service is in operation in Albany to assist him in maintaining the communication with the legislators and their staffs, county medical societies, individual physician members, and the State Society headquarters.

The weekly legislative newsletter of our State Medical Society, the *Capitol News*, has been published in Albany during each session of the Legislature since 1965. This publication was delivered each week to members of the Legislature, county medical society officers and executives, and key physicians throughout the State. The *Capitol News* is designed to keep its readers abreast of important developments in health legislation in New York State and to advise them of the opinion of the State Medical Society on the key health issues which are being discussed in the Legislature. To date, 21 issues have been distributed this year.

Headquarters Activities. The Albany activities received strong back-up support from the Division headquarter's staff led by the Assistant to the Director. Over the past year, memoranda addressed to more than 130 specific legislative proposals were prepared with the cooperation and approval of Legislative Counsel and sent to Legislators. This teamwork of personal contact and written communications was the key to success in gaining legislative approval of some of our bills and averting a massive number of undesirable measures.

Under the supervision of the Division Director, the staff is responsible for the review of State and federal legislation pertaining to health care and the practice of medicine. Extensive files are maintained on key topics and issues which arise concerning the relationship of medicine and government, as well as on individual bills which are introduced in the State Legislature and in Congress.

During the 1981 State legislative session, approximately 16,000 bills have been introduced thus far. These bills were screened by staff and by Legislative Counsel. Those involving health care (more than ten percent) were referred for analysis and comment to the appropriate Interspecialty Committee representatives and to the chairmen of the appropriate State Society committees. These comments, as well as recommendations from county medical society leaders via the Legislation Opinion Report of *Capitol News*, were considered along with information in our Division files and previous memoranda prepared by Legislative Counsel in establishing the State Society's position on all health legislation. Position statements and memoranda were prepared with the cooperation and approval of our Legislative Counsel and disseminated to the legislators and governmental officials. The staff also cooperated with other Society divisions by providing them with necessary information and seeking their advice and recommendations on pending legislation and regulations. Memoranda on the more than 130 individual legislative proposals previously mentioned were distributed not only to the legislators, but to members of the State Medical Society Council, Board of Trustees, State Legislation Committee, and to staffed county medical societies.

Through our legislation information center, the staff provided information and materials for publication in the *News of New York* and assisted in preparation of *Hot Line* communications to our members. Varied requests for information from county medical societies, individual members, the AMA, and others were answered as quickly as possible. In addition, suggestions and opinions obtained from individual members and county medical societies regarding legislative issues were tabulated and recorded for use in preparing the State Society's positions on specific legislation.

Continuing the practice started a few years ago, a 42-page brochure presenting a concise report on health bills of interest to the medical profession acted upon during the 1980 session of the State Legislature was prepared and widely distributed. A similar brochure for the 1981 session is in the planning stage.

State Legislation Committee. The Division of Governmental Affairs provided staff support to the State Legislation Committee. In this capacity, the Director and staff worked closely with the committee and under its direction. It is the responsibility of the division to apprise the committee of activities in Albany, make the necessary preparations for meetings, assist in conducting the meetings, and in the preparation of reports to the Council and House of Delegates.

The Division staffed two State Legislation Committee meetings. The first was held on September 17, 1980, at headquarters. The purpose of this meeting was to prepare a report to the House of Delegates recommending MSSNY's 1981 State Legislation Program. The second meeting was held in Albany on March 2, 1981, to review the early activities of the 1981 legislative session and to consider resolutions referred to the committee by the Council and the House of Delegates. The committee reviewed new proposals which had been introduced during the early weeks of the session and discussed the topics which were likely to become the major health care issues of the ongoing session.

Federal Legislation Committee. The Division is responsible for providing similar staff assistance to the Federal Legislation Committee. The Director and his staff worked closely with the chairman and committee members and under their supervision. The Division provided the committee with information on federal health bills and, working closely with AMA staff, exchanged data of mutual interest. At the request of the AMA, communications concerning MSSNY's positions on bills about to be considered by the Congress were quickly dispatched to New York's Congressional Delegation over the signature of our Executive Vice-President.

Public Meetings & Private Conferences. In addition to his participation in the activities previously reported, the following is a list of some of the key meetings attended by the Director since June 27, 1980:

Sept. 5, 1980	Board of Regents Conference, Albany
Oct. 21, 1980	NYSAP Board of Directors, New York City
Jan. 4–7, 1981	AMA State Legislation Conference, Key Biscayne, Florida
Jan. 20, 1981	NYSAP Legislation Committee, Albany
Jan. 21, 1981	Meeting with Trial Lawyers
Jan. 29, 1981	NYSAP Board of Directors, New York City
Feb. 17, 1981	Legislative Conference, Malpractice Bill, New York City
Feb. 20, 1981	Meeting with Trial Lawyers
March 17, 1981	NYSAP Legislation Committee, Albany
March 24, 1981	NYSAP Legislative Breakfast, Albany
	NYSAP Board of Directors, Albany
March 27, 1981	Legislative Conference, Generic Drug Bill, New York City
April 13, 1981	Medical Malpractice Insurance Meeting, New York City
April 22, 1981	Medical Malpractice Insurance Crisis Meeting, Headquarters
May 5, 1981	Meeting with Chairman, Senate Insurance Committee, Medical Malpractice Insurance Crisis, Albany
May 5, 1981	Meeting with Assembly Speaker Fink, Medical Malpractice Insurance Crisis, Albany
May 5, 1981	Meeting with Chairman, Assembly Insurance Committee, Medical Malpractice Insurance Crisis, Albany
May 6, 1981	NYSAP Legislation Committee, Albany
May 11, 1981	Meeting with Commissioner, New York State Department of Health, Albany
May 11, 1981	Emergency Meeting, Medical Malpractice Crisis, Albany
May 15, 1981	NYSAP Board of Directors, New York City
May 17, 1981	New York State Senate Meeting, Lincoln Center, New York City
May 25, 1981	New York State Democratic Meeting, New York City
May 28, 1981	Medical Malpractice Conference, Assembly Parlor, Albany
June 1, 1981	Membership Assembly (Physicians Rally), Medical Malpractice Insurance Crisis, Albany
June 5, 1981	Meeting with Lieutenant Governor, Medical Malpractice Crisis, Albany

New York State Association of the Professions. The Director, working with Carl Goldmark, Jr., M.D., and Henry I. Fineberg, M.D., as MSSNY's representatives on the Board of Directors of the New York State Association of the Professions (NYSAP), promoted our State Medical Society's legislative goals. He also served as Chairman of NYSAP's Legislation Committee; and a member of the Committee on Legislators' Breakfast, held in Albany, in mid March; and as Chairman of the Nominating Committee.

Many benefits resulted from MSSNY's involvement in NYSAP's legislative activities. A primary bill in NYSAP's legislation program was MSSNY's Professional Service Corporation Tax Benefit Bill, which was strongly supported by the constituent associations. NYSAP also strongly supported our State Medical Society in its efforts to obtain legislative solutions to the malpractice crisis when it endorsed the Collateral Sources Bill and worked for its enactment. In his Memorandum of Approval, the Governor cited NYSAP as one of the organizations which had supported MSSNY's Collateral Sources Bill.

COMMENTS

This Division continues to be an intricate part of our entire operation inasmuch as legislation plays a vital role. With the malpractice problem, as well as the pervasive influence of Government in all aspects of the way we practice medicine, this Division continues to be an extremely critical one for our Society. (For additional comments relative to our legislative efforts see my concluding remarks.)

DIVISION OF INSURANCE AND MEMBERSHIP BENEFITS

Bernard M. Jackson, C.L.U., *Director*

General Insurance. There are approximately 8,798 participants in the Medical Society of the State of New York Supplemental Insurance Programs. Group Life, Disability Income, Professional Overhead Expense, In-Hospital Indemnity, and Accidental Death and Dismemberment Insurance Programs are available for our physician members. Participation increased in all plans this past year. All of our group insurance programs feature a special renewal guarantee.

Since the inception of our Group Life Insurance Program, the Bankers Life of Des Moines, Iowa, the underwriting company, has paid over $500,000.00 in dividends to our physician members insured under the plan. The balance of our insurance programs, underwritten by the Continental Insurance Companies have paid over $7,500,000.00 in benefits to our physicians since the programs were implemented. Hundreds of insured physicians have written letters to the Medical Society of the State of New York which are highly laudatory of the prompt claims payment service.

We have been informed by our endorsed administrator that a dividend of approximately 52.93% for a total of $212,195.00 will be paid this year to the participating members in our Group Life Insurance Program.

The maximum under our Group Life Insurance Program was increased to $250,000.00. In addition, a student member disability income protection plan, and an optional increased benefit in the supplemental Disability Income Program providing for additional lump sum payments following disability, were approved and implemented.

A comprehensive multiperil office package was specially designed by the General Insurance Committee and staff, in conjunction with the Whiting National Insurance Company, the underwriting carrier for our physician members. It is expected that this program will be marketed this Fall.

A sophisticated financial analysis program was approved and implemented for our membership. This program, administered by Shearson, Loeb Rhoades, Inc., offers our physician members in indepth comprehensive analysis of their overall financial goals, at fees not available to the general public.

A special "free insurance," i.e., a limited amount of Group Life Insurance to be offered to new members under 35, for a six month period without charge, is being explored.

The General Insurance Committee and staff continue to explore and review other forms of insurance for the personal and professional needs of our physician members. These include a Disability Benefits Law Insurance Program, a comprehensive Major Medical Plan, a Medicare Supplement, and Group Auto and Homeowners insurance. It should be noted that the underwriting market for some of these proposed programs is limited, due to the adverse experience of the underwriting companies.

The General Insurance Committee and staff are studying the feasibility of administering some aspects of the General Insurance Program.

Membership Benefits. The theme, "Membership Pays, It Does Not Cost" continues to be developed and expanded by the Division of Insurance and Membership Benefits. New benefit programs, including auto rentals, microfilming, office and home security protection, certified diamonds at wholesale prices, were reviewed by staff and the Membership Benefits Committee and referred to the Council for approval. All these programs feature special discounts and service for our physician members and their families.

The Membership Benefits Committee and staff have studied and recommended to the Committee on Research and Development that a study be made on the feasibility of forming a "for profit corporation" within the framework of the Medical Society of the State of New York. The purpose of a "for profit corporation" would be to bring many thousands of dollars to the Medical Society of the State of New York in the form of dividends from the "for profit" corporation which would be considered related income and not taxable. This additional income could have the effect of stabilizing dues and expanding services for our physician members. Initial studies indicate that there is a trend among 501(C)6 corporations to form "for profit corporations."

Periodic seminars are being held for the benefit of our physician members on subjects ranging from pension programing and financial analysis to the use of computers in medical practice.

Thousands of requests from our physician members, both written and telephoned, are serviced annually in a highly professional manner. An analysis of these requests show the most popular programs to be purchasing and leasing cars at group discounts, major applicances at wholesale prices, and our Group Insurance Programs.

Ad Hoc Committee to Study the Situation of Charles J. Sellers & Co., Inc. The Ad Hoc Committee met to again consider the question of Charles J. Sellers & Co., Inc., since all pending appeals have been decided and the judgments against the company have been upheld.

Despite this fact, the Ad Hoc Committee feels that Charles J. Sellers & Co., Inc., is in no financial danger, and the policies held by our MSSNY members are absolutely safe. Therefore, the Ad Hoc Committee does not feel that the legal situation involving the Sellers Agency in any way should affect the performance of this company in carrying out its duties to our members.

Administrative Committee for the MSSNY Pension Program. Our pension coordinator has advised us that approximately $1,613,782.00 has been invested thus far in our Medical Society of the State of New York Pension Program. The Medical Society of the State of New York Pension Plan investment fund has outperformed the Dow by 78% for the last nine months.

COMMENTS

This Division has continued to expand under Mr. Jackson's directorship. We are also continuing to monitor Mr. Sellers' company's activities. Your attention is drawn to the Ad Hoc Committee concerning Mr. Sellers and their findings. The membership benefits continue to increase under Mr. Jackson's division, and he has given vigorous leadership in this area.

MEDICAL SERVICES

Robert J. O'Connor, M.D., *Director*

The Division of Medical Services functions essentially under two separate formats — one being the committee structure of eleven Council established committees and the second being the ancillary activities of the Director and Associate Director of the Division dealing with Third Party Payors, Workers' Compensation Board and its various committees, the Bureau of Disability Determinations, the Bradford Administrative Services, Inc., and numerous others. In order to avoid unnecessary reporting, I submit that it would be repetitious to recount the activities of the committees assigned to this Division. Detailed annual reports of the meetings, deliberations, and recommendations of the specific committees have been submitted separately. Additionally a statistical list of all meetings, conferences, etc., related to Division activities and attended by the Director and/or the Associate Director of the Division is appended. This list provides a broad overview of the areas of involvement and of the time involved in gaining new knowledge, keeping up with current trends and trying to anticipate and understand constantly arising new ideas. To meet this challenge many hours are spent both during normal working schedules and during evenings and weekends. I would like to outline a few of the areas in which a great deal of time is expended and which have given rise to or have arisen out of the frustrations experienced by members of MSSNY and other physicians throughout New York State.

Workers' Compensation & Occupational Health Committee. There are three separate committees of the Board which necessitate our presence. These are the Advisory Committee on the Medical Fee Schedule and Allied Problems, the Administrative Practices Committee, and the Disability Determinations Committee. All three of these meet monthly and discuss all problems as they relate to Workers' Compensation. The MSSNY has active input into all these areas and is able, through its representatives, to exert some influence on their decisions. In addition to attending all of these meetings I have frequent informal meetings with the Chairman of the Workers' Compensation Board to discuss matters of mutual concern. These frequent contacts, while time consuming are vital in maintaining the close and excellent understanding that exists between MSSNY and the Chairman. We do not always agree but always clearly understand our respective positions. This same ability to communicate exists between ourselves and other sectional heads of the Workers' Compensation Board.

Bradford Administrative Services, Inc. In both of these areas the Division has established a regular schedule of meetings with top echelon staff, usually on a every other month basis, at which time we discuss mutual problems that have arisen out of corporate policy changes or which have become apparent through correspondence received by the Division from physicians all over the State. The face to face interchange of ideas has been very productive in producing a clearer understanding of our mutual problems and has been particularly helpful to us in our Ombudsman activities. In addition to this type of meeting the Division Director also attends the meetings of the Medical Policy Advisory Committee of Blue Cross/Blue Shield of Greater New York. This committee is a forum for representative Board members of BC/BS of Greater New York and representatives from the 17 Downstate counties to exchange ideas and to discuss current activities of the Blue plans.

Medicaid-Bradford Administrative Services, Inc. Many of the problems encountered in the area of Medicaid reimbursement and procedures are resolved easily at regular meetings with top representatives from the Bradford Administrative Services, Inc. These meetings have proven to be very worthwhile and provide us with needed information for transmittal to county medical societies. They are invaluable for the Ombudsman program.

Ombudsman Service. This has been a very active area on an ongoing daily basis. Numerous requests for assistance are handled. By and far, the greater majority of problems are in the area of:

(a) Blue Shield reimbursement both from the point of view of delay in payment and inadequate payment.

(b) Medicaid reimbursement in terms of inadequacy and either delay or failure to receive payment.

(c) Workers' Compensation problems per se (Regionalization) as well as hundreds of questions relative to "No-Fault" procedures and the Workers' Compensation Medical Fee Schedule.

(d) Medicare rules and regulations particularly in variances between reimbursement policies and the actual law.

(e) Numerous questions about claim forms — which one to use and how to fill them out.

In addition, there are many questions involving almost every and all areas of socioeconomics as it applies to an individual physician and to running his practice.

Out of all these efforts it has become apparent to us in the Division that at least 70–80% of the problems we handle are physician or office staff generated while the remainder are directly traceable to third parties. The nature of the complaints indicate that:

1. The physician (or staff) is not familiar with the rules and regulations that exist in a given area, i.e., the Workers' Compensation Law specifically states that a C4 must be signed by the physician rendering treatment and not by another person or by the use of a facsimile stamp. This is a frequent cause of delay. Failure to sign the form accounts for a goodly number of delays. Clerical errors in filling out claim forms of any type is commonplace. All of this points up to the fact that many physicians do not take the time to become familiar with administrative procedures or do not adequately instruct their staffs as to proper procedure.
2. In the 30% or so of third party errors the problem lies in a computer input error (either because of sloppy techniques or by input of incorrect information submitted on claim forms).

With a little patience and understanding we can usually resolve these problems in a short period of time. Our biggest problem involves physicians who have completely misinterpreted various regulations and are resistant to explanations. However, we patiently press our explanations and in most cases are successful.

Patterns of Practice and Office Overhead Survey. After several years of struggle, the survey mentioned above was finally launched. The actuarial firm of Market Opinion Research, Inc., was retained to conduct the survey. This firm is based in Detroit. At this writing the survey is finished and is being analyzed through the computers. We expect the first draft report about June 1, 1981.

Council Committee Activities. Each of the eleven committees under the aegis of this Division has met on numerous occasions, discussed the problems at hand, submitted recommendations for Council action, and has dealt with newly arising problems as they have surfaced. Detailed separate reports of the individual committee activities have been submitted.

I would recommend that the Socioeconomics Committee, as such, be disbanded. Its functions have largely been taken over by the variously formed committees now in existence. It no longer has an independent function.

Fraud and Abuse. In the past six months or so, the whole question of Fraud and Abuse has been gaining momentum. We have established contact with responsible people in the Attorney General's Office and have started to meet to discuss the problems involved and areas in which mutual efforts would be useful. It is too early to report on this effort but will do so when more information is gained.

Cost Containment. The Division has been instrumental in stressing cost-effectiveness. A full afternoon seminar has been arranged at the time of the Spring CME Assembly in Niagara Falls.

The panelists for this Seminar will be:

Leonard S. Weiss, M.D., Moderator
Chairman, MSSNY Committee on Cost Containment
David Axelrod, M.D., Commissioner
New York State Department of Health
Steven Sieverts, Vice-President
Blue Cross/Blue Shield of Greater New York
Russell F. Schuck, Manager
Employee Benefits Planning
International Business Machines Corp.
S. David Pomrinse, M.D., President
Greater New York Hospital Association
Louis A. Orsini, Vice-President and Director
Health Insurance Association of America
Samuel M. Gelfand, M.D., Vice-Chairman
MSSNY Committee on Cost Containment

Finally, the Division of Medical Services has attempted to serve the membership of MSSNY in the framework of personal contact, individual help and advice, and open discussions of the many problems that exist. As Division Director, I feel that the most important aspect of our activities is to make our members aware that we are responsive to their needs, willing to seek solutions to the myriad problems confronting us, and willing to go to them when the need arises — personal, direct interest in everything that affects our constituent societies is vital.

Meetings Attended by the Director Division of Medical Services	(No. of Days)
Annual Meeting New York State Society of Internal Medicine	3
Hospital Review & Planning Council — BC/BS	1
Meeting with HHS re Universal Claim Form	1
BC/BS Seminar: Appropriateness Review HSA	1
Speaking Engagement Steuben County MS re Medicaid, No-Fault	2
WCB Advisory Committee Meeting on WC Medical Fee Schedule & Allied Problems	8
HSA Board of Directors	7
Long Island Plastic Group, Mineola, Evaluation of Group for WC	1
New York Academy of Compensation Medicine — Bd. of Directors	3
Disability Determinations Board — Social Security Admin.	5
WC Advisory Committee of Administrative Procedures	6
BC/BS Medical Policy Advisory Cte. Meeting	4
Broome County Medical Society — Speaking Engagement	2
HSA Appropriateness Review Committee	3
Meeting with Bradford Administrative Services (MMIS)	3
First District Branch — Executive Committee	2
St. Lawrence County MS — Speaking Engagement	2
American Academy of Compensation Medicine	2
State of New York Attorney General's Office re Medicaid Fraud	1
American Assn. of Medical Assistants, Rye, NY — Talk on WC Claim Forms	1
New York Academy of Medicine Health Conference	2
Met with Representatives of BC/BS	2
AMA Seminar for Physician Negotiators Advanced Course, Parker Meridien Hotel, New York City	3
Annual Scientific Session — Niagara Falls — Cost Containment Seminar Sponsored by Cost Containment Committee	3
WC Meetings on WC Disability Det. Procedures	3
Meetings with Physicians doing Medicaid Work in The Bronx	3
Numerous Conferences with Individual Physicians held at Lake Success, to Discuss Particular Problems as they Relate to this Division's Activities.	
Statewide PSRO Council	3
PSRO Advisory Committee	2
Monitoring all meetings of Hospital Review and Planning Council	
WCB Task Force — re Provisions of WC Law	1

Meetings Attended by Associate Director Division of Medical Services	
Hospital Review and Planning Council Meetings	5
Statewide PSR Council	1
Statewide PSR Council Advisory	1
Quarterly meetings with BCBS GNY Officials	2
Meetings re: Patterns of Practice Survey	2
NY Hospital-Cornell Medical Center — Second Opinion	1
Meetings with Bradford Administrative Services Offic.	2
BCBS Medical Policy Advisory Committee	1
Generic Drugs Meeting with Assemblyman Grannis	1
Medicaid Fraud and Abuse Meeting with Attorney General's Office	1
American Association of Medical Assistants Meeting	1
Academy of Medicine Seminar on Health	1
Medicaid Meeting in Albany with Dr. McGarvey, OHSM	1

COMMENTS

It should be noted that Mr. William Brainin left this Division and has become subsequently employed as the Executive Director of the Nassau County Medical Society. We wish Mr. Brainin luck in his new position. Doctor O'Connor, as Director, has continued to lead this Division well, considering the multitude of problems which his Division must cover.

Workers' Compensation and Medicaid continued to offer this Society extensive problems. The Patterns of Practice and Overhead Expense Survey has finally been completed and is now being studied by Dr. O'Connor's Division. We trust that this survey will give impetus towards a solution of some of the Workers' Compensation problems, as well as aiding our legal suit in this area.

This Division is involved in discussions about the future of PSRO, and a study group is formulating ideas for physicians to maintain control and direction over peer review.

This Division is also working to anticipate any changes in PSRO. The Division is contemplating being prepared if there is any great change in the participation in funding of the federal government in the PSRO effort. Several meetings have already been held with various leaders of this movement throughout the State, and your Society is trying to prepare itself in the event that there is any substantial change in the present situation.

DEPARTMENT OF RESEARCH AND DEVELOPMENT

Deborah Siegel, *Director*

The Committee on Research and Development welcomed Past-President, G. Rehmi Denton, M.D., as its new Chairman.

The committee, previously composed entirely of Past-Presidents, voted (as per the motion of Lynn Callin, M.D.) to expand committee members to include, as regular members, the following officers of the Medical Society of the State of New York: President-Elect and Vice-President.

Over the past year, Research and Development has addressed a variety of topics while functioning within a "think tank," idea group and research capacity.

Research and Development gave the Demographic Survey of Physicians in New York State (Resolution 79-16) priority consideration. The first step, and most essential component of the survey, was to establish a Master List of Physicians. Though requiring much time, energy, and additional funds, the master list is nearing completion (projected for September, 1981). This list will yield basic demographic data — each physicians' name, at least one correct address, county breakdown, and specialty breakdown. The projected total of physicians is expected to be approximately 48,000.

The Committee on Research and Development decided that, at present, no additional information would be sought. Maintenance methodologies and verification procedures are in the process of being developed.

Once the list is complete it can be used for a number of things — membership development, demographic studies, health manpower studies, comparisons of physician distribution before and after the malpractice crisis, etc.

Corporate Visitation Program. The Corporate Visitation Program was established in 1980 with the help of the American Medical Association in response to the growing number of Business-Medical groups surfacing across the country. These groups, on both county and State levels, direct their efforts towards containing health care costs.

The Corporate Visitation Program is under continual development and expansion. During 1980–81, the program met a total of 4 times. Program guidelines were established and a primary objective was formulated; the program's purpose was to effect actual cost savings in relation to health care without sacrificing the quality of that care. This would be accomplished by Industry and Medicine working together to solve mutual problems on legal, political, medical, and corporate levels. Russell Schuck, Manager of Employee Benefits, IBM, and Ralph M. Schwartz, M.D., President of the Medical Society of the State of New York, were chosen as Co-Chairmen, representing Industry and the MSSNY, respectively.

The Malpractice Crisis and Physician Awareness has been, and will continue to be, discussed. Future projects that have begun to be discussed include a seminar or presentation which would seek the use of industry consultants and foundation or corporate funding.

Medical Malpractice Legislation Chart. The Department of Research and Development, in response to the Malpractice Crisis, compiled a chart of state-by-state medical malpractice legislation from 1975–80. It was accompanied by a 'Glossary of Statute Definitions.' This was distributed to Corporate Visitation Program Participants, American Medical Association, House of Delegates, Medical Society of the State of New York Councilors, AMA Legislative Department, and New York State Senate and Assembly Leaders. It will appear in the September, 1981, issue of the *New York State Journal of Medicine*. In addition, state-by-state updating has been begun.

Maternal Mortality Grant. The Director of Research and Development, Ms. Deborah Siegel, is writing a grant in cooperation with George Lawrence, M.D., Director of Scientific Activities, and Rod McLean, M.D., Chairman of the Maternal and Child Health Committee. It is hoped that this grant will re-establish funding for the Maternal Mortality Studies (done on a continuous basis up until 1979). Re-establishment of the study will insure a continuous data base to study the economic, legal, environmental, and social effects of the times on maternal mortality. Once relationships have been studied, recommendations to reduce maternal mortality may be made.

Return of Dues Program. The Department of Research and Development, in conjunction and cooperation with the Division of Insurance and Membership Benefits, has and will continue to explore and research such programs as the Return of Dues Program. While at the present moment in time this kind of program would be too costly in the long run, this and programs of a similar nature will continue to be explored as to their value for members of the Medical Society of the State of New York.

For-Profit Organization. The Department of Research and Development, also in cooperation with the Division of Insurance and Membership Benefits, is exploring possibilities of an appropriate "for-profit" organization, which will allow additional monies to be brought into the Medical Society of the State of New York without threatening its tax exempt status. Perhaps one of the most positive aspects of this type of venture would be to keep membership dues down — which is a potent membership benefit.

Empire State, Medical, Scientific, Educational Foundation, Inc. The Committee on Research and Development wishes to see the Empire State, Medical, Scientific, Educational Foundation, Inc., become active again. To this end, the legality of including on the Membership Dues Card a line for a voluntary contribution to the Foundation was explored. No legal bars were found and this recommendation for approval will be asked of the Council in the near future. Yearly voluntary contributions of members will enable projects to be done within the auspices of the Foundation and will enhance its image while providng useful information from studies done.

Expansion of Library Services. The library and its potential were discussed by the Committee on Research and Development. Discussions on the future of the library will continue.

Future Research and Development Projects. Within the following months, Research and Development will address itself to a number of projects (some of which, due to time limitations were tabled until early fall, 1981):

1. A comparative study on medical malpractice rates across the country noting geographic breakdown is already underway.
2. A study of cost containment courses in medical schools, done in cooperation with the AMA, is also currently being prepared.
3. Consideration of a study which would allow specialty society presentation at the House of Delegates as is done in the AMA.
4. Consideration of a study as to the value of creating an organization of the New York State Association of Medical Staff Leaders.
5. Consideration of a study exploring the feasibility of the undertaking of either establishing a comprehensive Health Practices Act or "Redefining the Practice of Medicine." The purpose of this undertaking would be to try and re-establish physician leadership in the delivery of health care.
6. Members of the Committee would also like to address an examination of the *New York State Journal of Medicine* and should that examination reveal the need for restructuring, begin to determine what changes should be made.
7. The Committee will formulate a Long Range Planning chart for the Medical Society of the State of New York. The purpose will be to clarify direction and aid in realizing objectives; it will evaluate the trends of

professional organizations and physicians, thereby making the MSSNY better able to address member needs.

COMMENTS

Under Ms. Debbie Siegel's direction, this Department has finally matured and is now in a position to render extensive service to the Medical Society of the State of New York. This Department continues to work under the direction of the Executive Vice-President inasmuch as its many activities are closely related. Ms. Siegel has division head status and you can see from her report that this Division is becoming much more active and more productive.

We are finally reaching the point where we are getting a handle on the demographic problems of physicians practicing in New York State. This has not been an easy job, and has required the careful coordination of efforts both of this Division as well as Jay Garnock's Computer Services Division.

For your information, the Committee on Research and Development is composed of past-presidents. It is starting to meet and devote much longer hours to the general problems of the Society, and we look forward to its deliberations and recommendations.

DIVISION OF SCIENTIFIC ACTIVITIES

George J. Lawrence, Jr., M.D., *Director*

The Staff Table of Organization describes the various areas covered by the Division of Scientific Activities. This report will detail the major areas which occupied the Division during the past year. The various committee reports detail its full activities.

Continuing Medical Education. Since the October, 1980, meeting of the House of Delegates, this Division has spent most of its time and efforts in effectuating the mandate of the House which requires evidence of CME as a requirement for continued active membership in MSSNY. Communications were mailed in January to all active members who had not yet reported their CME activities to us, warning them of the March 1, 1981, deadline for reporting and suggesting helpful ways to make the reporting obligation easy to fulfill. These letters resulted in a flood of reports which staff had all it could do to keep up with. Further communications were mailed to still delinquent members and their county medical societies after the deadline of March 1st passed. These latter notifications succeeded in providing us with another flood of reports, which at this writing are still arriving. It is clear that when all the reports are in and computerized, our active membership will not be reduced by any appreciable numbers as a result of noncompliance with the CME mandate. After the initial confusion caused by the necessity of setting a deadline, the reporting and recording of CME activities should become a much simpler routine for all concerned. Members are reminded that staff is more than anxious to be helpful, and a letter or phone call to the Division of Scientific Activities can usually straighten out any questions or misunderstandings.

Scientific Programming. A second time-consuming activity of the Division is Scientific Programming. As can be learned from reading the committee report, MSSNY has been attempting to make available to our members CME of high quality and low cost. In the fall of 1980, eighteen CME Video-Clinics were sponsored by MSSNY in six areas of the State not close to teaching centers. A total of almost two hundred physicians attended these clinics. This Division had the total assistance, cooperation, and expertise of the Division of Communications in the development and presentation of these programs, and our two Divisions are presently planning for their continuation.

On October 19, 1980, MSSNY sponsored an all-day program, *Medicine and Religion*, at the Rockefeller University in New York City. This program was very well received by an audience of more than two hundred people, and its proceedings are presently in the process of being prepared for publication in the *New York State Journal of Medicine*.

The Annual CME Assembly was presented this year from June 26–28 at the International Convention Center in Niagara Falls, New York. The program did credit to the Scientific Program Committee and the Chairmen of the various Scientific Sections of MSSNY. The quality of the various programs was excellent. A full report can be found in the report of the Scientific Program Committee.

The Physicians' Committee. The Physicians' Committee was originally established in 1974 by MSSNY as an effort to assist the "Impaired Physician." From 1974 to 1977 the Committee became well established and answered over eighty calls for assistance. In 1977 the passage of the Medical Practices Law resulted in the suspension of the activities of this Committee because it required physicians to report to the State Board for Professional Medical Conduct any information which would reasonably appear to show that a physician was guilty of professional misconduct. "Habitual alcoholism or drug use or practice of medicine while impaired by alcohol or drugs" are included in the definition of professional misconduct. Members of the Physicians' Committee were not exempt from the reporting requirement of this law.

In order for this Committee to continue its activities in support of impaired physicians, an amendment to the law was required, and finally in 1979 this was effected after a concerted educational program by MSSNY with assistance from David Axelrod, M.D., Commissioner of the New York State Department of Health; Sheila B. Blume, M.D., Director of the New York State Division of Alcohol Abuse; and Thaddeus Murawski, M.D., Executive Secretary of the New York State Board for Professional Medical Conduct. A new procedural protocol has been developed, and the Committee resumed its functions in the spring of 1981 under the chairmanship of Brian R. Nagy, M.D. Members are referred to the August issue of the *New York State Journal of Medicine* and the annual report of the Physicians' Committee for more complex details.

Commissions on Public Health and Education Annual Meeting. The 24th Annual Meeting of the Commissions on Public Health and Education with the New York State Department of Health was held in Albany on July 17th and 18th.

It produced its usual high quality of dialogue between MSSNY and NYSDH.

This traditional meeting is highly regarded for its informativeness, and it provides an annual opportunity for all the Chairmen to exchange ideas with the Commissioner of the New York State Department of Health, his medical advisory staff, and the chairmen of our committees.

CME Accreditation. MSSNY was originally designated the accrediting agency for CME in New York State by the AMA in 1976. During the short life spans of the LCCME and CACME, we were similarly recognized by those bodies. In 1980 the accreditation Council for Continuing Medical Education (ACCME) came into being as the one nationally recognized accrediting agency for CME. MSSNY has continued to accredit for CME those institutions in New York State which present programs which, as a rule, do not attract physicians from more than one or two states outside of New York State. Those institutions that generally attract physicians from many states must be surveyed and accredited by ACCME. A perusal of the report of the Committee on Continuing Medical Education will illustrate how busy it and its Subcommittee on Surveys have been with this activity. Suffice it to say here that institutions in New York State wishing CME accreditation should apply to MSSNY unless their programs are aimed at an audience more than one third of whom are from beyond bordering states. These accrediting activities are an additional part of MSSNY's attempt to make high quality CME readily available to all our members at reasonable cost.

"What Goes on in CME." The "Continuing Medical Education" section of the *New York State Journal of Medicine* provides a list of all CME activities presented in New York State, which are submitted for publication.

We are hoping to expand our list of programs being published through encouraging institutions to report schedules of programs on a yearly basis.

Physicians' Placement Bureau. The Physicians' Placement Bureau continues to serve both the physicians seeking placement in New York State and the communities in need of physicians. The complete list of the Bureau's positions for physicians is published in the "Physicians' Placement Opportunities" section of the *New York State Journal of Medicine*.

The Bureau has received reports that it was responsible for matching many physicians with the communities in need.

COMMENTS

The Division of Scientific Activities continues to be the backbone of this organization, inasmuch as this Division deals primarily with the medical profession and its close association with clinical care of people.

The yearly meeting of the Commission on Public Health and Education in Albany is a very worthwhile educational experience and presents in a day and a half a symposium on clinical medical care in the State of New York. All of those who attend find it a heartening educational experience and it is possible that this meeting may be expanded to include more people. It is also noteworthy because it represents the cooperation of the everyday practicing physician working in conjunction with his counterpart in the Health Department of New York State.

Continuing Medical Education remains one of our critical problems, and I must point to the cooperation between Dr. Lawrence and Mr. Garnock of the Computer Services Division, who are resolving this problem concerning CME credits and verification. It has not been an easy task for the Medical Society of the State of New York to continue its philosophy of mandating CME for continuing membership in this Society. There are still criticisms of the mandatory aspect of this activity, but to this date the consensus is that our action in mandating CME for continuing membership was and continues to be quite feasible and easily implemented by our membership.

DIVISION OF SCIENTIFIC PUBLICATIONS

Alfred A. Angrist, M.D., *Director*

The Division continues its major activity of editing for publication the *New York State Journal of Medicine* which is published and distributed monthly.

The current policy of the *Journal* is to keep physicians abreast with the changes and advances in medicine; particularly in respect to disease mechanism and therapeutic approaches to treatment and diagnosis.

Articles for the *Journal* are obtained through critical selection from those submitted voluntarily and through solicitation. Preference for publication is based on subject material and style.

The editors of the *Journal* select, promote, and initiate articles and editorials of interest to the organization (MSSNY) and to the *Journal's* readership. This includes giving the readers an overview of the transactions of the various MSSNY committees, the House of Delegates, and the Council. These special presentations (overview of the transactions) are prepared by the Office of the Executive Vice-President.

The preliminary and final programs for the Spring CME Assembly were prepared by this Division in collaboration with the Advertising Sales and Meetings Services Division. Papers from this assembly program appear in the *Journal* throughout the year.

Journal advertising is controlled from the standpoint of merit and policy in collaboration with the Advertising Sales and Meetings Services Division.

For library readership references, the *Journal* publishes a biannual index which appears in the June and December issue of each year.

Author(s) requests for reprints in any volume, and the binding of same, are also handled in this Division. Figures indicate that there has been an increase in the number of reprints requested.

The *Journal* editors periodically meet and/or consult with the Publications Committee for review and discussion in regard to issues and suggestions that concern the *Journal's* current and future policy and policy changes. Suggestions this year include calculating the risk(s) needed to be taken to achieve a greater response to the *Journal* and utilization of the *Journal* as a research tool — to survey readership interest.

Determination of the recipient of and the preparation for the presentation of the Redway Award and Medal for medical writing and the Hammond Award for Distinguished Service is currently being processed and determined. These presentations will be awarded at the House of Delegates Convention in the Fall of 1981.

The Albion O. Bernstein Library and Archives function is carried out by the Librarian and dependent upon the decisions of the Library and Archives Committee.

COMMENTS

The *Journal* continues to be an outstanding example of a fine periodical devoted to keeping the physicians of New York abreast of changes and advances in modern medicine, particularly in respect to disease mechanisms and therapeutic approaches to treatment and diagnosis.

We continue to be plagued by decreasing income from advertising, as I noted in an earlier part of my report.

I would be remiss in my duties if I did not draw the attention of the House of Delegates to our unusual Editor, Dr. Alfred A. Angrist, who by sheer ability and integrity continues to maintain this *Journal* in the forefront of all medical journals in this country. I have discussed with Dr. Angrist his future plans, and he has agreed with me that a future determination must be made on the leadership of this *Journal*. There shall be specific recommendations made concerning Dr. Angrist's future to the Council.

This concludes my general comments on the specific divisions of the Medical Society of the State of New York and I should now like to make a few philosophical remarks regarding the MSSNY.

The Medical Society of the State of New York is no different from other not-for-profit organizations in that its income is derived almost completely from dues. Its major product is service to our membership; not an item which one can put on the open market. Like any other not-for-profit organization our major problem is one of credibility and service.

At the staff level, here at MSSNY, there have been several items in the past year which have strained this credibility. In my report today, I have avoided the malpractice issue for very specific reasons. I need not remind the membership of the incredible problem and the amount of work which your outgoing President, Dr. Schwartz, has had to deal with. This malpractice issue has filtered down and involved our President-Elect, Dr. Rosenberg, who has been a bulwark of dependability for this organization. The Council itself has met and has tried to deal with all these problems. From my position it is easy to see the immense amount of frustration that must exist amongst our members. They are frustrated by their inability to cope with a problem, the solution of which hinges on other peoples' good will and decision, namely, the Governor, the Superintendent of Insurance, and the Legislature of New York State.

This situation is not different from 1975 when the Medical Society of the State of New York helped form the MLMIC. it is very easy for anyone looking at the malpractice problem objectively to see that we have been forced to carry a double burden — that of the financial responsibility of running an insurance company and at the same time trying to be responsive to the basic desire of the membership of MSSNY. The membership is torn between no more increases in premiums, and, secondly, maintaining a facade of fiscal responsibility in the light of the obvious problem of escalating premiums. The Society has been further forced to combat the sincere motivations of a portion of our membership who feel that they have reached a saturation point on premiums, and come hell or high water, no amount of reasoning or rationalization will convince them that premiums should be elevated. This intramural intellectual hassle is still not resolved and requires forbearance by all parties if they wish to maintain and prevent the fractionation of this Society.

The so-called "conflict of interest" between the insurance company and the membership must be relegated to where it belongs a straw man – which really does not exist except in the minds of those who would tear us apart. No matter what is said and done, and no matter how many articles are written in the press or how often someone attempts to tear this Society apart, the fact remains that we must stand together to overcome the common enemy. Do not be misled by splinter groups or legislative leaders who would obfuscate the basic issue. There will be no change in the malpractice situation unless the great State of New York makes the legislative changes necessary to deal with the medical liability crisis.

To complete the discussion of misconceptions. With regard to our Medical Society there are two further items which must be mentioned. These are our legislative efforts in Albany and the matter of internal communications between the Medical Society of the State of New York and its membership. There are some in this Society who will never be satisfied as to the success of our legislative efforts until every single bit of legislation we propose is passed the next day in Albany. This of course will never happen. There is a small percentage of our members who listen and give complete credence to the many legislative alibis that "your people never come to visit us, we do not know who they are, and we do not know what you really want done." These allegations have been investigated time and time again and in 99% of the cases they have proven to be utterly false. This does not mean that our legislative efforts cannot be improved or that the manner in which we try to accomplish our goals cannot also be improved. Toward that end we are finally opening up a full-time office in Albany, hoping that this will be a small step in the direction of better legislative liaison. Mr. Paul Tagliaferro has been assigned to staff our Albany office, and we hope that his presence will further our legislative activities.

The PAC movement in New York State has been considerably more successful in the past several years than it ever was before. However, when one considers that barely 10% of our membership support the PAC movement it means that there are 17 or 18 thousand physicians out there who are making absolutely no contribution towards the legislative efforts, and that only a few thousand are footing the bill for the others. Can you imagine the strength of our PAC movement if we had 100% cooperation of all our membership?

I must also finally mention our internal communications. This Society makes every effort to communicate with its membership. We cannot force you to read everything we send out, but we do make an intense effort to keep you well-informed with the *News of New York*, the *Ad Rem Bulletins*, and the issuance of *Hot-Lines*, as the need arises.

There are a few other items which I should like to touch upon and these deal mostly with income and dues. The last dues increase for this organization was in 1977, at which time we increased our dues by $50.00 a year, and the House of Delegates in its wisdom allocated that 75% of that increase should be for a legal fund and 25% for general administration. In 1978, the breakdown was as follows: $12.50 was allotted to administration, $12.50 for legal purposes, and $25.00 was to be returned to constituent medical societies on a per capita basis. In 1979, the dues were broken down to $37.50 for administration and $12.50 for the legal fund. At this time it should be reported that we returned $515,000 to constituent county societies. In 1980, the entire $50.00 dues increase was turned over to MSSNY for general administrative purposes. The recommendation for this year, 1981, will be the same. It is our hope to keep the dues increase where it is for 1981, and recommend no dues increase until 1982, at which time there will be a projected deficit of around $400,000.

According to our master file, which is slowly nearing completion, and which will represent about the only decent demographic record of physicians in New York State, it will be noted that there are approximately 10 to 20 thousand physicians in this State who have no affiliation with a county society or the State Society. It is our intention to try to solve this problem with an increase membership campaign to recruit these physicians who are not aligned with their fellow practitioners. The thrust of our membership will be towards the young man just opening an office, and although we solicit membership from the older group, we feel that it is not practical to undertake that route at this time. It is highly unlikely that anyone practicing for 15 or 20 years will suddenly decide to join the Medical Society of the State of New York unless some outstanding membership benefit can be given.

Our general membership is remaining constant, although there is some mild attrition as the years go by (please see the Secretary's Supplemental Report for the latest figures). I must take notice of the declining AMA membership in this State. When we had unified membership in all three organizations; namely, county, State, and AMA, we had 29 to 30 delegates in the AMA. We now are reduced to 15 to 16 delegates and the only reason we do not have as few as 8 or 9 delegates is that we receive credit for life members, and as you know, the number of life members has been increasing lately and now stands between 5 and 6 thousand.

It is difficult to comprehend that of our 21,000 active dues-paying members less than 9,000 now belong to the American Medical Association. I personally feel that this is disgraceful and every effort should be made to reverse this trend, considering the benefits which every physician derives from the AMA, whether he belongs or not.

Another area with which I am dissatisfied is our Foundation. As you know, the Empire State Medical, Scientific, and Educational Foundation, Inc., is one of the few foundations in the State which has a charter which permits it to solicit tax-free funds. This Foundation, which has great potential, unfortunately has very little funding. The present funding is derived from the War Memorial Fund which this Society maintained for children of deceased physicians who served their country.

For some time now I have been recommending that we add a line item to our dues bills which permits a voluntary contribution to the Foundation of some as yet undetermined amount. This Foundation is a very valuable tool and, unless it becomes funded, there is no way in which its potential can be reached. I find it very difficult to consider the role of this Foundation without proper funding. When one thinks of a foundation one assumes that it has some capital and that it permits grants of its own money for worthwhile projects. The philosophy of our Foundation to date has been to seek grants. Somehow this does not make sense to me, and if this Foundation ever wants to get off the ground it must in some way fund itself much better than it has in the past. I see no other way to do this unless as physicians we do it for ourselves.

My final remarks are directed to the members of the House of Delegates, and I ask that they request the incoming President and the Council to reevaluate the present location of our headquarters at Lake Success. In the interest of the statewide membership and the MSSNY's mission to serve our membership, I have of late been concerned that the present location does not afford easy access to airports, hotel accommodations, and the hub of governmental and legislative activities. In addition, there are economic reasons for considering a change in location. At this time I will not go into the advantages or disadvantages of contemplating such a move. I only ask that the entire matter be evaluated. Nothing is forever, and since the House is charged by our Bylaws with the general management, superintendence, and control of the State Society and its affairs, it is only proper for you to reevaluate present policies and future commitments.

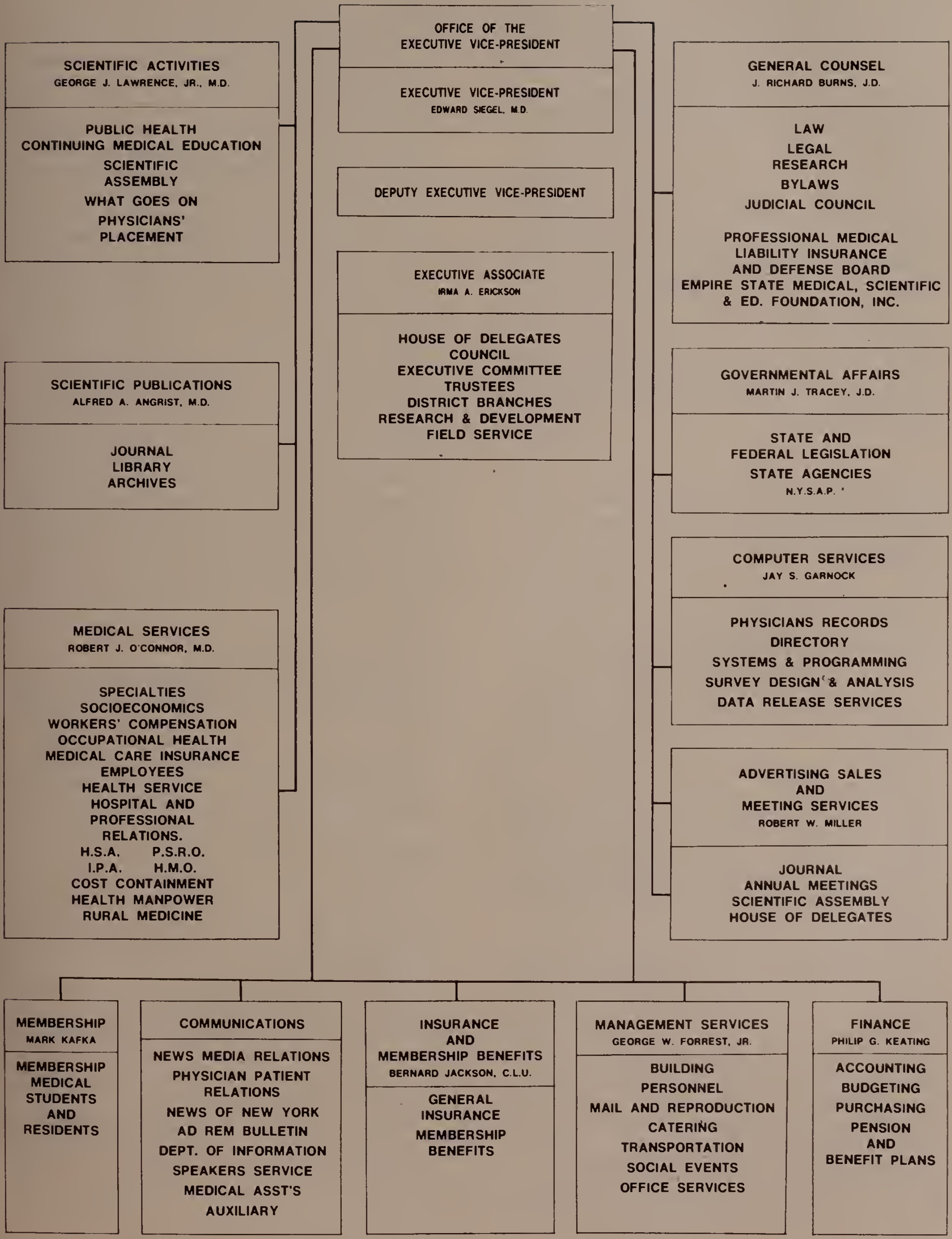
At this time I should like to thank the Council and Trustees for seeing fit to permit me to occupy my present position. I have been a member of this organization since 1946, and have had the extreme pleasure of serving as your President in 1971 and 1972. Nothing in that period of time has in any way attenuated my love for this organization and for the great role it performs not only for its members but for the people of the great State of New York. There is nothing so vital and so cherished as the great personal relationship that exists between physician and patient. It is this relationship which we as physicians have never really developed, and it is in this relationship that our greatest power exists. I call upon all members of this Society to look deeply into their own physician-patient relationship and to do all that they can to glorify that relationship.

I should like to express my thanks to our Staff. Organizations blessed with competent staff, such as the Medical Society of the State of New York, are very fortunate, and I should like the entire membership to be aware of its dedication.

Respectfully submitted,

Edward Siegel, M.D., *Executive Vice-President*

MSSNY
THE STAFF
TABLE OF ORGANIZATION
JANUARY 1, 1981



OFFICE OF THE EXECUTIVE VICE-PRESIDENT

EXECUTIVE VICE-PRESIDENT
EDWARD SIEGEL, M.D.

DEPUTY EXECUTIVE VICE-PRESIDENT

EXECUTIVE ASSOCIATE
IRMA A. ERICKSON

- HOUSE OF DELEGATES
- COUNCIL
- EXECUTIVE COMMITTEE
- TRUSTEES
- DISTRICT BRANCHES
- RESEARCH & DEVELOPMENT
- FIELD SERVICE

SCIENTIFIC ACTIVITIES
GEORGE J. LAWRENCE, JR., M.D.

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MEDICAL SERVICES
ROBERT J. O'CONNOR, M.D.

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- HOSPITAL AND PROFESSIONAL RELATIONS.
- H.S.A. P.S.R.O.
- I.P.A. H.M.O.
- COST CONTAINMENT
- HEALTH MANPOWER
- RURAL MEDICINE

GENERAL COUNSEL
J. RICHARD BURNS, J.D.

- LAW
- LEGAL RESEARCH
- BYLAWS
- JUDICIAL COUNCIL
- PROFESSIONAL MEDICAL LIABILITY INSURANCE AND DEFENSE BOARD
- EMPIRE STATE MEDICAL, SCIENTIFIC & ED. FOUNDATION, INC.

GOVERNMENTAL AFFAIRS
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- STATE AND FEDERAL LEGISLATION
- STATE AGENCIES
- N.Y.S.A.P.

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JAY S. GARNOCK

- PHYSICIANS RECORDS
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- SYSTEMS & PROGRAMMING
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- JOURNAL
- ANNUAL MEETINGS
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MEMBERSHIP
MARK KAFKA

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- NEWS MEDIA RELATIONS
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INSURANCE AND MEMBERSHIP BENEFITS
BERNARD JACKSON, C.L.U.

- GENERAL INSURANCE
- MEMBERSHIP BENEFITS

MANAGEMENT SERVICES
GEORGE W. FORREST, JR.

- BUILDING
- PERSONNEL
- MAIL AND REPRODUCTION
- CATERING
- TRANSPORTATION
- SOCIAL EVENTS
- OFFICE SERVICES

FINANCE
PHILIP G. KEATING

- ACCOUNTING
- BUDGETING
- PURCHASING
- PENSION AND BENEFIT PLANS

⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee would like to commend the Executive Vice-President for his in-depth report which the committee found very educational and informative. We note that three new divisions have been formed: Membership Development, Advertising Sales and Meeting Services; and the Computer Services Department have been raised to Division status.

Your reference committee also took note of the upsurge of legal action taken by the Medical Society of the State of New York in support of its members. We also note the formation of a full time office in Albany to promote a better legislative liaison. We applaud the assistance given to our members by the Ombudsman service.

We recommend to the delegates a thorough perusal of this comprehensive report.

⟹ Your reference committee recommends that the report of the Executive Vice-President be filed for information.

⟹ . . . *The report of the Executive Vice-President was* **FILED FOR INFORMATION** . . .

NEW YORK DELEGATION TO THE AMERICAN MEDICAL ASSOCIATION (ANNUAL)

To the House of Delegates, Ladies and Gentlemen:

INTERIM MEETING
SAN FRANCISCO, CALIFORNIA
December 7 to 10, 1980

At the Interim Meeting, San Francisco, California, December 7–10, 1980, the New York Delegation included the following:

Delegates: Edgar P. Berry, John H. Carter, John L. Clowe, George L. Collins, Jr., Paul M. DeLuca, Ralph S. Emerson, John A. Finkbeiner, Carl Goldmark, Jr., Joseph J. Kaufman, Morton Kurtz, Bernard J. Pisani, Milton Rosenberg, Ralph M. Schwartz, Charles D. Sherman, Jr., and George T. C. Way.

Alternate Delegates: Charles N. Aswad, Allison B. Landolt, Joseph F. Shanaphy, William C. Stein, and M. Theodore Tanenhaus.

Section Delegate: Russel H. Patterson.

Also: James M. Blake, Gerald D. Dorman, Henry I. Fineberg, Louis W. Giordano, Dattatraya G. Lanjewar, Edward Siegel, Victor J. Tofany, Edward A. Wolfson, and Tamarath K. Yolles.

County Executives: Thomas E. Cardillo, Coleman M. C. Fineberg, Edward Lucy, Norman D. Steingraber, Joseph L. Stile, and Richard F. Treccase.

Medical Student Representatives: John T. Farrar, Matthew Kuhn, and Alan Lefor.

Staff: Guy D. Beaumont, and Irma A. Erickson.

Meetings: The Delegation held a business meeting on Saturday, December 6, 1980, at which the reports and resolutions sent to the delegates in the advance handbook were analyzed. At the 9:00 a.m. breakfast meeting on Sunday, December 7, 1980, additional reports and resolutions distributed that morning were reviewed. After a consensus opinion had been reached, delegates specifically assigned to reference committees expressed the views of the New York Delegation at reference committee hearings on Monday. The Delegation considered reference committee reports at 7:00 a.m. breakfast meetings on Tuesday and Wednesday mornings, December 9 and 10, 1980. Prior to its presentation to the House, each reference committee report was reviewed and the Delegation discussed the position that should be taken on the various issues coming before the House. In addition to the above breakfast meetings, the Delegation caucused at luncheon meetings on December 8 and 9. Marie Kuffner, M.D., Chairman of the AMA Resident Physicians Section, addressed the Delegation at the December 9 luncheon meeting. Dr. Kuffner urged disapproval of the new guidelines for accrediting graduate medical education programs. The residents felt that the revised Essentials of Accrediting Residencies in Graduate Medical Education, as proposed, would dilute the original standards and weaken their position in graduate training programs. Marion Craighil, representing the Medical Students, addressed the Delegation at the Monday morning breakfast meeting. She requested support for a resolution by the Student Business Section and a recommendation by the Ad Hoc Committee on Women in Organized Medicine urging endorsement of the Equal Rights Amendment to the United States Constitution.

The New York Headquarters Suite was open on Saturday, Sunday, and Tuesday evenings.

Reference Committee Assignments. Members of the New York Delegation serving on reference committees were:

A. (Insurance and Medical Service)	Morton Kurtz
B. (Legislation)	Carl Goldmark, Jr.

Observers at reference committee hearings, designated by the chairman of the delegations, were:

Amendments to Constitution and Bylaws	Drs. Aswad, Berry, and Collins
A. (Insurance and Medical Service)	Drs. Emerson and Finkbeiner
B. (Legislation)	Dr. Carter
C. (Medical Education)	Drs. Pisani, Schwartz, and Sherman
D. (Hospital and Medical Facilities)	Drs. DeLuca, Kaufman, and Way
E. (Scientific-Public Health)	Drs. Rosenberg and Tanenhaus
F. (Board of Trustees)	Drs. Blake, Clowe, and Landolt
G. (Miscellaneous)	Drs. Shanaphy and Stein
H. (Miscellaneous)	Drs. Dorman and Tofany

Resolutions. The following resolutions were introduced by the New York Delegation and were acted upon as indicated:

COMMENDATION RESOLUTION — Henry I. Fineberg, M.D.

Whereas, Henry I. Fineberg, M.D., has been a member of the AMA all fifty-three years of his medical career; and

Whereas, For twenty years, Henry was a New York Delegate to the American Medical Association and served on numerous reference committees, was Chairman and member for ten years of the Judicial Council, a member for ten years of the Committee on Quackery, was a member of the Committee on Radio and Television, the AMA/AHA Committee on Medico-Legal Education, the Committee to Review the Organization of the House of Delegates, and the Committee to Review the Relationship of Medicine with Allied Health Professions; and

Whereas, on January 1, 1981, Henry will retire after twenty years as Executive Vice-President of the Medical Society of the State of New York to assume emeritus status; therefore be it

Resolved, That the American Medical Association House of Delegates commend Henry I. Fineberg, M.D., for his accomplishments and in appreciation of fifty years of dedicated service to the medical profession; and be it further

Resolved, That this House wish him well in all future endeavors and many happy and healthy years of retirement.

AMA HOUSE OF DELEGATES ACTION: Adopted

RESOLUTION: 42(I-80), Compensation for Service on Government Mandated and Funded Hospital Committees

Whereas, Physicians are required to serve on hospital committees mandated by federal law for such purposes as peer review and utilization review; and

Whereas, Hospitals receive funds for that express purpose; and

Whereas, Federal Funds are available through such organizations as PSRO to compensate individual physicians; and

Whereas, Such funds designated for physician compensation in carrying out the mandates are not always used by hospitals for that purpose; therefore be it

Resolved, That the American Medical Association urge the federal government to require that physicians serving on federally mandated hospital committees be compensated from federal funds provided for that purpose, and that the respective hospitals not direct such funds to other hospital activities; and be it further

Resolved, That legislative changes and/or regulatory modifications be pursued to insure the intent of this resolution.

The House of Delegates considered the following substitute resolution:

Resolved, That it be the policy of the American Medical Association that physicians serving on federally mandated hospital committees be compensated from federal funds provided for that purpose, and that the respective hospital medical staffs be assured that these funds are not directed for other purposes by the hospital without their prior knowledge and authorization.

AMA HOUSE OF DELEGATES ACTION: Resolution 42 and suggested substitute referred to the Board of Trustees for report at the 1981 Annual Meeting.

RESOLUTION: 43(I-80), The Care of the Elderly Outside of the Hospital

Whereas, The care of the elderly in hospitals is frequently unduly prolonged because of the unavailability of skilled nursing facilities to which these patients can be transferred; and

Whereas, Many of these patients could be adequately treated at home where their families could care for them if adequate home health care were provided and paid for by Medicare; and

Whereas, At the present time Medicare reimbursement for such services is limited to four hours a day, five days a week; and

Whereas, Such patients frequently require much more care than reimbursement presently allows; and

Whereas, The cost of maintaining a patient in the hospital is far greater than the cost of providing skilled home health care; therefore be it

Resolved, That the American Medical Association seek changes in federal regulations to provide reimbursement for total skilled home health care for those patients whose conditions warrant treatment in a home environment rather than in that of an institution.

AMA HOUSE OF DELEGATES ACTION: Referred to the Board of Trustees.

RESOLUTION: 44(I-80), Corporate Visitation Program

Whereas, In 1978 the American Medical Association embarked upon a new and aggressive program to establish an improved and ongoing communication with the nation's business community; and

Whereas, This program has shown the nation's business community AMA's vital interest in the rising cost of medical care and in assisting them with related problems; and

Whereas, The AMA is assisting many medical societies in developing similar programs; therefore be it

Resolved, That the House of Delegates of the American Medical Association commend AMA officers and staff for their positive initiative in establishing an improved and ongoing communication with the nation's business community; and be it further

Resolved, That this House of Delegates encourage all medical societies to embark upon similar efforts and seek AMA's support in their implementation.

The House of Delegates amended Resolution 44 as follows:

Resolved, That the House of Delegates of the American Medical Association commend AMA officers and staff for their positive initiative in establishing an improved and ongoing communication with the nation's business community; and be it further

Resolved, That this House of Delegates encourage all county and state medical associations to embark upon similar efforts and seek AMA's support in their implementation; such implementation may be enhanced by enlisting the cooperation of the senior medical officer or medical consultant, if any, of the corporations contacted.

AMA HOUSE OF DELEGATES ACTION: Adopted as amended.

The AMA House of Delegates adopted the following substitute resolution on the problems of evaluating foreign medical schools and licensing their graduates. The substitute resolution was introduced by the Section on Medical Schools and the delegations from New York, Pennsylvania, and Illinois:

SUBSTITUTE RESOLUTION: 70(I-80), Foreign Medical Schools

Resolved, That the American Medical Association House of Delegates adopt the position that, based on the private sector, there be a uniform method to evaluate foreign medical schools; and be it further

Resolved, That the American Medical Association recommend that the standards used to determine adequacy of the program of a foreign medical school should be equivalent to the standards by which United States schools are evaluated; and be it further

Resolved, That the American Medical Association recommend that no individual accrediting or licensing jurisdiction acts independently in making judgments on the quality of education in foreign medical schools, but rather participates in the uniform evaluation mechanism; and be it further

Resolved, That the ultimate goal of these efforts be development of a mechanism providing for evaluation of the qualifications of graduates from newly created foreign medical schools.

Important Actions of the House of Delegates Included:

The House of Delegates

— reiterated the Association's policy on national health insurance. Cornerstones of that policy are the 1979 statement that the AMA "continue to advocate in a positive manner the superiority of a voluntary, free-choice method of medical and health care delivery compared to a system dominated and controlled by the federal government," and the four principles outlined in 1978 by the AMA House of Delegates.

— a revision of the Essentials of Accredited Residencies, as approved by the LCGME, was referred by the House to the Board of Trustees for further negotiations with other LCGME sponsoring organizations. The AMA's Resident Physician Section expressed concern with portions of the revision pertaining to resident's responsibilities and agreements. The RPS said that the revised sections lack the detail of the current Essentials, which were approved by the House in 1974.

— voted to seek repeal of health planning legislation and set a new policy calling for elimination of Professional Standards Review Organizations. In both cases the delegates imposed responsibility on the profession to expand its work in the areas now controlled by the federal programs.

— voted against endorsing the Equal Rights Amendment to the United States Constitution.

— approved proposed bylaws for two medical education accrediting councils. The action followed AMA-initiated negotiations between the organizations and sponsoring the Liaison Committee for Graduate Medical Education (LCGME), the Liaison Committee on Continuing Medical Education (LCCME), and the AMA Council for Accreditation of Continuing Medical Education (CACME). When the draft bylaws have been approved by all parent bodies, the LCGME will be replaced by an Accreditation Council for Graduate Medical Education sponsored by the AHA, American Board of Medical Specialties, American Hospital Association, Association of American Medical Colleges, and Council of Medical Specialty Societies. The LCCME and CACME will be replaced by an Accreditation Council for Continuing Medical Education sponsored by the AMA, ABMS, AHA, Association for Hospital Medical Education, AAMC, CMSS, and Federation of State Medical Boards.

— accepted a report recognizing the health hazards of marijuana use, but noted that it may have clinical value in some cases.

— approved an AMA-American Psychiatric Association study of physician suicides.

— approved a study of the possibility of permitting direct membership in the AMA.

— called for a formal membership promotion program at all levels of the AMA Federation.

— referred to the Board of Trustees a resolution asking the AMA to continue its jail care project and develop alternate funding sources.

— approved an additional investment of up to $5 million in AMACO, the Association's liability reinsurance facility.

Respectfully submitted,

George L. Collins, Jr., M.D., *Chairman*

NEW YORK DELEGATION TO THE AMERICAN MEDICAL ASSOCIATION (SUPPLEMENTARY)

To the House of Delegates, Ladies and Gentlemen:

130th ANNUAL MEETING
CHICAGO, ILLINOIS
June 7 to 11, 1981

At the 130th Annual Meeting of the American Medical Association, Chicago, Illinois, June 7 to 11, 1981, the New York Delegation included the following:

Delegates: Edgar P. Berry, John H. Carter, John L. Clowe, George L. Collins, Jr., Paul M. DeLuca, Richard D. Eberle, Ralph S. Emerson, John A. Finkbeiner, Carl Goldmark, Jr., Joseph J. Kaufman, Morton Kurtz, Bernard J. Pisani, Milton Rosenberg, Ralph M. Schwartz, and Charles D. Sherman, Jr.

Alternate Delegates: Charles N. Aswad, James M. Flanagan, Dattatraya Lanjewar, George Lim, Richard N. Pierson, Jr., Joseph F. Shanaphy, M. Theodore Tanenhaus, and George T. C. Way.

Section Delegates: Russel H. Patterson and Robert D. Reinecke.

Also: James M. Blake, Gerald D. Dorman, Henry I. Fineberg, John K. Garan, Louis W. Giordano, Robert M. Kohn, Edward Siegel, Victor J. Tofany, Edward Wolfson, and Tamarath K. Yolles.

County Medical Society Executives: Coleman M. C. Fineberg, Christian M. Hynes, Edward Lucy, Hazel Spadafora, Joseph L. Stile, and Richard F. Treccase.

Medical Student Representatives: Gregory Brusino, Alan Lefor, and Matthew Kuhn.

Staff: Guy D. Beaumont, Irma A. Erickson, and Frank Salant.

The Delegation held a business meeting on Friday, June 5, 1981.

In response to a recommendation adopted by the AMA House of Delegates that all state and specialty society delegations be urged to participate in a general caucus for the purposes of candidate review activities, the New York Delegation joined the Indiana, Ohio, Michigan, and Illinois delegations to interview candidates for AMA offices on Saturday afternoon, June 6, and Sunday morning, June 7.

The Delegation held breakfast meetings each morning, Friday, June 5th through Thursday, June 11th. Reports and resolutions under consideration by the House were thoroughly analyzed to afford those delegates specifically assigned to reference committees an opportunity to express the views of the New York Delegation at each reference committee. Reference committee reports were again reviewed, prior to their presentation to the House, and the Delegation discussed the consensus position that should be taken on the various matters coming before the House. The Hospitality Suite was open on Friday, Saturday, Sunday, Monday, and Tuesday.

On Monday, June 8, 1981, the New York Delegation hosted its annual "picnic" luncheon for AMA delegates, alternate delegates, and guests.

Elections and Awards

The reelection of John A. Finkbeiner, M.D., to the AMA Council on Medical Service was announced in the House on Wednesday, June 10, 1981. Dr. Finkbeiner expressed his appreciation to the Delegation and to all others who had supported him in his successful reelection campaign.

The American Medical Association honored Dr. Fineberg by presenting to him a certificate of appreciation in recognition of his contributions to the AMA Judicial Council, of which he was a member from 1971 to 1981.

Mrs. Torrence P. B. Payne of Newburgh, New York, who was President of the MSSNY Auxiliary in 1974–1975, was elected President-Elect of the American Medical Association Auxiliary.

The AMA-ERF Jerry L. Pettis Memorial Scholarship was presented to Lee Kaplan, a fourth year medical student at Albert Einstein College of Medicine.

Medical Explorer Post #750 of Massapequa General Hospital, Seaford, New York, was selected by the AMA for recognition at the 1981 Annual Meeting.

Dr. Collins presented New York medallions to the Explorer Post and to Mr. Kaplan as a token of recognition from the New York Delegation.

Reference Committee Assignments. Members of the New York Delegation serving on reference committees and convention committees were:

A. (Insurance and Medical Service)	Charles D. Sherman, Jr., M.D.
D. (Hospital and Medical Facilities)	John L. Clowe, M.D.
Tellers	James M. Flanagan, M.D.

The following were assigned by the Chairman of the Delegation to be observers at reference committee hearings:

Constitution and Bylaws	Drs. Aswad, Collins, and Shanaphy
A. (Insurance and Medical Service)	Drs. Emerson, Finkbeiner, and Lanjewar
B. (Legislation)	John H. Carter, M.D.
C. (Medical Education)	Drs. Pierson, Pisani, and Schwartz
D. (Hospital and Medical Facilities)	Drs. DeLuca, Kaufman, and Way
E. (Scientific — Public Health)	Drs. Rosenberg and Tanenhaus
F. (Board of Trustees)	Drs. Eberle, Goldmark, and Landolt
G. (Miscellaneous)	Drs. Flanagan and Lim
H. (Miscellaneous)	Drs. Dorman, Kurtz, and Tofany

Resolutions. The following resolution was introduced by the Delegation and was acted upon as indicated:

RESOLUTION 4 (A-81), Continuation of PSRO

Whereas, At the Interim Meeting in 1980 the AMA House of Delegates adopted the policy to "continue professionally directed efforts to ensure that care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost and to encourage the elimination of all government directed peer review programs including PSRO"; and

Whereas, PSRO in many localities is successful due to strong physician support, and is the preferred modality for peer review ensuring quality of care and cost containment; therefore be it

Resolved, That the American Medical Association urge the government to use federal funds to review purposes to continue Professional Standards Review Organization (PSRO) activity rather than create new state mechanisms in states where the physician community has determined PSRO to be effective.

AMA HOUSE OF DELEGATES ACTION: Considered in conjunction with Resolution 86, which asked the AMA to take the lead in developing effective methods of professionally assessing the quality of medical care. The House adopted the following substitute resolution in lieu of Resolutions 4 and 86:

> **Resolved,** That the American Medical Association take a leadership role in collaboration with all units of the Federation in developing and promoting effective means of physician assessment of the quality of medical care regardless of the future fate of PSROs; and be it further
>
> **Resolved,** That physicians maintain control and direction over peer review and that peer review be done only by physician sponsored organizations regardless of the funding source for such review and that the AMA notify all agencies involved in medical peer review of this resolution; and be it further
>
> **Resolved,** That physicians, acting through their state medical associations, provide for protection of the confidentiality of existing data accumulated for PSRO regardless of the future fate of PSRO; and be it further
>
> **Resolved,** That the Council on Medical Service submit a report of progress on the implementation of this resolution at the 1981 Interim Meeting.

In addition, the House referred the following resolved to the AMA Board of Trustees:

> **Resolved,** That, since the Quality Assurance Program for hospitals as devised by the JCAH and medical care foundations utilized effectively by many states are proven mechanisms for providing physician peer review, the House of Delegates request the Board of Trustees to investigate expanded use of these methods and assist actively the formation of medical care foundations, or similar organizations, in states where they do not now exist, if requested by the state society.

The following resolution was introduced by Morton Kurtz, M.D., as a Delegate from New York:

RESOLUTION 5(A-81), Continuation of the Commissioned Corps of the U.S. Public Health Service

Whereas, The United States Public Health Service (USPHS) has represented a valuable national health resource since 1798; and

Whereas, The Commissioned Corps of the USPHS, a uniformed service since 1876, has consistently contributed the majority of health professional expertise and leadership necessary for the USPHS to carry out its mission; and

Whereas, The crucial contribution of the USPHS Commissioned Corps to national health efforts such as disease surveillance and control, health promotion, medical research, and the provision of health service to special population groups such as American Indians and Alaska Natives is well established; and

Whereas, Recently there have been concerted efforts on the part of the Office of Management and Budget to abolish the USPHS Commissioned Corps; and

Whereas, There is little evidence that such efforts are intended, or would serve, to reduce federal government expenditures or employment; and

Whereas, Such abolition would seriously jeopardize the ability of the USPHS to carry out its responsibilities in a quality manner under competent health professional leadership; therefore be it

Resolved, That the American Medical Association strongly support the continuation of the Commissioned Corps of the United States Public Health Service and actively oppose efforts to dismantle this valuable health resource.

AMA HOUSE OF DELEGATES ACTION: Adopted as amended by the deletion of the phrase "and actively oppose efforts to dismantle this valuable health resource" in the resolved portion of the resolution.

The following reports respond to New York resolutions submitted at the Interim Meeting in 1980. House action on these reports is indicated:

Compensation for Service on Government Mandated and Funded Hospital Committees

(Resolution 42, I-80)

REPORT H OF THE COUNCIL ON MEDICAL SERVICE

At the 1980 Interim Meeting the House of Delegates referred Resolution 42 and a substitute proposed by the Reference Committee through the Board of Trustees to the Council on Medical Service for study. Resolution 42 called for the AMA to urge the federal government to require that physicians serving on federally mandated hospital committees be compensated from federal funds provided for that purpose and that the respective hospitals not direct such funds to other hospital activities. It also proposed that legislative changes and/or regulatory modifications be pursued to insure the intent of the resolution.

The proposed substitute resolution stated that "it be the policy of the AMA that physicians serving on federally mandated hospital committees be compensated from federal funds provided for that purpose, and that the respective hospital medical staffs be assured that these funds are not directed for other purposes by the hospital without their prior knowledge and authorization."

Based on discussion from the floor of the House, the Council believes that Resolution 42 and the substitute were referred not because of any disagreement with their specific intent — which was to oppose unauthorized diversion of funds received for physician review activity — but rather because of a desire for clarification and possible restatement of the Association's overall position on physician reimbursement for such review.

The Association's basic position on physician compensation for review activities was first enumerated in 1966; in that year, the House adopted Board of Trustees Report CC (A-66) which stated:

> "The Board urges physicians to reject any suggestion that they should receive compensation for performing the ordinary responsibilities expected of them as members of utilization review committees of hospitals or extended care facilities in which they are staff members. In situations where an excessive amount of time or travel is involved, physicians serving on utilization review committees are entitled to receive remuneration from the hospitals."

This policy has been subsequently amplified and refined in response to evolving demands imposed on the profession by government or other third parties. For example, Resolution 25, adopted by the House at the 1975 Annual Meeting, stated in part that "where the federal government or other third party payors mandate utilization review activities, or when inordinate amounts of time and/or responsibility are involved, physicians should be adequately compensated for their time and effort."

At the 1976 Annual Meeting the House adopted CMS Report D, as amended which called for the AMA to "continue to counsel physicians not to seek compensation for providing the traditional responsibilities expected of them as members of review committees of institutions of which they are staff members." The report stated that "when hospital utilization review committees are mandated by government or other third parties to review inpatient care, or when such review may be categorized as requiring inordinate amounts of physician time and/or responsibility, compensation for the physician involved should legitimately be claimed"; and that "third party payors and uninsured nongovernmental patients should accept responsibility for their share of the cost of such review."

The Council on Medical Service believes that the general premise of these statements — compensation only for review activities required by government or other third parties or requiring inordinate amounts of physician time or effort — continues to be valid, and that the Association's present policy on this subject is sufficiently encompassing to guide the profession even in the event of future changes in specific legislation or third party requirements.

With regard to the specific concern addressed by Resolution 42 (I-80) — unauthorized diversion of funds for physician review activity to other purposes by hospitals — the Council would note that safeguards against such diversion appear to exist in present federal regulations. For example, hospitals conducting delegated review under the PSRO program must submit a review plan which specifies the methods of providing for selection, training, and reimbursement of review personnel. Further, each hospital performing delegated review is required to identify separately in its regular Medicare Cost Report the actual amount expended by the hospital for that period in performing PSRO delegated review; the data collected by the hospital for this purpose must include the compensation paid, on an individual and an aggregated (by category) basis, for each category of professional and technical personnel involved in the review function, including the review coordinator, physician advisor, other physicians, and other health care professionals. Only aggregate, not individual, compensation data need be included in the Cost Report, but the individual data must also be compiled for audit or upon request. Such data may be requested by any physician involved in the review process.

The Council has been unable to identify any actual instances of such unauthorized diversion of review funds, but agrees with the sponsor of Resolution 42 that an Association statement opposing such diversion would be appropriate. Accordingly, the Council recommends:

(1) That it be Association policy that federal or third party funds provided for reimbursement of physicians serving on mandated hospital review committees shall not be diverted for other purposes by the hospital.

(2) That this report be adopted in lieu of Resolution 42 (I-80) and the proposed substitute.

AMA HOUSE OF DELEGATES ACTION: Adopted

Care of the Elderly Outside of the Hospital

(Resolution 43, I-80)

REPORT I OF THE COUNCIL ON MEDICAL SERVICE

At the 1980 Interim Meeting, the House of Delegates referred Resolution 43 through the Board of Trustees to the Council on Medical Service. The resolution asked the AMA to seek changes in federal resolutions to allow Medicare reimbursement for total skilled home health care for those patients whose conditions warrant treatment in a home environment rather than an institution.

The AMA has already testified in favor of liberalizing home health benefits available to Medicare beneficiaries; specifically, the Association has supported elimination of the 100-visit limitation under both Part A and Part B, elimination of the 3-day prior hospitalization requirement under Part A, and elimination of the $60 deductible for home health benefits under Part B. Further, these changes — and others related to home health care — were in fact incorporated in the health section (Title IX) of Public Law 96-499, the Omnibus Reconciliation Act of 1980, which was signed in mid-December.

The Council on Medical Service has been informed by the sponsors of Resolution 43 that this new legislation satisfies the intent of the resolution, and is pleased to convey this information concerning the liberalization of home health benefits to the House.

Parenthetically, the Council would also note that, although the "whereas" portion of a resolution is not part of any referral by the House, the concerns expressed in the "whereas" portion of Resolution 43 regarding the limitation of Medicare reimbursement to "four hours a day, five days a week" may derive from the policies of specific home health agencies regarding availability of service.

The Council recommends that this report be adopted in lieu of Resolution 43 (I-80).

AMA HOUSE OF DELEGATES ACTION: Adopted

Foreign Medical Schools

(Substitute Resolution 79, I-80)

REPORT B OF THE COUNCIL ON MEDICAL EDUCATION

Substitute Resolution 70, which was adopted at the 1980 Interim Meeting, established an AMA policy position that a uniform method to evaluate foreign medical schools be based in the private sector; that standards for evaluation of a foreign medical school be equivalent to the evaluation standards for U.S. medical schools; that individual licensing or accrediting agencies not act independently in making judgments on the educational quality of foreign medical schools, but rather participate in the uniform evaluation mechanism; and that a mechanism be developed to evaluate the qualifications of graduates from newly created foreign medical schools.

This resolution reflects the increasing problems of several states caused by the more recently created medical schools outside the continental United States. The problems relate specifically to two areas: clinical clerkships for undergraduate medical students and qualifications for licensure of graduates of such schools. The states which are initially most concerned about either or both of these problems are New York, New Jersey, Ohio, Texas, Pennsylvania, Illinois, and California.

These problems also are currently the concern of the Federation of State Medical Boards (FSMB) which has appointed a special commission to collect necessary data and other information from the newly created foreign medical schools in which large numbers of American students are enrolled. The FSMB will make this information available to the individual states or licensing jurisdiction on request.

It is important to point out that laws, regulations, and policies now exist by which duly qualified students in foreign medical schools may enter clinical clerkships in the United States. The AMA's Fifth Pathway is an example; it provides to such students an academic year of supervised clinical experience in a program offered by an accredited U.S. medical school. In addition, the American Hospital Association has published guidelines for hospitals offering clinical training, and the Liaison Committee on Medical Education has published standards for clinical clerkships.

Because state medical practice acts are in part designed to protect the patients from the unlawful practice of medicine — that is by persons other than physicians duly licensed or otherwise legally authorized (such as residents), or by students currently matriculated in an accredited medical school and under the supervision of a licensed physician — physicians, medical societies, and hospitals have the responsibility to terminate and to report to the proper state authorities persons illegally participating in clinical clerkships.

The ECFMG certification process has been functioning satisfactorily for some years in the evaluation of graduates of foreign medical schools prior to their entrance into an American residency program.

Therefore, it would seem that mechanisms are in place: laws, regulations, policies, and the ECFMG certification process which provide opportunities for U.S. graduates of foreign medical schools to properly enter the mainstream of American medical education and licensure. Independent activities in these areas by the individual licensing jurisdictions can only compound the problems and spread them into other states.

If a licensing jurisdiction acts independently of a uniform mechanism, and provides "localized accreditation," that is, limited to that particular state, it is quite likely that students and graduates of such accredited institutions would be locked into that state for clinical clerkships and licensure, and that reciprocity problems with other states would be assured. Conversely, if a specific licensing jurisdiction refused to grant accredited status to a particular institution, then the students and graduates of that medical school would be forced to seek clinical clerkships and eventually licensure in other states, thus compounding and spreading the problems to states not originally involved. Therefore, the present situation is not just a problem for those states now acutely involved — it is a national problem which needs to be addressed in a uniform manner by all licensing jurisdictions.

The Council recommends that the AMA urge that individual licensing jurisdictions consider information that may be distributed by the Federation of State Medical Boards commission as a basis for judgments regarding the preparation for medical practice of individual applicants from foreign medical schools.

AMA HOUSE OF DELEGATES ACTION: Referred back to the Council on Medical Education for further study and report back at the Interim Meeting in 1981.

IMPORTANT ACTIONS OF THE HOUSE OF DELEGATES

The House of Delegates —

- adopted an incremental approach to dues increases that will raise AMA dues to $285 in 1982. The House also accepted the principle of considering raises of $30 in 1983 and $25 in 1984, subject to the wishes of the House in 1983 and 1984. The House also adopted recommendations to set the dues of physicians in their second year of practice at 75% of regular dues, to set the dues of physicians in military service at two thirds of regular dues beginning in 1983, and to continue the reduced dues rates for residents ($35) and students ($15);
- limited AMA dues exemptions to those members who are over 70 years of age and have retired from the active practice of medicine, or to those members with a financial hardship of physical disability;
- endorsed a new functional profile of the AMA as the basis for organizational changes designed to meet the needs of the profession while reducing expenses. It

identifies representation — in a variety of professional and public arenas — as the primary function of the AMA. Other primary functions are providing information, establishing and maintaining standards of conduct and performance, and sharing with other organizations the maintenance and implementation of educational standards. In voting on a request to study and present alternatives to the Interim Meetings, the House agreed to the study, but said that the Interim Meeting is to be preserved and any modification thereof shall preserve member participation and the intent of the Interim Meeting, while at the same time reducing costs; and

— established a direct AMA membership option as a means of offering physicians and medical students another way to join organized medicine. The Association's bylaws were amended by a vote of 196 to 59. The AMA will put its first emphasis on recruiting members through the Federation in cooperation with states that want to join the AMA in a coordinated marketing campaign. Direct members will be counted in determining the number of delegates from each state.

A memorandum from the Board to delegates during the Annual Meeting outlined a plan for implementing the direct membership option. The plan calls for states and counties to begin billing all physicians by Oct. 1, with the AMA underwriting part of the additional cost of soliciting all physicians. After the April 30 delinquency date each year, the AMA will bill all nonmember physicians and students. Lists of those who respond to direct billing will be sent for review to state associations before processing is completed. The amended bylaws state that all objections to applicants for direct membership will be referred to the Judicial Council for prompt disposition. The Board memorandum pointed out that accepted physicians and students will be urged to join state and county societies and that the names will be sent to local societies as membership prospects.

The Board of Trustees will give the House a full review and appraisal of the program after three years.

Respectfully submitted,

George L. Collins, Jr., M.D., *Chairman*

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee reviewed the annual and supplementary reports of the New York Delegation to the AMA. We note with great pleasure the election of Dr. Finkbeiner to a full term on the AMA Council on Medical Services. We commend Dr. George Collins for the excellent job he has done as chairman of the New York Delegation. We wish him well in his bid for a position on the AMA Board of Trustees in 1982. We feel he will bring the same decisive leadership to the AMA which he has always demonstrated at the State level.

⟹ Your reference committee recommends that the annual and supplementary reports of the New York Delegation to the AMA be filed for information.

⟹ . . . *The annual and supplementary reports of the New York Delegation to the AMA were* **FILED FOR INFORMATION . . .**

COMMITTEE ON DISTRICT BRANCHES

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on District Branches are as follows:

Richard D. Eberle, M.D., *Chairman*	Onondaga
Sheppard Arluck, M.D.	Livingston
Samuel Cytryn, M.D.	Nassau
Nathan M. Greenstein, M.D.	The Bronx
Allison B. Landolt, M.D.	Westchester
Michael J. Lynch, M.D.	Washington
Carl E. Marlow, M.D.	Onondaga
George E. Taylor, M.D.	Allegany
Nicholas P. Teresi, M.D.	Albany
Herbert J. Wilk, M.D.	Broome

The Committee on District Branches reviewed the progress of the district branches during the year 1980–1981, and considered recommendations for the future.

First District Branch. The revised bylaws of the First District Branch designate one slate of officers to serve on both the District Branch and the Executive Committee (formerly known as the "Coordinating Council") and replaced all standing committees with ad hoc committees. A bylaws amendment includes the immediate Past-President of the First District Branch as an officer and member of the Executive Committee. The Executive Committee unanimously approved a recommendation, which was endorsed by the component county societies, to request a voluntary $5 contribution from all of its members to support the activities of the First District Branch.

Voluminous reports emanating from the Health Systems Agency prompted the Executive Committee to enlist the services of a graduate in public health and urban planning to report to the county societies at regular intervals, to inform them of new developments.

Of primary concern relative to HSAs is physician input into decision making processes. The establishment of an HSA Ad Hoc Committee on Appropriateness Review presented an opportunity to become involved with the planning mechanisms of HSAs.

The President of the First District Branch is a member of the Steering Committee which selects representatives to specific service panels, such as radiation therapy, maternity and newborn services, and radiology. The First District Branch will continue to concern itself with the activities of other regulatory agencies affecting health care, such as the PSRO, State, and city health departments, and the Department of Social Services. Barbara Blum, Commissioner of Social Services, has met with members of the Bronx County Medical Society to discuss problems concerning Medicaid. The President of the First District Branch visits each of the component county societies to discuss their particular problems, and he informs the membership of the activities of the district branch through county society bulletins.

The First District Branch submitted a resolution for the consideration of the House of Delegates in 1980 relative to a change in the Bylaws, for a more equitable distribution of expense money by the Medical Society of the State of New York to each district branch. This resolution will come before the House of Delegates at the meeting in October, 1981.

Second District Branch. The Second District Branch will hold an organizational meeting with the Medical Boards of the counties of Nassau and Suffolk in a coordinated effort to discuss areas of mutual concern. Each county is active individually, meeting with legislators in October and February. As far as funding is concerned, a figure is unavailable at present and executive directors of the counties have been handling mailings for the district branch.

Third District Branch. There have been no changes in the Third District Branch to date. It is hoped that a meeting of district branch officers and county medical society presidents can be arranged to address financial support for staff, and increased activities. Most delegates from the Third District Branch caucus as a unit at the meeting of the House of Delegates and discuss mutual problems and act on resolutions in their common interest.

Fifth District Branch. A successful meeting of the Fifth District Branch was held with physicians and legislators representing the area. The projected increase in medical liability insurance was discussed at this meeting. Mr. Gerald Hoffman, Executive Director of the Medical Society of the County of Onondaga, is encouraging physician participation in the activities of the Fifth District Branch. A membership fee has been requested from members for funding, and a proposal is being considered which combines continuing medical education with a travel package.

Sixth District Branch. The Sixth District Branch is planning a CME seminar to be held jointly with the Sixth, Seventh, and Eighth districts in February, 1982. Revitalization of the district branch concept is contingent upon the interest of the membership. The press of meetings at the State and county levels make it difficult to create substantial interest in the district branch concept. The current dues structure of the Sixth District Branch does not adequately support the clerical, bookkeeping, and executive functions of the branch.

Seventh District Branch. The Seventh District Branch continues to be involved with task forces relative to the activities of the Finger Lakes Health Systems Agency. This has included an appropriate review of therapeutic radiology. In addition, an evaluation of cardiac surgery in the Rochester area was performed. As the HSA goes into further areas of appropriateness review, the branch will try to have representation on the task forces, or set up parallel monitoring groups of physicians. A Joint Legislative Committee to work along with the previously existent group in Monroe County has been established; and the Seventh District Branch is working closely with the Continuing Education Office of the University of Rochester School of Medicine. The contact has been one of mutual respect, and further close cooperation is anticipated for the future. The Craig Developmental Center in Sonyea requested the branch to set up a Peer Review and Quality Assurance Committee to insure that proper care is rendered to the patients at that facility. The primary care specialty societies are working in conjunction with the branch to establish this committee. The members of the Seventh District Branch wish to provide these services rather than have them delegated to lay persons.

Ninth District Branch. The Ninth District Branch has considered committees on education and legislation, as well as a social committee. A survey relative to the expansion of continuing medical education programs on a district branch basis, rather than a county basis, has also been considered.

It is the consensus of the Committee on District Branches that some incentive must be offered to members to become actively involved with district branches; however, it was emphasized that the district branches are considered an administrative arm of the MSSNY — the concept must not be set aside; it must be made viable! A change in the structure of the district branches to provide for county medical society officers and delegates to serve on the Executive Committee of District Branches would stimulate renewed interest. Positive thinking relative to strong leadership is required. The importance of contact with legislative representatives cannot be overemphasized — a strong leadership would provide the impetus for this contact. A coordinated effort between adjacent district branches would reinforce the leadership.

After discussion, the committee approved reaffirmation of the principles presented to the House of Delegates in 1980 that —

> 1) district branches can and should serve important functions within MSSNY, including political, legislative, educational, and social, for the smaller counties. There may be other important functions;
>
> 2) input into the functional and policy making structure of MSSNY can best be accomplished through a regional approach method as the district branch concept;
>
> 3) no district branch will serve its function well without a solid financial and staff support more properly structured at the regional and local level rather than from MSSNY;
>
> 4) matters such as bylaws changes, direct election of councilors by district branches, realignment or changes of district branch geographical structure should be held in abeyance until the district branches demonstrate their ability to function successfully;
>
> 5) no change in alignment should be mandated without the concurrence of each county directly concerned;
>
> 6) physician input in health planning could be augmented by an active district branch involvement; and
>
> 7) smaller county participation can only be strengthened in the district branch concept and that this will strengthen and enlarge the overall membership involvement.

The committee unanimously approved the recommendation that a resolution be presented to the House of Delegates at its meeting in 1981 which would recommend to district branches to change their bylaws so that the president of the county medical societies in the district, and a representative delegate from each of the county medical societies in the district, who is presently serving as a delegate to the MSSNY House of Delegates, be elected to serve on the executive committee of each individual district branch.

Respectfully submitted,

Richard D. Eberle, M.D., *Chairman*

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⇒ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

⇒ Your reference committee recommends that the report of the Committee on District Branches be filed for information.

⇒ . . . *The report of the Committee on District Branches was* **FILED FOR INFORMATION** . . .

Resolution 81-1, County Medical Society Representation on the Executive Committee of the District Branches

Introduced by Richard D. Eberle, M.D., as an Individual

Whereas, A strong leadership provides impetus for the resolution of common goals; and

Whereas, The President and a representative Delegate to the Medical Society of the State of New York House of Delegates of each county medical society would provide the stimulus for a strong leadership within the district branches; therefore be it

Resolved, That the Medical Society of the State of New York recommend to district branches to change their Bylaws so that the presidents of the county medical societies in the district, and a representative delegate from each of the county medical societies in the district who is presently serving as a delegate to the MSSNY House of Delegates, be elected to serve on the executive committee of each individual district branch.

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⇒ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Inasmuch as testimony at the reference committee hearing indicated that there was strong feeling towards allowing district branches to continue to function in accordance with their individual needs, your reference committee recommends that Resolution 81-1 be not adopted.

⇒ . . . *The House voted to* **NOT ADOPT** *Resolution 81-1* . . .

DISTRICT BRANCHES

First District Branch

To the House of Delegates, Ladies and Gentlemen:

The First District Branch of the Medical Society of the State of New York is comprised of the county medical societies of The Bronx, Kings, New York, Queens, and Richmond and represents over 12,000 members. The present officers are as follows:

President	Nathan M. Greenstein, M.D.,	The Bronx
President-Elect	Richard B. Nolan, M.D.,	New York
Vice-President	Felix R. Rosenhain, M.D.,	Queens
Secretary	William A. Schwarz, M.D.,	Richmond
Treasurer	John P. Albanese, M.D.,	The Bronx
Delegate	Norton M. Luger, M.D.,	Queens

In accordance with the bylaws of the First District Branch, which were revised in 1979, one slate of officers serves both the District Branch and the Executive Committee (formerly known as the "Coordinating Council"). All standing committees have been replaced with ad hoc committees.

The Executive Committee met at regularly scheduled meetings in November, 1980, and in January, March, and May, 1981.

At its meeting on November 11, 1980, the Executive Committee unanimously approved a recommendation, which was endorsed by the Comitia Minora or Board of Directors of each component county medical society, to request a voluntary $5.00 contribution from all of its members to support the activities of the First District Branch. This voluntary contribution was included on the 1981 dues bills.

Over the last several years, the Executive Committee has become increasingly concerned with the activities of the HSA of New York City. A large part of the problem was dealing with the voluminous reports emanating from HSA, and it was felt that we needed guidance from someone with expertise in the field of health planning to review and digest this material. It was, therefore, agreed to enlist the services of a graduate in public health and urban planning. The major portion of the cost of this project was underwritten by the New York County Medical Society, with supporting contributions from the other four component county societies. Our health planning consultant reports to the county societies at regular intervals, keeping us informed of new developments, and it is hoped that we can continue this program with revenues received from the voluntary contributions to the District Branch.

Our primary concern with regard to the HSA was that physicians have not had sufficient input into their decision making processes. This year, with the establishment of the HSA Ad Hoc Committees on Appropriateness Review, we have had the opportunity to become involved with the planning mechanisms, and, as President of the First District Branch, I am a member of the Steering Committee which selects representatives to specific service panels. To date, we have had representation on the panels for radiation therapy, maternity and newborn services, radiology, cardiac diagnostic/surgical services, burn care services, computed tomographic services, and end stage renal disease services. The First District Branch has, and will continue in the future, to concern itself with the activities of other regulatory agencies affecting health care, such as the PSRO, State and city health departments, Department of Social Services, etc.

In April of this year, the announcement of a proposed 71% increase in malpractice insurance, prompted the scheduling of a special meeting of the Executive Committee. Dr. Ralph Schwartz, President, MSSNY, was present to give an in-depth report on the efforts of MSSNY and MLMIC to alleviate the crisis. At its meeting on May 12, 1981, the Executive Committee approved a motion to request that the MSSNY organize a mass rally in Albany of all physicians in New York State on June 1, 1981, to demonstrate their concern to the legislators. Following MSSNY Council action, a successful mass rally was held in Albany on that date. The Executive Committee also recommended that MSSNY request a $200.00 contribution from each member to continue its campaign to bring about legislative changes. The Council approved the recommendation to publicize to the membership the request for voluntary contributions to be put into the Special (Malpractice) Fund to be used for the purpose of solving the malpractice crisis.

During the year, the Executive Committee approved two bylaws changes which will be presented to the district's membership at the District's Annual Meeting. These will provide for an alternate delegate, and will allow the President to consult with the presidents of the five constituent societies and to act on their majority opinion in the event that a situation should arise requiring an amendment in less than 60 days prior to an Annual Meeting.

During my term as President I have visited each of the component county societies to discuss their particular problems with them, and have kept our membership informed of our activities with frequent publications in the county society bulletins.

This year a resolution will come before the MSSNY House of Delegates, which was submitted by the First District Branch, relative to a change in the Bylaws for a more equitable distribution of expense money by the Medical Society of the State of New York to each district branch.

I wish to thank the officers and members of the Executive Committee for their assistance and cooperation throughout the year.

Respectfully submitted,

Nathan M. Greenstein, M.D., *President*

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the First District Branch be filed for information.

⟹ . . . *The report of the First District Branch was* **FILED FOR INFORMATION** . . .

Third and Fourth District Branches

To the House of Delegates, Ladies and Gentlemen:

As reported to the MSSNY Committee on District Branches, there have been no changes in the activities of the Third and Fourth District Branches.

Efforts to conduct meetings of the District Branch Executive Committee and County Medical Society Presidents have met with little success.

Councilors of the Third and Fourth District Branches have been active in meeting with county medical societies during the past year and have been active in their reports to the Council and the county medical societies.

Delegates of the district branches caucus as a unit at the Annual Meeting of the House of Delegates and continue to act in the best interests of the members of northeastern New York.

The annual meeting of the Third and Fourth District Branches is scheduled for September, 1981.

Respectfully submitted,

Nicholas P. Teresi, M.D., *President*
Third District Branch

Michael J. Lynch, M.D., *President*
Fourth District Branch

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Third and Fourth District Branches be filed for information.

⟹ . . . *The report of the Third and Fourth District Branches was* **FILED FOR INFORMATION** . . .

Sixth District Branch

To the House of Delegates, Ladies and Gentlemen:

The Sixth District Branch of the Medical Society of the State of New York has met on one occasion over the past year. The press of other business and the malpractice dilemma has precluded more vigorous action. Even so, our meeting was well attended with representatives from Broome, Cortland, Tioga, Tompkins, Delaware, and Otsego Counties.

As identified by the membership, the two priority concerns of the District are malpractice and the new Medicaid Management Information System. In an effort to support the increased administrative function of the District, a dues increase to five dollars per person per year was approved. The District discussed a number of different options available to them concluding that the continued vigilance of the District and the Medical Society of the State of New York was essential.

A week long CME session, in concert with the Sixth, Seventh, and Eighth Districts, has been planned and scheduled for March 6, 1982, through March 13, 1982. Plans are also underway for annual meetings of the District and a semi-annual newsletter.

Officers for the District are as follows:

President	Herbert Wilk, M.D.,	Broome
1st Vice President	Thomas Lavell, M.D.,	Delaware
2nd Vice President	Rodman Carter, M.D.,	Otsego
Secretary/Treasurer	John R. Scott, D.O.,	Tioga
Delegate	Vincent Maddi, M.D.,	Broome
Alternate Delegate	Stephen Blatchly, M.D.,	Tompkins
Past President	Robert Good, M.D.,	Chemung
Executive Director	Edward Lucy	

Respectfully submitted,
Herbert Wilk, M.D., *President*

■

⇒ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman*

⇒ Your reference committee recommends that the report of the Sixth District Branch be filed for information.

⇒ . . . *The report of the Sixth District Branch was* **FILED FOR INFORMATION** . . .

Eighth District Branch

To the House of Delegates, Ladies and Gentlemen:

In the past eleven months the Advisory Council of the Eighth District Branch has held two meetings.

Through its Committee on Continuing Medical Education under the chairmanship of Milford C. Maloney, M.D. (Erie County), the Eighth District Branch sponsored and planned two medical seminars. One held on May 16, 1981, and the other on November 7, 1980. More than 300 physicians were in attendance at these two seminars and approved Category I credits were authorized on an hour-by-hour basis.

Plans were developed and the Seventh and Eighth District Branches held a combined convention at the Britannia Beach Hotel, Nassau, Bahamas, from February 28 through March 7, 1981. Continuing medical education seminars were conducted each day and Category I credits were authorized on an hour-by-hour basis. The next scheduled combined convention has been set for a Caribbean Cruise from March 6 through March 13, 1982.

The Advisory Council at its meetings —

1. endorsed the improved business overhead expense proposal presented through the Charles J. Sellers Company, Inc.
2. requested MSSNY insurance committee to proceed with the implementation of the disability benefits law protection group plan, previously approved by the MSSNY Council.
3. unanimously reaffirmed its endorsement of the Charles J. Sellers Agency and Mr. Sellers as the endorsed insurance administrator for the Eighth District Branch, commending him and his organization for exemplary services to the medical profession over the years.
4. expressed its concerns regarding the expenses incurred by its representatives, attending the Annual Meeting of the House of Delegates in metropolitan New York City, and requested the Council to give serious consideration to moving the meeting of the House to another site in the State, keeping in mind the costs to the delegates and the individual organizations each represents.
5. expressed its continuing dissatisfaction with the regionalization fee concept promulgated by the New York State Workers' Compensation Board, and voted to express these concerns to the Medical Society of the State of New York and to our area State legislators;
6. took note of the pending retirement of Henry I. Fineberg, M.D., the Executive Vice-President of the Medical Society of the State of New York; and voted to contribute $500.00 in his honor, to a fund to aide in the care and treatment of mentally and physically retarded children;
7. paused in silent meditation in memory of David Harrington, M.D., of Genesee County, a Past President of the District Branch and a past delegate to the MSSNY;
8. voted to support the proposal that the Medical Liability Mutual Insurance Company, sponsored by the MSSNY, not be allowed to raise the premiums of malpractice insurance even if it means that the company would not survive, thus forcing the State Legislature to assume its rightful responsibility so that medical liability will once again be insurable and insurance be affordable;
9. added a number of "preferred purchase programs — for members only" as a tangible benfit of the county and branch society memberships;
10. suggested candidates to be nominated for MSSNY offices; and
11. voted to approve co-sponsorship of a CME Symposium on *Clinical Management of Diseases in the Aged* for Category I credits.

The next annual meeting and election of officers is scheduled for September 24, 1981, at which time the following will have completed their two-year term of office:

President	George E. Taylor, M.D.,	Allegany
President-Elect	Carmelo S. Armenia, M.D.,	Erie
Secretary	Harvey J. Blanchet, Jr., M.D.,	Orleans
Treasurer	Frederick R. Downs, M.D.,	Wyoming
Delegate	Paul W. Sum, M.D.,	Cattaraugus

The following have been designated to be the Nominating Committee of the District Branch:

Duncan C. Wormer, M.D.	Cattaraugus
Charles R. Sinatra, M.D.	Chautauqua
William B. Pierce, M.D.	Genesee

The Nominating Committee will present a slate of candidates for elective offices for a two-year term commencing at the close of the 1981 House of Delegates meeting.

Respectfully submitted,

George E. Taylor, M.D., *President*

■

⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Eighth District Branch be filed for information.

⟹ . . . *The report of the Eighth District Branch was* **FILED FOR INFORMATION** . . .

Ninth District Branch

To the House of Delegates, Ladies and Gentlemen:

The officers of the Ninth District Branch for two years (September, 1979, to September, 1981) are as follows:

President	Allison B. Landolt, M.D.,	Westchester
First Vice-President	John Simmons, M.D.,	Putnam
Second Vice-President	Joel E. Mandel, M.D.,	Rockland
Secretary	Francis McMahon, M.D.,	Dutchess
Treasurer	W. Brewster Wolfe, M.D.,	Orange
Executive Director	Joseph L. Stile, M.P.A.	

Since the Annual Meeting of the District Branch on September 28, 1980, your president met with the Committee on District Branches on May 20, 1981, and each district branch reported its activities for the year. I regret to report that your district branch could have been more active this past year, but perhaps the malpractice crisis has taken precedence over branch activities in order of importance.

Many of the plans and programs we had envisioned on assuming office in September, 1979, have not been inaugurated due to an unenthusiastic response from several counties regarding a dues structure. Your president and the councilor for the district branch, Robert Mayers, M.D., however, have made several visits to the counties comprising the branch during the past year and an excellent and cordial relationship exists at the present time.

My term of office draws to a close with this annual report. I wish to thank my fellow officers for their support, encouragement, and thought. To Mr. Joseph Stile and Mrs. Barbara Francis once again my profound gratitude for their unstinting assistance and devotion. I am pleased to be able to turn over to John Simmons, our incoming president, a district branch with good morale and the potential for action.

Respectfully submitted,

Allison B. Landolt, M.D., *President*

■

⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Ninth District Branch be filed for information.

⟹ . . . *The report of the Ninth District Branch was* **FILED FOR INFORMATION** . . .

PHYSICIANS' HOME

To the House of Delegates, Ladies and Gentlemen:

This is the current report of the Physicians' Home.

Physicians' Home is a tax free corporation independent of the Medical Society of the State of New York whose purpose is to provide aid to needy physicians, their wives or widows, and dependent children.

Physicians' Home has functioned continuously since 1919. The name is misleading in that it was discovered early that our "guests" much preferred cash funds permitting them to remain in their own homes and surroundings.

Aid is distributed in the form of monthly checks. Applicants can apply directly or be referred by a friend, relative, or associate.

We now have 77 "guests," and are actively seeking new applicants.

Funds have been accumulated via endowments, yearly contributions from members, voluntary assessments from members of the Medical Society of the State of New York, contributions from our auxiliary and from various county medical society auxiliaries.

In the first nine months of the present fiscal year (October, 1980, through June, 1981) we have distributed $160,082.00

Applicants furnish a detailed current budget, are interviewed by a professional social worker who reports to our Executive Committee, and all "guests" are reviewed yearly so that Physicians' Home can be aware of increasing or decreasing needs of each guest.

Physicians' Home has only one salaried employee, who manages the office. No officer, director, or trustee receives any reimbursement for services or expenses.

In any given year administrative costs and the excess of aid over donations are defrayed from investment income.

The portfolio is managed by Manufacturers Hanover Trust Company. Our books are checked by Price Waterhouse and Company.

Through the years our relations with the Medical Society of the State of New York have been beneficial, cordial, and constructive. The Physicians' Home welcomes the opportunity to present this report for your information and will appreciate your continued efforts to widen the base for financial support of this unique institution and help us find worthy "guests."

Respectfully submitted,
Executive Committee
Physicians' Home

Perrin B. Snyder, M.D., *President*

■

⟹ *Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Physicians' Home be filed for information.

⟹ . . . *The report of the Physicians' Home was* **FILED FOR INFORMATION** . . .

RÉSUMÉ OF INSTRUCTIONS FROM THE 1980 HOUSE OF DELEGATES AND ACTIONS THEREON BY THE COUNCIL, BOARD OF TRUSTEES, EXECUTIVE COMMITTEE, OFFICERS, COUNCIL COMMITTEES, AND GOVERNMENTAL AGENCIES

To the House of Delegates, Ladies and Gentlemen: *

AMA — Report on Actions of the New York Delegation. The following resolutions were forwarded to the AMA as requested by the House: Resolution 80-24, "*Compensation for Service on Government Mandated and Funded Hospital Committees,*" (page 663); and 80-37, "*The Care of the Elderly Outside of the Hospital,*" (page 660).

In addition, the New York Delegation introduced a resolution "Corporate Visitation Program," and George L. Collins, Jr., M.D., introduced a commendation resolution entitled "Henry I. Fineberg, M.D., in Appreciation of Fifty Years of Dedicated Service to the Medical Profession."

The AMA House of Delegates adopted the following substitute resolution on the problems of evaluating foreign medical schools and licensing their graduates. The substitute resolution was introduced by the Section on Medical Schools and the delegations from New York, Pennsylvania, and Illinois:

> **Resolved,** That the American Medical Association House of Delegates adopt the position that, based in the private sector, there be a uniform method to evaluate foreign medical schools; and be it further
>
> **Resolved,** That the American Medical Association recommend that the standards used to determine adequacy of the program of a foreign medical school should be equivalent to the standards by which United States schools are evaluated; and be it further
>
> **Resolved,** That the American Medical Association recommend that no individual accrediting or licensing jurisdiction acts independently in making judgments on the quality of education in foreign medical schools, but, rather participates in the uniform evaluation mechanism; and be it further
>
> **Resolved,** That the ultimate goal of these efforts be development of a mechanism providing for evaluation of the qualifications of graduates from newly created foreign medical schools.

Actions taken by the AMA House of Delegates on the resolutions introduced by the New York Delegation are included in the annual and supplemental reports of the New York Delegation to the AMA.

Ambulatory Care Facilities for Diagnostic Studies, Evaluations, and Treatment (page 633). The House adopted amended Resolution 80-21, "*Use of Ambulatory Care Facilities for Diagnostic Studies, Evaluations, and Treatment,*" the resolved portions of which read as follows:

> **Resolved,** That the House of Delegates of the Medical Society of the State of New York affirm the position that diagnostic studies for evaluation of some illnesses can be performed effectively and at a lesser cost on an ambulatory basis; and be it further
>
> **Resolved,** That the Medical Society of the State of New York encourage use of outpatient facilities, and use of these facilities for diagnostic testing instead of hospitalization whenever medically feasible, whether in a private office, clinic, HMO, or other ambulatory setting; and be it further
>
> **Resolved,** That an insured's health insurance plan should provide for equal payment and equal deductibles whenever the necessary services are performed in or out of the hospital; and be it further
>
> **Resolved,** That a copy of this resolution be forwarded with recommendations to the Commissioner of Insurance of the State of New York.

On October 21, 1980, this resolution was referred to the Committee on Hospital and Professional Relations to develop recommendations to be sent to the Commissioner of Insurance of the State of New York in an attempt to implement the directive of the House of Delegates.

The Committee on Hospital and Professional Relations informed the Council at its meeting on February 19, 1981, that under the present insurance law this is available as an optional rider. The Council approved the recommendation of the Committee that the State Insurance Commissioner should be encouraged to promulgate regulations that mandate all third party carriers to insure and reimburse for diagnostic studies, whether they are performed in a physician's office, clinic, hospital, or outpatient department of a hospital. The Council also approved the referral of this resolution to the MSSNY Committee on State Legislation for the preparation of the necessary bills for introduction to the Legislature at the current session.

On March 6, 1981, Albert B. Lewis, Commissioner of Insurance of the State of New York, was urged to give due deliberation and consideration to implementing the mandate, and it was noted that the promulgation of such regulations could result in a cost reduction to the citizens of this State without the sacrifice of high quality medical practice, which is the hallmark of New York State physicians.

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* Pages referred to are from the Minutes of the 1980 Annual Meeting of the House of Delegates, as published in the *New York State Journal of Medicine* for March, 1981, vol. 81, no. 4, pages 453–718.

The Committee on State Legislation in its Annual Report noted that legislation designed to accomplish the purpose of this resolution was drafted by our Legislative Counsel and was transmitted to the Chairmen of the Senate and Assembly Health Committees for possible introduction. Similar legislation which would accomplish the purpose of this resolution was introduced late in the current session, A.7905 (Vann), and our Legislative Counsel issued a memorandum in support.

Annual Meeting of the House of Delegates (page 542). "*Shortening the Annual Meeting of the House of Delegates of the Medical Society of the State of New York,*" Resolution 80-2, which requested that the Medical Society of the State of New York reduce the Annual Meeting of the House of Delegates by one day, commencing in 1981, was referred to the Council.

At its meeting on October 30, 1980, the Council referred Resolution 80-2 to the Speaker of the House of Delegates for recommendations. On November 18, 1980, a copy of the verbatim transcript of the discussion in the House relative to this resolution was forwarded to the Speaker for his information and guidance.

On December 22, 1980, a memorandum was forwarded to Presidents, Secretaries, Executive Secretaries, and/or Directors of Component County Medical Societies and Presidents of District Branches requesting the opinion of County Medical Societies and District Branches relative to future dates and places for the meeting of the House.

At its meeting on January 21, 1981, the Executive Committee considered the recommendation of the Speaker, and the opinion of County Medical Societies and District Branches, as well as several other aspects of the Annual Meeting, involving —

1. the time of the House of Delegates Meeting;
2. the location of the meeting; and
3. the duration of the meeting.

As a result of these deliberations, the following recommendations were referred to the Council for approval:

1. That the 1981 Annual Meeting of the House of Delegates be held on October 11–14 at the Grand Hyatt in New York City.
2. That the meeting in 1982 be held outside New York City, the actual location to be determined by administration.
3. That the Annual Meeting of the House of Delegates continue to be held in the fall of the year.
4. That the following recommendations be adopted in lieu of Resolution 80-2, SHORTENING THE ANNUAL MEETING OF THE HOUSE OF DELEGATES OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK:
    a. Beginning in 1981, the meeting be shortened by one day and the Speaker be directed to follow the recommendations as outlined below:

Sunday
House of Delegates — Opening Session — 1:00 p.m.
Awards, Presentations, and Speeches, as well as Report of the House Committee on Bylaws
President's Dinner
Monday
Reference Committee Meetings and Reports completed. (Split Medical Services into 2 Reference Committees)
Auxiliary Reception
Tuesday
House of Delegates — Reference Committee Reports
Morning Sessions — 9:00 a.m. — 12:30 p.m.
Afternoon Sessions — 1:30 p.m. — 5:00 p.m.
Evening Session — 7:00 p.m. — 10:00 p.m., if necessary
Wednesday
Elections — 9:00 a.m.
Followed by Annual Meeting of MSSNY and President's Address
Completion of Reference Committee Reports

At its meeting on January 22, 1981, the Council approved the recommendations of the Executive Committee.

Blue Shield Plans — Reimbursement Update. Resolution 80-52, "*Updating Reimbursement in Blue Shield Plans,*" (page 634) called upon the Medical Society of the State of New York to formally request that Blue Cross-Blue Shield, through all of its subdivisions in New York State,

1. inform the public that the Blue Shield portion of several of the plans they presently offer are inadequate in their reimbursement and not in keeping with today's health care costs; and
2. eliminate these inadequate plans and replace them with fee schedules which are in keeping with today's costs of practicing medicine, which reflect the physicians' usual and customary charges.

The House considered the following amended resolution:

Resolved, That the Medical Society of the State of New York formally request that Blue Cross-Blue Shield of Greater New York, through all of its subdivisions in New York State, —

1) inform the public that the Blue Shield portion of the $4,000 — $6,000, $7,000 – $8,500, and Executive Indemnity plans they presently offer are inadequate in their reimbursement and not in keeping with today's health care costs; and
2) eliminate these inadequate plans and replace them with fee schedules which are in keeping with today's costs of practicing medicine, which reflect the physicians' usual and customary charges.

The House referred the original resolution, the amended resolution, and the discussion in the House pertinent to this matter to the Council.

At its meeting on October 30, 1980, the Council referred the original resolution, the amended resolution, and the discussion in the House relevant to this matter to the Committee on Medical Care Insurance for deliberation and recommendations.

The Committee on Medical Care Insurance in its report to the Council on February 19, 1981, noted that it realizes the complexity and multiplicity of the Blue Cross-Blue Shield plans and understands that these indemnity plans are utilized for group insurance where there is additional coverage under major insurance programs, however, physicians are placed at a disadvantage if they do not accept assignment and receive from the patient fees far in excess of what these plans allow. This leads to controversy between the physician and the patient. The Committee felt that a change in the wording of the Explanation of Medical Benefits (EMB), sent to the patient by the carrier, would inform the subscriber that the policy has purchased only a limited insurance benefit. The Council approved Resolution 80-52 as amended by the House and as amended by the Council by the addition of the following resolved:

> **Resolved,** That the Medical Society of the State of New York encourage insurance carriers who write this type of insurance to rephrase the wording in their Explanation of Medical Benefits (EMB) so that the subscriber will know that the "amount received is the maximum that their policy has purchased, but does not reflect current economic conditions, due to the limited insurance benefits of the policy."

On April 14, 1981, Mr. Edwin Werner, President of Blue Cross-Blue Shield of Greater New York, was informed of the action of the House and encouraged to give due consideration to the concerns of physicians.

Bylaws, Amendments Adopted. The House voted to adopt the first Resolved of Resolution 79-2, "*Unified Membership in County, MSSNY, and AMA*" (page 474) and did not adopt the second Resolved. The first Resolved called upon the Medical Society of the State of New York to institute a campaign directed to all physicians in the State of New York advising them of the need for support and of the benefits which physicians derive by joining MSSNY and the American Medical Association.

This resolution was referred to the Division of Communications for suggestions as to implementation.

The House adopted Resolution 79-38, "*Vacancies and Succession,*" (page 480) which amended the Bylaws of the Medical Society of the State of New York by adding a new paragraph following Article V, Section 1, paragraph 8, which states that if the office of assistant secretary, assistant treasurer, or vice-speaker becomes vacant, for any reason whatsoever, the Council, when the House of Delegates is not in session, shall elect a successor for the unexpired term.

The House adopted Resolution 79-40, "*Past President of AMA — a Member of the House of Delegates of the Medical Society of the State of New York for Life,*" (page 480) amending Article III, Section 1, paragraph 1, of the Bylaws by the addition of the phrase "and any past president of the American Medical Association provided that individual is a member of the Medical Society of the State of New York."

Resolution 79-43, "*Compliance with Continuing Medical Education Requirements,*" (page 481) was amended by the House and adopted as amended, thereby amending Article II, Section 3, of the Bylaws by the addition of the following paragraph:

> "An active member as defined in Article II, Section 1, who is found not to be in good standing as of March 1, 1981, or March 1 of any subsequent year, for failing to comply with paragraph 1 of this Section shall receive reasonable notice that he must fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing. An active member who does not fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing shall automatically cease to be a member of the component county medical society and the State Society, unless, in the view of the Council, specific mitigating circumstances exist that the physician could not complete the CME requirements."

These amendments were incorporated in the 1980 Revised Bylaws and published in the January, 1981, issue of the *New York State Journal of Medicine* (pages 107–126).

Bylaws, Amendments Proposed (pages 665–672). Resolutions 80-1, "*Reduced Dues for Young Physicians Entering Practice,*" 80-11, "*Bylaws Amendments to Provide Staggering of Dues-Paid Deadlines at Each Level of the Federation,*" 80-14, "*Distribution of Expense Money by the Medical Society of the State of New York to Each District Branch,*" 80-20, "*Deletion of Article XI, Section 4, Committee on Prize Essays,*" 80-27, "*Proposed Revisions of the Principles of Professional Conduct,*" 80-30, "*Privileges of Student Members,*" 80-31, "*Resident Membership in the Component County Medical Societies and the Medical Society of the State of New York,*" 80-32, "*Student Membership,*" 80-33, "*Membership for Students Enrolled in Osteopathic Schools,*" 80-48, "*Unified Membership in County, MSSNY, and AMA,*" and 80-51, "*Introduction of Resolutions,*" were considered by the House Committee on Bylaws.

Its annual report to the House of Delegates has been published in the August, 1981, issue of the *New York State Journal of Medicine*, vol. 81, no. 9, pages 1407–1421.

Bylaws, Amendments Referred Back to the House Committee on Bylaws (pages 477–478). The House referred the following resolutions back to the House Committee on Bylaws: Resolution 79-27, "*Age Qualification for Entitlement to Life Membership for Practicing Physicians,*" and Resolution 79-39, "*Life Membership.*" These resolutions are now under consideration by the House Committee on Bylaws, and its recommendations relative to the above resolutions were published in the August 1, 1981, issue of the *New York State Journal of Medicine* on pages 1407–1421.

Controlled Substances (pages 580–581). The Reference Committee on Public Health and Education considered Resolution 80-39, "*Opposition to Expansion of the Triplicate Prescription Program,*" and Resolution 80-53, "*Suspension of the Triplicate Prescription Program,*" together, and because of the number and complexity of the suggestions made in these two resolutions, introduced a substitute resolution combining the principles embodied in Resolutions 80-39 and 80-53.

The House adopted the following amended substitute resolution in lieu of Resolutions 80-39 and 80-53:

> *Whereas*, The New York State Department of Health is in the process of reviewing the expansion of the Triplicate Prescription Program to include additional controlled substances; and
>
> *Whereas*, At the National Conference on Multiple Prescription Programs held in Albany, New York on September 8, 9, and 10, 1980, serious questions were raised as to the effectiveness of the Triplicate Prescription Program as it is now constituted in New York State; and
>
> *Whereas*, Fiscal responsibility is an important consideration to those authorities entrusted with the use of public funds of the citizens of New York State; and
>
> *Whereas*, The authority of the Commissioner of Health of the State of New York regarding the addition of controlled substances to the New York State Triplicate Prescription Program, as defined in the current statute, is limited to action taken by the Legislature except in the case of an emergency situation in which the commissioner may act on a particular substance as an individual; therefore be it
>
> **Resolved,** That the Medical Society of the State of New York recommend to the New York State Legislature that the authority of the Commissioner of Health of the State of New York to add a controlled substance to the New York State Triplicate Prescription Program in an emergency situation expire after 60 days, unless specifically authorized for continuation by the Legislature; and be it further
>
> **Resolved,** That the Triplicate Prescription Program be studied by an independent group five years from January 1, 1978, by which time enough evidence may have been accumulated to evaluate its continuation.

On October 17, 1980, the amended substitute resolution was forwarded to the Director of the Division of Governmental Affairs for implementation.

In response to a communication from the Division of Governmental Affairs, addressed to the New York State Senators and Assemblymen, Stanley Fink, Speaker of the Assembly, expressed appreciation to MSSNY for informing him of the position of MSSNY, and stating that he had reviewed the resolution and referred it to counsel for recommendation. In addition, Speaker Fink forwarded the resolution to the appropriate Assembly Committee which has jurisdiction over this area of the law.

Senator Hugh T. Farley, in his reply, stated that he will give MSSNY's recommendation careful consideration. Assemblyman Joseph M. Reilly expressed appreciation for the benefit of the views of MSSNY, which will be of assistance to him when this topic is discussed.

At its meeting on March 19, 1981, the Committee on State Legislation informed the Council that the Committee had reviewed the amended substitute resolution for Resolutions 80-39 and 80-53, and was informed by Legislative Counsel that, in response to the transmission of this resolution to the Legislature, two proposals have been drafted and are the subject of continuing negotiations between our representatives and the Legislature, seeking the development of final proposals which will satisfactorily accomplish our goals.

Council Minutes of MSSNY. Resolution 80-5, "*Distribution of Minutes of the Council of the Medical Society of the State of New York*" (page 542) was amended by the House, adopted as amended, and referred to the Board of Trustees. The amended portion of Resolution 80-5 reads as follows:

> **Resolved,** That the Medical Society of the State of New York send the minutes of every meeting of the Council to the president and secretary of each component county medical society and the president of each State specialty society represented on the MSSNY Interspecialty Committee as well as its representative on the Interspecialty Committee.
>
> Fiscal Note: Approximately $1100 per year.

At its meeting on October 29, 1980, the Board disapproved the expenditure of $1100 for the following reasons:

> At the present time the Council minutes are sent to the following:
>
> Members of the Council
> Members of the Board of Trustees
> Guests attending the Council Meeting
> Executive Secretaries and/or Directors of County Medical Societies
> Presidents of County Medical Societies if there is no Executive Secretary or Director
> AMA Delegates and Alternates
> District Branch Presidents

Although the Board agreed with the concept of the resolution, it felt that it was necessary to have copies sent to the Executive Secretary/Director, the President, and the Secretary of each County Medical Society.

The Board in accordance with Article VI, Section 2, paragraph 3 of Bylaws, returned this matter to the Council.

At its meeting on October 30, 1980, the Council amended Resolution 80-5 to read as follows:

> **Resolved,** That, in addition to current distribution, the Medical Society of the State of New York send the minutes of every meeting of the Council to the President of each Specialty Society represented on the MSSNY Interspecialty Committee, as well as its representative on the Interspecialty Committee.
>
> Fiscal Note: Approximately $300 per year.

The Council **ADOPTED** *the resolution as* **AMENDED** *and* **REFERRED** *it back to the Board of Trustees.*

At its meeting on November 19, 1980, the Board of Trustees approved Resolution 80-5, as amended by the Council.

Death – Determination of. Resolution 80-6, "*Determination of Death,*" (page 662) was adopted by the House. The resolved portion of Resolution 80-6 reads as follows:

> **Resolved,** That the Medical Society of the State of New York wholeheartedly support an amendment to Section 1, p. 4140-a of the public health law of the State of New York, which reads as follows:
>
> > Determination of death. A person shall be dead when in the announced opinion of a duly licensed physician, based on prevailing standards of medical practice, such person has experienced an irreversible cessation both of spontaneous respiratory and circulatory functions. If the use of artificial means of support precludes a determination that these functions have ceased, a person shall be dead if in the announced opinion of a duly licensed physician, based on prevailing standards of medical practice, such person has experienced a total and irreversible cessation of brain function.

On October 20, 1980, the Chairman of the Committee on State Legislation was informed of the action of the House.

The annual report of the Committee on State Legislation notes that no legislation relative to determination of death has yet been introduced into the New York State Legislature; however, MSSNY has fully supported such legislation in the past and will continue support as soon as such legislation is introduced.

Drug Information to Expectant Mothers. Resolution 80-34, "*Drug Information to Expectant Mothers required by Chapters 484 and 485 of the Laws of 1978,*" (page 663) called upon the Medical Society of the State of New York to:

1. continue the legislative effort to repeal Chapters 484 and 485 of the New York State Laws of 1978 which require that the physician or nurse-midwife in attendance shall inform the expectant mother of the drugs that they expect to employ during pregnancy, and of the obstetrical and other drugs that can be used at birth, and of the possible effects of such drugs on the child and mother; and
2. formulate a program that will meet the needs for providing appropriate information to expectant mothers in cooperation with the American College of Obstetricians and Gynecologists (ACOG), the American Academy of Pediatrics (AAP), and voluntary health agencies who are concerned with caring for expectant mothers.

The House adopted Resolution 80-34.

On October 20, 1980, the Chairman of the Committee on State Legislation was informed of the action of the House and was asked to continue legislative efforts to repeal these objectionable Chapters of the New York State Laws of 1978. The Chairman of the Committee on Maternal and Child Health was asked to develop a program for providing appropriate information to expectant mothers.

The Committee on State Legislation notes in its annual report that legislation which would substantially modify the present requirements of the law in accordance with recommendations approved by the Council in February, 1979, has been introduced into the Legislature with the support of this Society. A memorandum has been issued to the entire Legislature urging the enactment of the modifications. (S.3942, Trunzo; A.5285, Cochrane)

Dues for Student Members. The House adopted Resolution 80-29, "*Dues for Student Members,*" (page 554) in lieu of Resolution 80-40. The resolution set annual dues for student members at $3.00. The Director of the Division of Communications was asked to design a student membership application form to assist the Division of Finance in implementing this resolution.

On November 10, 1980, a memorandum was sent to members of the MSSNY Medical Student Section informing them of the action of the House. It was noted that this nominal sum not only would partially offset MSSNY's annual budget appropriations for the newly established Medical Student Section, but would establish commitment to membership in organized medicine. The new student member application form was enclosed with the memorandum, and the students were also encouraged to join the AMA Student Section.

Dues Increase Allocation (page 499). The Reference Committee on Reports of Officers, noted that the designated allocation of the legal fund now is approximately $1 million, with an approximate interest income of $100,000 per year. At this time it appears to be sufficient for any projected legal requirements of the Society in the coming year. In order to avoid any necessary dues increase to balance the projected budget for 1981, the Committee on Budget and Finance has recommended that the $12.50 portion of the $50.00 dues increase be allocated to the general fund for this coming year. Thereby, the total $50.00 dues increase approved in 1977 will be allocated to the general fund for the coming year.

The House adopted this recommendation with the understanding that the House can vote on the reallocation of the 1977 dues increase in subsequent years, if the need is demonstrated.

On October 15, 1980, the Chairman of the Committee on Budget and Finance was informed of the action of the House.

Fee Schedules. Disapproval of and adoption of payments based on usual, customary, and prevailing fees.

The Reference Committee on Medical Services considered Resolution 80-19, "*Usual, Customary, and Reasonable Fees for Workers' Compensation Reimbursement,*" (page 635), and Resolution 80-45, "*Elimination of Workers' Compensation Board Fee Schedule and Substitution of Usual, Customary, and Reasonable Fees,*" (page 635), together, and presented a substitute resolution for the consideration of the House, the resolved portion of which reads as follows:

> **Resolved,** That the Medical Society of the State of New York disapprove fixed fee schedules and seek the adoption of payments based on usual, customary, and

prevailing fees in all negotiations relating to fees where such negotiations are mandated by governmental agencies.

The House adopted the substitute resolution. On October 21, 1980, the substitute resolution was forwarded to the Chairmen of the Committees on Interspecialty and Workers' Compensation and Occupational Health for the information and guidance of the committees.

On January 22, 1981, the Committee on Interspecialty reported to the Council that the substitute resolution for Resolutions 80-19 and 80-45 is and will continue to be the thrust of the Interspecialty Committee in all negotiations with the Workers' Compensation Board.

At its meeting on June 18, 1981, the Council considered motions by the Committees on Workers' Compensation and Interspecialty relative to Relative Value Scale revisions for the Workers' Compensation Medical Fee Schedule. The Council reaffirmed the above substitute resolution. On July 28, 1981, the Chairman of the Workers' Compensation Board was informed of MSSNY's position as the only fair and equitable method for determining reimbursement.

Fluoride Rinse Programs in Schools. "*School Fluoride Rinse Programs,*" Resolution 80-12, (page 578), was adopted by the House as amended by the Reference Committee on Public Health and Education. The resolved portions of amended Resolution 80-12, reads as follows:

> **Resolved,** That the Medical Society of the State of New York endorse the concept of school fluoride rinse programs; and be it further
>
> **Resolved,** That the members of the MSSNY encourage the schools to participate in fluoride rinse programs in those communities without fluoridation of drinking water.

On October 17, 1980, amended Resolution 80-12 was forwarded to the Commissioner of the New York State Department of Education with the recommendation that the State Education Department encourage all schools to participate in such programs.

The resolution was also sent to county medical societies, Presidents of District Branches, and to the Editor of the *News of New York*, with a request that this information be disseminated to the membership.

The membership was informed of the concept of school fluoride rinse programs in the *News of New York* on November 1, 1980. On November 18, 1980, a communication was received from James J. O'Connell, Assistant Commissioner for Educational Finance, Management, and School Services, in which he stated that Commissioner Ambach had noted the MSSNY's position. Mr. O'Connell indicated that the State Education Department is cooperating with the New York State Department of Health in the implementation of the self-applied fluoride mouth rinse program (SAFER). Schools have been encouraged to participate in this or other rinse programs. It was Mr. O'Connell's understanding that many schools do have such programs.

Forensic Medicine (pages 576–577). The House adopted the Annual Report of the Committee on Forensic Medicine.

On October 17, 1980, the Chairman of the Committee on Forensic Medicine was informed of the action of the House, and of the comment of the Reference Committee on Public Health and Education that it approved the suggestion of the Committee on Forensic Medicine that the Medical Examiner system be extended on a regional basis throughout the State, to replace any existing Coroner Systems.

Health Care Facilities. "*Establishment of Skilled Nursing and Other Health Related Facilities,*" Resolution 80-36 (page 579). The House considered and adopted the following substitute resolution in lieu of Resolution 80-36:

> **Resolved,** That the Medical Society of the State of New York inform the Public Health Council and the Health Department of the State of New York of the cost savings which would be realized by permitting and encouraging the establishment of sorely needed, cost-effective skilled nursing facilities and health related facilities capable of meeting the State's standards, whether investor-owned, voluntary, or public.

On October 17, 1980, the Director of the Division of Scientific Activities was requested to inform the Public Health Council and the Health Department of the State of New York of the cost savings of establishing such health related facilities.

During discussion of the above resolution, the Reference Committee on Public Health and Education heard testimony reflecting the need for an additional category of long-term health care facilities, the Intermediate Health Care Facility, for those patients who require a sheltered environment, but less than skilled nursing services.

The reference committee recommended that the Council explore this modality with State officials. The House adopted this recommendation, and on October 17, 1980, the Chairman of the Committee on Aging and Nursing Homes was informed of the action of the House and requested to implement the recommendation.

Home Health Care — Reimbursement (page 660). The House referred Resolution 80-37, "*The Care of the Elderly Outside of the Hospital,*" to the Council. Resolution 80-37 called upon the Medical Society of the State of New York to seek amendment of the regulations of the Federal Government and of the State of New York to provide reimbursement for home health care for periods of up to twenty-four hours a day, seven days a week, if required for the adequate care of the patient, and to prevent the institutionalization of the patient for reasons not requiring such institutional care.

The Reference Committee on Governmental Affairs and Legal Matters noted that this resolution would require a revision at the Federal level, consequently the reference committee felt that this matter should be submitted to the AMA for implementation.

At its meeting on October 30, 1980, the Council approved Resolution 80-37 and referred it to staff to prepare a resolution for submission to the December, 1980, Interim Meeting of the AMA House of Delegates.

At the Interim Meeting on December 7–10, 1980, the AMA House of Delegates referred this resolution to the AMA Board of Trustees. (See Supplementary Report of the AMA Delegation.)

In its report to the Council on February 19, 1981, the Committee on Medical Care Insurance stated that it was the opinion of the Committee that the intent of Resolution 80-37 is addressed in Medicare and Medicaid Provisions of the Omnibus Reconciliation Act of 1980 — Public Health Law 96-499, promulgated in December, 1980, which notes the following:

> *Home Health Services*
>
> "The House bill provides Medicare coverage for unlimited home health visits; eliminates the 3-day prior hospital stay requirement under part A of Medicare; eliminates the $60 deductible for home health benefits under part B; includes the need for occupational therapy as a qualifying criterion for home health benefits; allows proprietary home health agencies in states without license laws to participate in Medicare; provides authority for the Secretary of Health and Human Services to require bonding or the establishing of escrow accounts to the extent he finds necessary; requires the Secretary to establish regional intermediates for home health agencies; and requires the Secretary to take several actions to achieve the more effective administration of the home health benefit.
>
> SENATE AMENDMENT — No provision.
>
> CONFERENCE AGREEMENT — The conference agreement follows the House Bill."

Hospitals

HOSPITAL COMMITTEES. Resolution 80-24, "*Compensation for Service on Government Mandated and Funded Hospital Committees,*" (page 663), called upon the Medical Society of the State of New York to seek such changes in legislation and/or regulation to insure that physicians who serve on government mandated and government funded hospital committees, such as audit and utilization committees, be compensated by the hospital out of government funds provided to the hospital for that purpose.

The House considered the following amended resolution:

> **Resolved,** That the Medical Society of the State of New York support the introduction of such changes in legislation and/or regulation to insure that physicians who serve on federally mandated and funded hospital committees, such as audit and utilization committees, be compensated by the hospital out of government funds provided to the hospital for that purpose.

The House referred the original resolution, the amended resolution, and discussion in the House pertinent to this matter to the Council.

During deliberations by the House of Delegates, there was consensus that this resolution be referred to the Council for indepth discussion, and a decision as to whether a similar resolution should be introduced at the next meeting of the AMA House of Delegates. Some misgivings were expressed about the loss of independence if physicians would indeed be paid for service on these federally mandated and funded hospital committees.

The Council approved the resolution and referred it to staff to prepare a resolution for submission to the December, 1980, Interim Meeting of the AMA House of Delegates.

At the Interim Meeting on December 7–10, 1980, the AMA House of Delegates considered the New York resolution and a suggested substitute resolution and referred both to the Board of Trustees for report at the 1981 Annual Meeting.

At the Annual Meeting, the Council on Medical Services of the AMA reported on this resolution and noted that the Council has been unable to identify any actual instances of such unauthorized diversion of review funds, but agreed with the sponsor of the resolution that an Association statement opposing such diversion would be appropriate. Accordingly, the Council recommended:

> "That it be Association policy that Federal or third party funds provided for reimbursement of physicians serving on mandated hospital review committees shall not be diverted for other purposes by the hospital."

The AMA House of Delegates adopted the report of the Council on Medical Services in lieu of the resolution. (See Supplemental Report of the New York Delegation to the AMA.)

HOSPITAL MEDICAL LIABILITY INSURANCE (page 629). Resolution 80-3, "*Hospital Medical Liability Insurance Coverage,*" called on the Medical Society of the State of New York to take the position that hospitals that wish to protect their fiscal integrity against the possibility of the risk of loss as medical liability joint tort feasors with members of their medical staff, should themselves provide and pay for medical liability insurance coverage in their own hospital liability program; and that the New York Delegation to the American Medical Association be requested to introduce a resolution to that effect at the Interim Session of the AMA House of Delegates in December, 1980.

In consideration of this resolution, the Reference Committee on Medical Services noted that the matter addressed in this resolution was considered in the House of Delegates in 1978, Resolution 78-60, which was adopted as amended, and which reads as follows:

> **Resolved,** That the Medical Society of the State of New York urge that medical malpractice insurance coverage shall not be a mandatory requirement for hospital medical staff appointments; and be it further
>
> **Resolved,** That all hospitals that require medical malpractice insurance of its voluntary professional staffs shall themselves be expected to carry liability insurance for each of its employees, and professional medical liability insurance for its professional employees including hospital salaried physicians in amounts equal to the limits of those of the majority of its voluntary medical staff members; and be it further
>
> **Resolved,** That this resolution be presented at the next meeting of the House of Delegates of the American Medical Association for appropriate action.

Subsequently, Resolution 78-60 was presented by the New York Delegation to the AMA — Resolution 78 (I-78) and the AMA Board of Trustees in reviewing the resolution submitted a report which was adopted in lieu of Resolution 78 (I-78), which stated in part —

"The Board of Trustees also believes that if equity demands that voluntary staff members should have insurance coverage so that the burden of financial loss would not fall entirely upon the hospital, then salaried hospital physicians should likewise be covered by adequate insurance or protected financially through self-insurance mechanisms established by the hospital so that the burden would not fall unfairly upon members of the voluntary medical staff."

The reference committee recommended affirmation of this position and that Resolution 80-3 be referred to the Council with a request that a mechanism be established to work for development of guidelines for use of medical boards that would enable them to evaluate the adequacy of hospital liability programs and that these guidelines be disseminated to the medical boards of hospitals throughout the State.

The House affirmed the AMA position and adopted Resolution 80-3 and referred it to the Council.

At its meeting on October 30, 1980, the Council referred Resolution 80-3 to the Division of Medical Services for referral to the proper committee to develop guidelines for medical boards.

At the meeting of the Council on February 19, 1981, the Committee on Hospital and Professional Relations reported that devising strict guidelines would not reflect local conditions and the vast differences in structures and patterns relative to hospital operations. Therefore, the Committee considered all the ramifications of Resolution 80-3, and recommended a new resolution in lieu of Resolution 80-3 which states that "medical staff boards with boards of trustees develop definitive procedures of insurance parameters for both physicians and hospitals that would reflect a partnership relationship between both parties rather than an adversary relationship." The Council approved the adoption of the new resolution in lieu of Resolution 80-3.

On March 10, 1981, Chairmen of the Medical Boards of Hospitals in New York State, as well as county medical societies, were advised of the new resolution which the Council adopted in lieu of Resolution 80-3.

The correspondence stated:

"The intent of this resolution, as you are well aware, is to allay the fears of physicians with hospital privileges being mandated by hospital by-laws to carry liability insurance individually as a condition of maintaining hospital privileges and allowing hospitals the right to opt to go bare.

"This resolution addresses the problem by attempting to establish guidelines for liability insurance which will not throw the onus on either the individual hospital or the individual physician.

"Since each hospital is autonomous under the guidance of the Board of Trustees, it was felt that discussions between the hospital medical staff and the Board of Trustees would result in a harmonious resolution of the problem."

HOSPITAL MEDICAL STAFF ADMISSION (page 630). Resolution 80-25, "*Relevant Qualifications for Hospital Medical Staff Admission,*" was amended to read as follows, and adopted as amended:

Resolved, That it is the policy of the Medical Society of the State of New York that admission to a hospital medical staff should be by an impartial review by a medical staff credentialing procedure of an applicant's relevant qualifications, and that membership in any group shall not be a substitute for review of the individual's qualifications.

A copy of Resolution 80-25 was sent to the President of the Hospital Association of New York State. It was noted that this statement of policy was sent to HANYS, as well as Hospital Boards of Trustees, to stress the importance that the State Medical Society places upon the proper credentialing procedures for Hospital Staff Appointments.

A memorandum, enclosing Resolution 80-25, was forwarded to county medical societies and district branches, requesting that this information be disseminated to the membership for their guidance as they participate in credentialing activities in their various hospitals.

In addition, an *Ad Rem* was sent to hospitals on October 31, 1980, informing them of MSSNY's position. A copy of Resolution 80-25 was also forwarded to the Chairman of the Committee on Hospital and Professional Relations for his information and guidance.

David F. Perry, Vice-President of the Hospital Association of New York State, informed MSSNY that the Committee on Professional Affairs of HANYS concurred with the principle espoused in Resolution 80-25; i.e., impartial review of all applicants to the medical staff. However, the resolution's failure to acknowledge the exclusive responsibility and authority of the hospital board of trustees to grant appointments to the medical staff was of concern to the members of the committee. The Committee on Professional Affairs of HANYS, therefore, recommended that Resolution 80-25 be expanded to include a sentence, to the effect, "Such impartial review should serve as the basis for the hospital board of trustees' final determination on the request for appointment to the medical staff." They noted that, once so amended, the Committee on Professional Affairs and the HANYS as a whole would endorse this important statement of policy and actively seek its acceptance and implementation throughout the State.

This correspondence was referred to the Executive Committee on January 21, 1981, which recommended that Resolution 80-25 be expanded to include the sentence, "Such impartial review should serve as the basis for the hospital board of trustees' final determination on the request for appointment to the medical staff." The Council approved this recommendation.

On March 16, 1981, the Hospital Association of New York State was advised of the approval of the Council of amended Resolution 80-25 and county medical societies and district branches were also advised that amended Resolution 80-25 will now be endorsed by MSSNY as well as HANYS.

HOSPITAL PRIVILEGES (page 591). The Reference Committee on Medical Services recommended, and the House approved, that Paragraph B-2 of the "GUIDELINES ESTABLISHED BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK AND THE HOSPITAL ASSOCIATION OF NEW YORK

STATE FOR INDIVIDUAL HOSPITALS AND THEIR MEDICAL STAFFS IN THE DETERMINATION OF MEDICAL STAFF MEMBERSHIP AND HOSPITAL PRIVILEGES" be amended to read as follows:

> "Hospitals with clinical departments shall grant privileges based on training and experience consistent with the requirements of the various Specialty Boards. Family physicians who apply to such hospitals shall become members of the Department of Family Practice, where it has been developed, with clinical privileges assigned by the Department of Family Practice with the approval of the specific department in which privileges are requested."

On October 24, 1980, the amended guidelines were forwarded to county medical societies and district branches with a request that these amended guidelines be included in MSSNY's Manual of Position Papers. It was noted that although these guidelines were initially developed by a joint committee of MSSNY and the Hospital Association of New York State, they have only received official approval from MSSNY.

The President of the MSSNY requested clarification from HANYS relative to their position after receipt of HANYS' statement on displaced physicians. The Committee on Hospital and Professional Relations reviewed the statement and felt that it is a broad based concept and is not as specific as the MSSNY position; however, this Committee felt the basic intent of both positions remain the same and, although HANYS did not concur with the MSSNY guidelines, there is a basic similarity between the two. Therefore, the Committee recommended, and the Council concurred, that the HANYS' position be added as an addendum MSSNY position paper. Physicians may then review the position of both MSSNY and HANYS for their consideration. HANYS' position statement on displaced physicians reads as follows:

POSITION STATEMENT ON DISPLACED PHYSICIANS

BACKGROUND

Since January 1975, over 30 hospitals in New York State have closed. During the same period a number of obstetrical and pediatric units of hospitals have also closed. Currently, there is a trend toward hospital mergers, consolidations, and shared clinical programs.

Whenever a hospital service or entire hospital is closed, there is a possibility that a physician, or physicians, will be deprived of access to a hospital by that action. It has happened in the past, and in all probability will happen more frequently and in larger numbers with future actions.

ISSUE

In cases where physicians from hospitals that have closed in whole or part apply for appointment at a neighboring hospital, review of their applications have not always been objective. It has been shown in a few significant cases, that the recommendations of the review committees were based more on fear of competition than on the character, competence, and qualifications of the applicants.

It is clear that the livelihood of many physicians is dependent on their ability to secure hospital appointments and be granted hospital privileges based on objective review. Not so apparent, but more important, is the right of the patients of those physicians to have access to hospital facilities when medically necessary and appropriate through the physician of their choice.

ACTION

The Hospital Association of New York State urges its member hospitals, their boards of trustees, administrators, and medical staffs to review and monitor their appointment and credentialing procedures to assure they are sensitive to the needs of the displaced physician and his patients. Hospital boards must exercise their responsibilities to their hospitals to assure the competence of the medical staff through objective appointment and credentialing procedures. They must also exercise their responsibility to the larger community and see that qualified physicians have hospital appointments and their patients are afforded equal access to hospital services.

(*Note:* Appointment of certain traditionally hospital-based specialists, such as radiologists and pathologists, may need to be made on the basis of hospital need as well as qualifications.)

Malpractice

COUNTERSUITS FOR FRIVOLOUS, SPECIOUS,
AND
GROUNDLESS MEDICAL MALPRACTICE SUITS

"*Countersuits for Frivolous, Specious, and Groundless, Medical Malpractice Suits,*" Resolution 80-23, (page 661) called on the Medical Society of the State of New York to urge the Legislature of the State of New York to enact legislation to allow countersuits for legal fees and other costs against attorneys who bring, or permit to be brought, frivolous, specious, or groundless medical malpractice suits.

The House adopted Resolution 80-23, and on October 20, 1980, the resolution and the comments of the Reference Committee on Governmental Affairs and Legal Matters that legislation to accomplish the purpose of this resolution has been prepared and initiated into the Legislature by the Law Revision Commission, was referred to the Director of the Division of Governmental Affairs. It was noted that strong support for this proposal was indicated.

At its meeting on March 19, 1981, the Council was informed that a memorandum in support of A.596 (D'Andrea), which would authorize such countersuits, has been distributed to the Legislature, to the Council, and leadership of the State Medical Society, and to county societies throughout the State.

The Committee on State Legislation in its annual report noted that several bills introduced into the Legislature during the current session were designed to discourage frivolous lawsuits and received the full support of this committee. Included among these bills were: A.6765 (Weprin) which would codify an action for malicious or reckless prosecution and abolish current special damage requirements; A.4712 (M. H. Miller) which would allow professionals to counterclaim against a plantiff for costs incurred in defending a frivolous claim; A.1517 (Nadler) which would require a plaintiff to post a bond to cover the defendant's costs when the malpractice panel has reached a unanimous determination in favor of the defendant and the plaintiff chooses to proceed to trial; and A.648 (Robach) which would provide for the payment of attorneys' fees and costs incurred by the defendant as a result of defending a suit found to have been totally without merit. To date, these bills are still being considered by the Legislature.

MALPRACTICE CRISIS

The Reference Committee on Governmental Affairs and Legal Matters agreed with the intent of Resolution 80-7, "*Malpractice Crisis*," (page 660), but it was felt that certain portions of the resolution were inappropriate; therefore, the reference committee presented a substitute resolution. The House amended and adopted the following substitute resolution in lieu of Resolution 80-7:

> **Resolved,** That the Medical Society of the State of New York again advise the government of the State of New York that a malpractice crisis exists today; and be it further
>
> **Resolved,** That the Medical Society of the State of New York continue to urge the Governor and Legislature of the State of New York to adopt the recommendations of the McGill Commission and the legislative program of the MSSNY.

The text of the resolution was brought to the attention of New York State Senators and Assemblymen in October of 1980. The correspondence stressed the increasing cost of health care to the consumer as a result of recent raises in medical liability insurance premiums.

Assemblymen James L. Emery, R. Stephen Hawley, Raymond M. Kisor, and Robert D'Andrea, responded to the communication assuring MSSNY that they will review the legislative program and will give consideration and support to MSSNY's proposals.

In a "*Hot Line*" communication on April 1, 1981, Dr. Schwartz informed the membership that the Medical Liability Mutual Insurance Company (MLMIC), after a complete review of the report of its actuarial firm, Peat, Marwick and Mitchell, authorized a filing with the New York State Department of Insurance requesting approval of a rate that would increase the general rate level of present liability insurance premiums by 71%.

Immediately after this action was taken, Dr. Schwartz wrote to Governor Carey urging his immediate action to prevent a crisis in medical liability insurance premium rates that may have a disastrous effect upon health care delivery in New York State.

At its meeting on April 16th the Council authorized the Society to create a statewide public action campaign emphasizing what may happen to health care delivery if physicians are faced with a 71% rise in medical liability insurance premiums on July 1. The campaign involved a meeting among officers of MSSNY and the MLMIC and MSSNY legislative and legal advisors to explore all possible solutions, including a measure to freeze premiums and create standby funds; development of the specifics of the campaign with outside consultation; and a special meeting to work out ways that the campaign would be used in each locality — persons attending to include county medical society presidents and executive directors, presidents of district branches, and presidents of the specialty societies on MSSNY's Interspecialty Committee.

MSSNY pursued three legislative proposals to meet the situation which would —

1) eliminate damages for expenses already compensated for by collateral insurance benefits;
2) allow payment of future damages when they are incurred, instead of in a lump sum; and
3) create an umbrella insurance mechanism, possibly State funded, to pay the cost of extremely high awards. This, the most important of the proposals, would have individual physicians pay the premiums to cover reasonable awards. The umbrella would thus put a cap on premiums but not on what an injured plaintiff could receive.

On May 21, 1981, the Council approved the following motion relative to the official position of the MSSNY concerning the malpractice crisis:

A. The Medical Society of the State of New York believes that the present professional medical liability insurance crisis will not be solved until there are meaningful legislative changes to —
   1) create a mechanism which shall spread the risk for accumulation of monies for contingent liability; or
   2) place a cap on awards, thereby limiting the contingent liability; or
   3) accomplish a combination of both of the above.

B. In addition, the MSSNY is opposed to the creation of any new commissions, temporary or otherwise, appointed by the Governor or the Legislature, since this will delay resolution of the crisis.

MSSNY officers met with Governor Carey on June 18th and discussed the premium crisis and other problems. Although the tone of the meeting was constructive, the Governor made it clear that no decision will be made on this year's premiums until October, when he will receive definitive recommendations from Superintendent of Insurance Lewis. It is expected that another meeting will take place between Mr. Carey and MSSNY leaders shortly after October 1. The MLMIC will issue policies at 1980 rates for the year beginning July 1, with an endorsement that any increase in premiums, determined by October, will have to be retroactive to July 1.

An *Ad Rem* of July 20, 1981, informed the membership that the Governor had signed a measure to reduce awards by the amount of collateral health insurance or disability benefits paid to the plaintiff. This bill, effective July 1, is expected to reduce the requested premium increase of the MLMIC from 71% to 52%.

Members of MSSNY were urged to write to their legislators in support of bill A.8806 (Bianchi, et al.) S.6977 (Marchi, et al.) "Medical Catastrophe Fund Act," a proposal for a State-administered fund, financed by a surcharge on health insurance payments, to equitably regulate payment of extremely high awards. The malpractice defendant would be responsible for the first $100,000, then the fund would take over; and bill A.1330 (Tallon), S.2441 (Pisani), A.3658 (P. Sullivan) a bill to require an investment fund for awards for future pain and suffering over $100,000 and provide that damages for anticipated future economic loss, such as loss of earnings or medical and hospital expenses, shall be paid as accrued or incurred through an investment fund.

Legislation relative to the malpractice crisis is discussed further in the Annual Report of the Committee on State Legislation.

Medicaid

MEDICAID COMMITTEE "*Creation of a Medicaid Committee of the Medical Society of the State of New York,*" Resolution 80-13 (page 632). The House adopted the following amended resolution:

> **Resolved,** That the Medical Society of the State of New York create a Statewide Medicaid Committee to represent the interests of Medicaid recipients and physicians who are enrolled as providers of services in the Medicaid Program of the State of New York; and be it further
>
> **Resolved,** That such committee be empowered to enter into negotiations with State authorities relative to the problems of Title XIX.

In November of 1980, President Schwartz, appointed the Committee on Medicaid, taking into consideration the recommendation of the Committee on Medical Care Insurance that all district branches be represented on the Committee and that the Chairman be a member of the Committee on Medical Care Insurance.

The Council, on October 30, 1981, approved the recommendation of the Committee on Medical Care Insurance that the Medicaid Committee review the following items:

1) proposed legislative changes relative to Medicaid Program;
2) update MSSNY Position Paper on Medical Care of the Indigent;
3) discuss "Is New York State Plan in conformity with Federal Mandate on Title XIX?"
4) monitor Medicaid Management Information System (MMIS) activities.

These charges are under consideration by the committee. (See Annual Report of the Committee on Medicaid.)

MEDICAID REIMBURSEMENT. "*Medicaid Reimbursement,*" Resolution 80-10, (page 632). The resolved portions of amended Resolution 80-10 read as follows:

> **Resolved,** That discussions relative to increasing Medicaid reimbursement continue at an accelerated pace between the government of the State of New York and the Medical Society of the State of New York; and be it further
>
> **Resolved,** That proposed increases more closely resemble usual and customary fees; and be it further
>
> **Resolved,** That if the discussions are not productive in a reasonable time period, MSSNY inform the membership in a clear and forthright manner; and be it further
>
> **Resolved,** That the House of Delegates specifically authorize the Council to instigate legal action if the Council deems it necessary.

and

"*Equitable Reimbursement Schedule in Medicaid,*" Resolution 80-26 (page 633), called on the Medical Society of the State of New York, in consort with other appropriate organizations to seek such legislative or regulative changes as indicated, to insure a more favorable and equitable reimbursement schedule in the Medicaid system similar to the usual, customary, and reasonable formula.

The Reference Committee on Medical Services took note of the fact that the Medical Society of the State of New York has been vigorously pursuing the goal sought by Resolutions 80-10 and 80-26, and stated that these efforts must continue. Therefore, the reference committee recommended that Resolutions 80-10 and 80-26 be referred to the Council for referral to the new Committee on Medicaid, the formation of which was recommended in Resolution 80-13, "*Creation of a Medicaid Committee of the Medical Society of the State of New York.*"

The House adopted amended Resolution 80-10 and Resolution 80-26 and referred them to the Council. At its meeting on October 30, 1980, the Council referred Resolutions 80-10 and 80-26 to the Committee on Medicaid.

These two resolutions were discussed in depth by the Committee on Medicaid, including the resolved added by the House of Delegates to Resolution 80-10, to authorize the Council to instigate legal action if necessary. In its report to the Council on February 19, 1981, the Committee reported that there is a distinct possibility that New York and its State Medicaid Plan are not in conformity with federal mandates relative to the Title XIX program and went on record in making the following motion, which was approved by the Council:

> That an in-house legal opinion be sought as to the compliance of the State of New York with the intent and spirit of the federal mandate under Title XIX that the program "assures Medicaid patients the same access to quality services as non-Medicaid patients" and that such an opinion should include the recommendations for legal action if such seems feasible and warranted.

J. Richard Burns, J.D., General Counsel, in his report to the Council at its meeting on April 16, 1981, noted that any suit that would be brought to compel the State to increase Medicaid reimbursement would not be successful. In all likelihood, the court would be receptive to arguments by the State concerning its financial limitations. In accordance with this opinion, General Counsel did not recommend initiation of a legal challenge.

The Annual Report of the Committee on Medicaid notes that since this option for relief is apparently ruled out, the committee believes we must continue to seek realistic reimbursement for rendering services to public assistance patients through other channels. These would include stepped-up communications with responsible State officials and legislators as well as the accumulation of verifiable data that will pointedly support our contentions that the goals of quality care and cost effectiveness can best be attained by active participation of physicians in the medical assistance (Medicaid) program.

The Chairman of the Committee on Medicaid noted the wide scope of the potential activities of the Committee on Medicaid and suggested that the initial focus might be on the problem of inadequate reimbursement and its cause and effect relationship to patient care vis-a-vis physician participation in the Medicaid program. With that in mind, the

Chairman appointed a Subcommittee on Medicaid Reimbursement to meet with State officials.

The Subcommittee on Medicaid Reimbursement reported in the annual report of the Committee on Medicaid that as its initial thrust the subcommittee met with Michael McGarvey, M.D., Chief Medical Officer and Deputy Director for Health Facilities Standards and Control, NYS Department of Health, who was very receptive to our presentation of facts and figures to stress the seriousness of the reimbursement problem. As a result Dr. McGarvey agreed to help us arrange a meeting with Governor Carey for the purpose of presenting facts and figures related to the Medicaid problem as well as the malpractice crisis.

Medical Bills. Resolution 80-35, "*Interest on Unpaid Medical Bills Due from Third Party Payors,*" (page 629) which called on the Medical Society of the State of New York to seek to introduce and support legislation requiring third party payors to pay interest on unpaid bills of thirty days or more duration, such interest to be computed at the rate of 1½% per month, retroactive to the date the bill was rendered, was adopted by the House.

On October 21, 1980, Resolution 80-35 was forwarded to the Committee on State Legislation for implementation.

At its meeting on March 19, 1981, the Council was informed by the Committee on State Legislation that preliminary negotiations have been held with representatives of the Blues, and that further meetings will be arranged in order to determine whether the objective of Resolution 80-35 might be accomplished through agreement with the carriers.

Medicare Coverage for Geriatric Mental Disorders. The House adopted Resolution 80-9, "*Medicare Coverage for Geriatric Mental Disorders,*" (page 631). The resolved portions of Resolution 80-9 read as follows:

> **Resolved,** That the Medical Society of the State of New York go on record as deploring the discriminatory practice of disallowing Medicare coverage for geriatric mental disorders since such exclusions prevent proper diagnosis, evaluation, and recommendations for therapy of organic brain syndrome patients; and be it further
>
> **Resolved,** That the Medical Society of the State of New York institute actions to halt such reimbursement denials where in the opinion of a physician proper care for organic brain syndrome patients can best be done in psychiatric hospitals; and be it futher
>
> **Resolved,** That the American Medical Association and interested Specialty Societies be informed of our actions and efforts to ameliorate this unfortunate situation and requested to assist us in this endeavor.
>
> Fiscal Note: Probably none.

On October 21, 1980, Resolution 80-9 was forwarded to the Chairman of the Committee on Medical Care Insurance to formulate suggestions for its implementation.

The Committee on Medical Care Insurance reported that it recognized the frustration of the makers of the resolution. The Committee recommended, and the Council, at its meeting on February 19, 1981, approved referral to the Federal Legislation Committee and the AMA for possible changes in the Title XVIII program to reflect the concerns embodied in this resolution.

The Committee on Federal Legislation will meet on September 24, 1981. This item has been placed on the agenda.

Positions of the Medical Society of the State of New York. "*Summary of the Official Positions of the Medical Society of the State of New York,*" Resolution 80-15 (page 553) requested an updated edition of the Position Papers of the Medical Society of the State of New York be annually distributed to the Delegates to this House of Delegates, and that the Delegates of this House of Delegates receive a 1980 updated version of the Position Papers of MSSNY within 60 days from the date that this resolution is adopted. Fiscal note: $560 per year.

The Reference Committee on Scientific Activities, Publications, and Miscellaneous presented the following substitute resolution:

> **Resolved,** That an updated edition of the Position Papers of the Medical Society of the State of New York be annually distributed to the members of this House of Delegates; and be it further
>
> **Resolved,** That the members of this House of Delegates receive a 1980 updated version of the Position Papers of the Medical Society of the State of New York within 60 days from the date of the adjournment of the House; and be it further
>
> **Resolved,** That the updated edition of the Position Papers of the Medical Society of the State of New York be disseminated by incorporating it in the edition of the New York State Journal of Medicine which contains the proceedings of the House of Delegates.
>
> Fiscal Note: $1,000 per year.

The House referred the original resolution, the substitute resolution, and discussion in the House pertinent to this matter to the Council.

At its meeting on October 30, 1980, the Council referred the entire matter to Administration.

Administration recommended that the following substitute resolution be adopted in lieu of the original resolution, and the substitute proposed by the Reference Committee on Scientific Activities, Publications, and Miscellaneous:

> **Resolved,** That the Medical Society of the State of New York annually publish an updated edition of the Position Papers of the MSSNY in the issue of the New York State Journal of Medicine which contains the proceedings of the House of Delegates; and be it further
>
> **Resolved,** That reprints of the portion of the Journal which contains the Position Papers be kept at the headquarters of the Society for general distribution, upon request.
>
> Fiscal Note: 1. Publishing Position Papers in the Journal — Approximately $3500 per year.
> 2. Reprints — Approximately $250 per year.

At its meeting on November 20, 1980, the Council approved the substitute resolution submitted by Administration in lieu of Resolution 80-15.

Based on additional information, the Board of Trustees, at its meeting on January 21, 1981, revised the fiscal note to read as follows:

1. Publishing Position Papers in the Journal — Approximately 4,836 per year.
2. Reprints — 100 at approximately $215.49.

The Board approved the substitute resolution for Resolution 80-15 with the revised fiscal note.

The Official Positions of the Medical Society of the State of New York were published in the Special March, 1981, issue of the *New York State Journal of Medicine* on pages 685 to 707.

Preoperative Consultations and Supportive Studies. Resolution 80-22, (page 634) "*Third-Party Reimbursement for Preoperative Consultations and Supportive Studies,*" was amended by the House and adopted as amended. The resolved portion of Resolution 80-22 reads as follows:

> **Resolved,** That the Medical Society of the State of New York shall work with appropriate organizations and government authorities to seek changes in legislation and/or regulations to promote third-party reimbursement for preoperative consultations and supportive studies to a qualified and credentialed physician, whether performed in or out of the hospital, with the consulting physician expected to provide the hospital with all necessary documentation.

On October 22, 1980, amended Resolution 80-22 was referred to the Division of Medical Services to implement the resolution in conjunction with the Committee on Hospital and Professional Relations.

The Committee on Hospital and Professional Relations informed the Council at its meeting on February 19, 1981, that it had considered the adopted Resolution 80-22 and felt that an additional clarifying statement was necessary. The Council approved the Committee's recommendation that the following resolved be adopted in lieu of the resolved of 80-22:

> **Resolved,** That pre-admission testing be allowed both in a physician's office and in a hospital setting according to criteria established by the physician and the hospital medical staff relative to such testing.

The Committee felt that the admissibility of such tests is a local matter and reimbursement by third party carriers should be mandated when there is basic agreement between the hospital medical staff and the individual physician consultant.

Primary Care Physician — Payment of for Concurrent Care in the Hospital

The House referred Resolution 80-4, "*Payment of the Primary Care Physician for Concurrent Care in the Hospital,*" (page 631) to the Council. The resolved portions of Resolution 80-4 read as follows:

> **Resolved,** That the Medical Society of the State of New York take the position that the primary care physician shall, by law, be designated to have the legal responsibility and authority to monitor the concurrent care of his patient as "Captain of the Concurrent Medical Care Team," for which he shall continue to render and receive payment for the daily administrative and professional services, based on his on-site determination and professional judgment in the best interest of the patient; and be it further
>
> **Resolved,** That the Medical Society of the State of New York and the American Medical Association seek an administrative ruling to provide and pay for these roles and services to the hospitalized patients of the primary care physician under Medicare, Medicaid, and other government and third party medical insurance programs, regardless of what other professional care is concurrently needed by the patient; and be it further
>
> **Resolved,** That the New York Delegation to the American Medical Association be requested to introduce a similar resolution at the 1980 interim session of the AMA House of Delegates.

The Reference Committee on Medical Services noted that there are already provisions for payment for concurrent care when a physician plays an active role in a patient's treatment and diverse physicians' services are required and documented.

At its meeting on October 30, 1980, the Council referred Resolution 80-4 to the Division of Medical Services for further clarification and study.

The Committee on Hospital and Professional Relations informed the Council at its meeting on February 19, 1981, that a review of this resolution notes that a request for "a Captain of the Concurrent Medical Care Team," whose only function would be to supervise and coordinate the activities of the active participating physicians, would not be in the best interest of the profession. The Council disapproved Resolution 80-4, as recommended by the Committee, and approved the Committee's recommendation that they go on record in affirming the comment of the Reference Committee on Medical Services stating "that there are already provisions for payment for concurrent care when a physician plays an active role in a patient's treatment and diverse physicians' services are required and documented."

State Legislation Program for 1981 (pages 651 and 652). The Reference Committee on Governmental Affairs and Legal Matters recommended adoption of and the House approved the following State Legislation Program for 1981:

1. Structured Award — Investment Fund for Pain and Suffering Damages Over $100,000 Plus Special Damages. (S.4420-A, Pisani) (A.5678-A, P.M. Sullivan) (A.5684, Tallon)
2. Reduction of Awards by Collateral Sources of Payment. (S.2071-B, Flynn) (A.10396-B, Seminerio)
3. No-Fault Insurance Law Amendments. (S.256-C, Marchi) (A-10168, Connelly) (A.6553, Connelly)
4. Professional Service Corporation Tax Law Amendments. (S.3801, Pisani) (A.4681, Robach)
5. Parallel Coverage — Emergency Care in Physicians' Offices. (S.4448, Lombardi) (A.5688, Tallon)
6. Medical Society Involvement in Physician Discipline. (S.5681, Warder) (A.9708, Schimminger)

In November of 1980 the Executive Committee and the Council were informed that our Legislative Counsel in Albany had advised the MSSNY that Governor Hugh L. Carey would be available to meet with representatives of MSSNY in order to discuss certain matters of importance to the physician community in New York which will be considered at the 1981 session of the New York State Legislature. Dr. Siegel wrote to Governor Carey, indicating convenient dates for a meeting to discuss the 1981 MSSNY legislative program and all other matters affecting the health and welfare of the people of New York State.

A meeting was held between MSSNY officers and Governor Carey on June 18th. The MSSNY legislative program, specific malpractice proposals, Medicaid, professional discipline, workers' compensation and no-fault, nurse practitioners, and other matters affecting medicine were discussed.

Although the tone of the meeting was constructive, the Governor made it clear that no decision will be made on this year's liability premiums until October, when he will receive definitive recommendations from Superintendent of Insurance Lewis. It is expected that another meeting will take place between Mr. Carey and MSSNY leaders shortly after October 1st.

Governor Carey signed the Collateral Sources Bill effective July 1st. The passage of this bill represents a savings of an estimated 19% on the original request for a 71% premium increase. The signing of this bill, although helpful, by no means alleviates the present malpractice crisis. The ultimate aim of MSSNY is a basic change in the present tort system.

In its annual report to the House, the Committee on State Legislation presents a detailed report on the 1981 State Legislation Program.

Triplicate Prescription — Verification of Accuracy of Computer Data.

"*Physician Verification of Triplicate Prescription Analysis,*" Resolution 80-28, (page 579). The House adopted the following substitute resolution in lieu of Resolution 80-28:

> **Resolved,** That the Medical Society of the State of New York encourage the establishment of Prescription Practice Committees throughout the State; and be it further
>
> **Resolved,** That the Medical Society of the State of New York undertake discussions with the Department of Health of the State of New York with the objective of establishing a procedure which would require that the State Health Department verify the accuracy of the data in the Triplicate Prescription Computer Data Bank with these committees.

On October 17, 1980, substitute Resolution 80-28 was referred to the Director of the Division of Scientific Activities for implementation. It was requested that a memorandum to county medical societies and district branches be prepared, encouraging them to establish Prescription Practice Committees throughout the State. It was also requested that discussions be held with the Department of Health toward establishing a procedure to verify the accuracy of the data in the Triplicate Prescription Computer Data Bank.

On December 19, 1980, a memorandum was sent to the Presidents and Executive Secretaries of County Medical Societies and Presidents of District Branches encouraging the establishment of Prescription Practice Committees at all county societies, or, where appropriate, at district branch levels.

Workers' Compensation

WORKERS' COMPENSATION BOARD RATINGS

Resolution 80-42 (page 636) "*Elimination of Workers' Compensation Board Ratings for Physicians Treating WCB Patients,*" as amended called on the Medical Society of the State of New York to support legislation, or take other action to eliminate Workers' Compensation Board physician qualification requirements and accept a valid New York State medical registration and license. These physicians duly registered and licensed should be permitted to treat all patients in accordance with established medical standards.

It was noted that the Reference Committee on Medical Services in discussing a similar resolution in 1978 (Resolution 78-37), indicated that the constitutionality of this provision of the Workers' Compensation Law was challenged in the courts at the time of its enactment and was ruled constitutional by the highest court in the State. The MSSNY Council, at its meeting on June 21, 1979, approved the concept and referred this resolution to the Committee on State Legislation for implementation. The State Legislation Committee reported that it is monitoring the situation and will raise the issue when the climate is favorable.

The House adopted amended Resolution 80-42 and it was again referred to the Committee on State Legislation for implementation.

In its report to the Council on January 22, 1981, the Committee on Workers' Compensation and Occupational Health noted that the medical specialists on the Workers' Compensation Board Advisory Committee have repeatedly requested this proposal of the Chairman without success. It will continue to be emphasized and, hopefully, be attainable some time in the future.

NOTIFICATION OF RESULTS OF HEARINGS

"*Notification of Results of Hearings,*" Resolution 80-44, (page 637), requested that the Medical Society of the State of New York seek to introduce and support legislation and/or changes in the Workers' Compensation Board regulations which will mandate that the results of all refereed hearings be sent to the treating physician and/or consultants. The Reference Committee on Medical Services noted that the intent of this resolution is contained in Resolution 77-51 "*Failure to Notify Treating Physician and Interested Party in Compensation Hearings.*" The House reaffirmed Resolution 77-51 in lieu of Resolution 80-44. The resolved portion of Resolution 77-51 reads as follows:

> **Resolved,** That the Medical Society of the State of New York petition the Chairman of the Workers' Compensation Board to modify the regulations to mandate notification of decisions and awards be sent to treating physicians and other interested physicians; and be it further
>
> **Resolved,** That if in the opinion of counsel, legislation to this effect is required, the House of Delegates authorize the Medical Society of the State of New York to seek introduction of such legislation, and urgently press for its passage.

The Committee on Workers' Compensation and Occupational Health, in its report to the Council on January 26, 1978, noted that MSSNY representatives on the Advisory Committee on the Medical Fee Schedule and Allied Problems have asked for implementation of the action sought by the resolution for the past two or three years. The Committee had been informed that the Chairman of the Workers' Compensation Board has been favorably inclined to effect the goal of the resolution and has already asked his staff to develop the necessary methodology.

On October 22, 1980, the Chairmen of the Committees on Workers' Compensation and Occupational Health and State Legislation were informed that since the goals of the resolution have not been realized, further attempts at implementing this resolution are indicated.

On March 19, 1981, the Committee on State Legislation informed the Council that it will continue to monitor the situation.

REOPENING CLOSED WORKERS' COMPENSATION BOARD CASES

"*Reopening Closed Workers' Compensation Board Cases,*" Resolution 80-41 (page 636). The House adopted Resolution 80-41 as amended. The resolved portion of amended Resolution 80-41 reads as follows:

> **Resolved,** That the Medical Society of the State of New York attempt to introduce and support action and seek legislative changes which will clearly state that if said case is reopened the physician who has examined the claimant for such reopening shall be paid usual, customary, and prevailing rates by the compensation insurance carrier.

On October 22, 1980, Resolution 80-41 was forwarded to the Chairman of the Committee on State Legislation, with a request that the committee attempt to introduce and support action and/or changes to accomplish the goal of Resolution 80-41. Resolution 80-41 was also forwarded to the Chairman of the Committee on Workers' Compensation and Occupational Health for his information and guidance.

In its report to the Council on January 22, 1981, the Committee on Workers' Compensation and Occupational Health noted that there have been long delays in getting a case reopened. An Ad Hoc Committee to Clarify Administrative Procedures Relative to Reopening Workers' Compensation Cases is being considered by the Chairman of the Workers' Compensation Board. Although the Committee approved amended Resolution 80-41, it recommended to the Council that the following resolved be approved:

> **Resolved,** That the physician involved in reopening a Workers' Compensation case should be paid for an initial visit in keeping with the Workers' Compensation Medical Fee Schedule, pending the attainment of the usual, customary, and reasonable fees for all services rendered under Workers' Compensation.

This recommendation was approved by the Council.

The Chairman of the Workers' Compensation Board was notified of the action of the Council.

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⇒ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee reviewed the Résumé.

Your reference committee finds this extensive report to be an excellent way of informing our membership of the efforts made in implementing the actions taken by the House of Delegates. We commend administration for an excellent job. We recommend that all delegates read it and carry it back to their respective counties.

⇒ Your reference committee recommends that the Résumé of Instructions from the 1980 House of Delegates and Actions Thereon by the Council, Board of Trustees, Executive Committee, Officers, Council Committees, and Governmental Agencies be filed for information.

⇒ . . . *The Résumé of Instructions from the 1980 House of Delegates and Actions Thereon by the Council, Board of Trustees, Executive Committee, Officers, Council Committees, and Governmental Agencies was* **FILED FOR INFORMATION** . . .

RESEARCH AND DEVELOPMENT

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Research and Development are as follows:

G. Rehmi Denton, M.D., *Chairman*	Albany
James M. Blake, M.D.	Schenectady
Lynn R. Callin, M.D.	Monroe
George L. Collins, Jr., M.D.	Erie
Ralph S. Emerson, M.D.	Nassau
Henry I. Fineberg, M.D.	Suffolk
Carl Goldmark, Jr., M.D.	New York
Walter T. Heldmann, M.D.	Richmond
Edward Siegel, M.D.	Clinton
George T. C. Way, M.D.	Dutchess

The Committee on Research and Development welcomed Past-President G. Rehmi Denton, M.D., as its new Chairman.

Under Dr. Denton's direction, Research and Development addressed a variety of topics while functioning primarily as a "think-tank" and idea and research group.

The Committee, previously composed entirely of Past-Presidents, voted (as per the motion of Lynn Callin, M.D.) to expand committee members to include, as regular members, the following officers of the Medical Society of the State of New York: President-Elect and Vice-President.

The Committee on Research and Development gave the Demographic Survey of Physicians in New York State (Resolution 79-16) priority consideration as per the suggestion of the Reference Committee at the House of Delegates 1980 annual meeting. The first step, and most essential component of the Survey, was to establish a master list of physicians on a statewide basis as per Reference Committee recommendation. Because of the consolidation of numerous secondary sources used in forming the master list, it is expected to be the most up-to-date, accurate, and comprehensive listing of practicing physicians in New York State. Though requiring much time, energy, and additional funds, the master list is nearing completion (projected for September, 1981). This list will yield basic demographic data — each physician's name, at least one correct address, county breakdown and specialty breakdown. The projected total of physicians is expected to be approximately 48,000.

The Committee on Research and Development decided that, at present, no additional information would be sought. Maintenance methodologies and verification procedures are in the process of being developed. Once the list is complete, it can be used for a number of things — membership development, demographic studies, health manpower studies, comparisons of physician distribution before and after the malpractice crisis, etc.

CORPORATE VISITATION PROGRAM

The Corporate Visitation Program was initiated within the Committee on Research and Development in 1980, with the help of the American Medical Association in response to the growing number of Business-Medical Groups surfacing across the country. These groups, on both county and state levels, direct their efforts towards containing health care costs.

The Corporate Visitation Program is under continual development and expansion. During 1980–81, the program met a total of four (4) times. Program guidelines were established and a primary objective was formulated: the program's purpose was to effect actual cost savings in relation to health care without sacrificing the quality of that care. This would be accomplished by Industry and Medicine working together to solve mutual problems on legal, political, medical, and corporate levels. Russell Schuck, Manager of Employee Benefits, IBM, and Ralph M. Schwartz, M.D., President of the Medical Society of the State of New York, were chosen as Co-Chairmen, representing Industry and the MSSNY, respectively.

The Malpractice Crisis and Physician Awareness has been, and will continue to be, discussed. Future projects that have begun to be discussed include a seminar or presentation which would seek the use of industry consultants and foundation or corporate funding.

MEDICAL MALPRACTICE LEGISLATION CHART

The Department of Research and Development, in response to the Malpractice Crisis, compiled a chart of state-by-state medical malpractice legislation from 1975–80. It was accompanied by a 'Glossary of Statute Definitions.' This was distributed to Corporate Visitation Program Participants, American Medical Association House of Delegates, Medical Society of the State of New York Councilors, American Medical Association Legislative Department, and New York State Senate and Assembly Leaders. It will appear in the September, 1981, issue of the *New York State Journal of Medicine*. In addition, state-by-state updating has been begun.

MATERNAL MORTALITY

The Director of Research and Development, Ms. Deborah Siegel, is writing a grant in cooperation with George J. Lawrence, Jr., M.D., Director of Scientific Activities, and Roderick McLean, M.D., Chairman of the Maternal and Child Health Committee. It is hoped that this grant will re-establish funding for the Maternal Mortality Studies (done on a continuous basis up until 1978). Re-establishment of the Study will insure a continuous data base to study the economic, legal, environmental, and social effects of the times on maternal mortality. Once relationships have been studied, recommendations to reduce maternal mortality may be made.

RETURN OF DUES PROGRAM

The Department of Research and Development in conjunction and cooperation with the Division of Insurance and Membership Benefits has and will continue to explore and research such programs as the Return of Dues Program. At the present moment in time, this kind of program would be too costly in the long run. Explorations into long range membership benefits programs will continue.

FOR-PROFIT ORGANIZATION

The Department of Research and Development, also in cooperation with the Division of Insurance and Membership Benefits, is exploring possibilities of an appropriate 'for-profit' organization, which will allow additional monies to be brought into the Medical Society of the State of New York without threatening its tax exempt status. Perhaps one of the most positive aspects of this type of venture would be to keep membership dues down — which is a potent membership benefit.

EMPIRE STATE MEDICAL, SCIENTIFIC, AND EDUCATIONAL FOUNDATION, INC.

The Committee on Research and Development wishes to see the Empire State Medical, Scientific, and Educational Foundation, Inc., become active again. To this end, the legality of including a line for a voluntary contribution to the Foundation on the membership dues card was explored. No legal bars were found and recommendation for approval will be asked of the Council in the near future. Yearly voluntary contributions of members will enable projects to be done within the auspices of the Foundation and will enhance its image while providing useful information from studies done.

EXPANSION OF LIBRARY SERVICES

The library and its potential were discussed by the Committee. Further discussions concerning the future of the library will continue.

FUTURE RESEARCH AND DEVELOPMENT PROJECTS

Within the following months, Research and Development will address itself to a number of projects (some of which, due to time limitations, were tabled until early fall, 1981):

1. A comparative study on medical malpractice rates across the country noting geographic breakdown is already underway.
2. A study of cost containment courses in medical schools, done in cooperation with the American Medical Association, is also currently being prepared.
3. Consideration of a study which would allow specialty society representation at the House of Delegates as is done in the American Medical Association.
4. Consideration of a study as to the value of creating an

organization of the New York State Association of Medical Staff Leaders.

5. Consideration of a study to explore the feasibility of either establishing a comprehensive Health Practices Act or "Redefining the Practice of Medicine." The purpose of this would be to try and re-establish physician leadership in the delivery of Health Care.
6. Members of the Committee would also like to address an examination of the *New York State Journal of Medicine*, and should that examination reveal the need for restructuring, begin to determine what changes should be made.
7. The Committee will formulate a long range planning chart for the Medical Society of the State of New York. The purpose will be to clarify direction and aid in realizing objectives; it will evaluate the trends of professional organizations and physicians, thereby, making the Medical Society of the State of New York better able to address member needs.

Respectfully submitted,

G. Rehmi Denton, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee notes with satisfaction that the demographic survey of physicians in New York State is nearing completion and the Committee on Research and Development should be commended for giving priority consideration to this valuable master list. We also commend the committee on the expansion of the Corporate Visitation Program and encourage the Committee to address the seven future projects mentioned in its report.

⟹ Your reference committee recommends that the report of the Committee on Research and Development be filed for information.

⟹ . . . *The report of the Committee on Research and Development was* **FILED FOR INFORMATION** . . .

Resolution 81-9, Change of the Name of the Section on Otolaryngology and Maxillofacial Surgery to the Section on Otolaryngology — Head and Neck Surgery

Introduced by Fouad B. Michael, M.D., Delegate, Section on Otolaryngology and Maxillofacial Surgery

Whereas, The American Board of Otolaryngology has changed its name to the American Board of Otolaryngology — Head and Neck Surgery; and

Whereas, The American Academy of Otolaryngology has accordingly changed its name to the American Academy of Otolaryngology — Head and Neck Surgery; therefore be it

Resolved, That the House of Delegates of the Medical Society of the State of New York change the name of the Section on Otolaryngology and Maxillofacial Surgery to the Section on Otolaryngology — Head and Neck Surgery.

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

There was consensus of opinion that until the corresponding statewide specialty society changes its name, the name of the section should continue to be "Section on Otolaryngology and Maxillofacial Surgery."

⟹ Your reference committee recommends that Resolution 81-9 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-9* . . .

Resolution 81-11, Search Committee for the Position of Executive Vice-President

Introduced by Medical Society of the County of Schenectady

Whereas, The Executive Vice-President of the Medical Society of the State of New York is its chief executive officer; and

Whereas, No personnel policy exists to define the method of selection if and when a vacancy should occur; and

Whereas, We believe that an advisory committee representing diversified experience in the affairs of organized medicine can be helpful to the Council in the search; therefore be it

Resolved, That the Medical Society of the State of New York establish a search committee for the position of Executive Vice-President. The members of such committee will include representatives of the House of Delegates, along with representatives of the Council, the Board of Trustees, and membership at large. This search committee is to be appointed by the President.

PAST HOUSE ACTION: Resolution 75-50

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Based on testimony presented at the hearing, your reference committee amended Resolution 81-11 as follows:

Resolved, That the Medical Society of the State of New York establish a search committee for the position of Executive Vice-President. The members of such committee will include representatives of the House of Delegates, along with representatives of the Council, the Board of Trustees, and membership at large. This search committee is to be appointed by the President forthwith; and be it further

Resolved, That the search committee consider both physicians and nonphysicians in the selection of an Executive Vice-President.

⟹ Your reference committee recommends that Resolution 81-11 be adopted as amended.

⟹ . . . *The House, after discussion, voted to* **ADOPT** *Resolution 81-11 as* **AMENDED** . . .

Resolution 81-13, Surplus of Physicians

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The Graduate Medical Education National Advisory Committee (GMENAC), in its September 30, 1980, report to the Department of Health and Human Services, projected a national excess of 70,000 physicians in 1990, 145,000 by the year 2000, and a surplus of physicians in 18 specialties; and

Whereas, Many physicians and students of medicine and of osteopathy are concerned about the effect of a manpower surplus in their respective specialties and locales of practice; and

Whereas, The choice of location of practice by future physicians may be influenced by identification in New York State of regions where physician surpluses might be expected to cause a detriment to the existing quality of local health care; and

Whereas, Information relative to projected numbers of practicing physicians will better enable locales and specialty groups to plan for a facilitated assimilation of increased numbers of practicing physicians; therefore be it

Resolved, That the Medical Society of the State of New York undertake to study the impact of predicted physician surpluses in New York State; and be it further

Resolved, That the Medical Society of the State of New York make available such information in a publication to be distributed to all members of the Medical Society of the State of New York, and to other interested individuals.

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D, *Chairman.*

Since the information called for in the resolution will become available through the Demographic Survey of Physicians in New York State, your reference committee feels that this resolution is redundant.

⟹ Your reference committee recommends that Resolution 81-13 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-13* . . .

Resolution 81-21, Restructuring and Reorganization of the Medical Society of the State of New York

Introduced by John T. Prior, M.D., as an Individual

Whereas, The House of Delegates of the American Medical Association, at its annual meeting in June, 1981, approved a restructuring and reorganization of that organization; and

Whereas, This restructuring and reorganization was the end product of six months of review and analysis including a survey of physicians' attitudes toward the AMA; and

Whereas, This restructuring and reorganization was predicated on the assumption that if the AMA disappeared today, someone would have to establish a new one tomorrow; and

Whereas, This restructuring and reorganizing process determined what activities were necessary and effective, and which should be expanded, curtailed or eliminated and what other activities should be initiated; and

Whereas, At this junction in its history, on the eve of its 175th anniversary the Medical Society of the State of New York should engage in similar soul-searching exercise to ascertain what are the needs, goals, and expectations of its members and potential members in the years ahead; therefore be it

Resolved, That the Speaker of the House of Delegates of the Medical Society of the State of New York appoint a special committee, representative of the district branches, to study "The Future Course of the Medical Society of the State of New York"; and be it further

Resolved, That the final recommendations of the special committee be presented to the next annual meeting of the House of Delegates.

Fiscal Note: Approximately $50,000 to $60,000.

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

The Committee on Research and Development in its annual report stated: "The Committee will formulate a long range planning chart for the Medical Society of the State of New York. The purpose will be to clarify direction and aid in realizing objectives; it will evaluate the trends of professional organizations and physicians, thereby, making the Medical Society of the State of New York better able to address member needs."

Since the Committee on Research and Development is addressing this subject, your reference committee recommends that Resolution 81-21 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-21* . . .

Resolution 81-22, Regulation of the Practice of Medicine

Introduced by Medical Society of the County of Queens, Inc.

Whereas, One of the prime principles of the present Federal Administration is an attempt to reduce the vast amount of over-regulation which is present in the federal government; and

Whereas, The Health Care System in the State of New York, once the finest in the nation, has deteriorated markedly due to over-regulation; and

Whereas, This over-regulation involves not only physicians but hospitals and nursing homes as well; and

Whereas, The public interest could be better served by a diminution in the amount of regulation both on the practice of medicine and hospital practice; therefore be it

Resolved, That the President of the Medical Society of the State of New York appoint a Council committee to study all aspects of over-regulation in the practice of medicine in New York State and submit appropriate recommendations to the Council to reduce governmental regulations.

Fiscal Note: $5,000.

PAST HOUSE ACTION: Resolutions 78-55 and 78-62

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

It is the feeling of your reference committee that the main thrust of the State Society has been to reduce regulations in the practice of medicine in New York State through the Council and its various committees. Therefore, we feel that this resolution is unnecessary.

⟹ Your reference committee recommends that Resolution 81-22 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-22* . . .

Resolution 81-39, Voluntary Contribution to the Empire State Medical, Scientific, and Educational Foundation, Inc.

Introduced by G. Rehmi Denton, M.D., as an Individual

Whereas, The Empire State Medical, Scientific, and Educational Foundation, Inc., has been inadequately funded; and

Whereas, The full potential of the Foundation has never been fully realized; and

Whereas, The Foundation should play a very important role in Health Care in New York State; therefore be it

Resolved, That the Medical Society of the State of New York add an extra line on the annual dues notices, requesting a voluntary contribution to the Empire State Medical, Scientific, and Educational Foundation, Inc.; the amount to be determined by the Council.

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee wishes to present the following substitute resolution:

Resolved, That the Medical Society of the State of New York publicize and explain the function of the Empire State Medical, Scientific, and Educational Foundation, Inc., and encourage the Foundation to solicit voluntary contributions to carry out the work of the Foundation.

Fiscal Note: The Foundation to provide funding for the solicitation of voluntary contributions.

⟹ Your reference committee recommends adoption of the substitute resolution for Resolution 81-39.

⟹ . . . *The House voted to* **ADOPT** *the substitute resolution for Resolution 81-39* . . .

Resolution 81-40, Proposed Member of the Medical Student Membership as a MSSNY Delegate to the AMA House of Delegates

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The precedent has been established by a number of state medical societies to annually reserve for a medical student member a position of society delegate or alternate delegate to the House of Delegates of the American Medical Association; and

Whereas, By voicing opinions, through their medical student member delegate to the House of Delegates of the American Medical Association, the medical student sections of these respective states have assumed unique and dominant positions in national medical politics; and

Whereas, The Student Memberhsip of the Medical Society of the State of New York counts its constituents from among the largest per capita pool of students and schools of medicine and of osteopathy than any other state in the Union, but continues to lag behind much smaller states in both student interest and political clout on the national level of organized medicine; and

Whereas, The Student Membership of MSSNY is currently funded by the Medical Society of the State of New York to send a nonvoting observer to the proceedings of the House of Delegates of the American Medical Association; and

Whereas, Without a voice on the New York State Delegation to the House of Delegates of the American Medical Association the scope of accomplishment and impact of the Medical Student Membership of MSSNY on "organized student medicine" outside the confines of New York State is essentially crippled, relegating MSSNY's student membership to a back-seat when compared with the national voice exercised by the American Medical Student Association (AMSA) chapter in New York State; and

Whereas, The establishment of a New York State student delegate to the House of Delegates of the American Medical Association would significantly increase the interest and political leverage of New York State medical students and thereby serve as a positive factor in aiding membership recruitment efforts by the Medical Student Membership of the MSSNY; therefore be it

Resolved, That the Medical Society of the State of New York support the policy that each year, in lieu of providing for the selection of one student member to attend the Interim and Annual Meetings of the House of Delegates of the AMA, at least one delegate or one alternate delegate from the total number of delegates that the Medical Society of the State of New York shall be entitled at the American Medical Association shall have been elected from among qualified student members nominated by the medical student membership.

Fiscal Note: (No additional expenditure beyond budgeting allowance established by Resolution 79-44)

PAST HOUSE ACTION: Resolution 79-44

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⟹ *Report of the Reference Committee on Reports of Officers:* The following report was presented by Robert E. Gordon, M.D., *Chairman.*

Your reference committee was advised by General Counsel that this resolution was in conflict with the Bylaws of the AMA.

⟹ Your reference committee recommends that Resolution 81-40 be not adopted.

⟹ . . . *The House, after discussion, voted to* **NOT ADOPT** *Resolution 81-40 . . .*

⟹ . . . *The House voted to* **ACCEPT** *the report of the reference committee as acted upon by the House . . .*

GOVERNMENTAL AFFAIRS AND LEGAL MATTERS

ETHICS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Ethics are as follows:

Joseph G. Zimring, M.D., *Chairman*	Nassau
Theodore C. Jewett, Jr., M.D.	Erie
Clifford L. Spingarn, M.D.	New York
George Tilley, M.D.	Onondaga
Allen Tisch, M.D.	Orange
Gideon Tropp, M.D.	Chemung
Marcus Wiener, M.D.	Kings

This past year, the Committee has received a number of letters from both county medical societies and individual physicians regarding the type of advertisements being seen in newspapers and magazines. There seems to be much confusion on the part of physicians in attempting to differentiate between advertising and solicitation. The Committee on Ethics attempted to answer all of these inquiries with quotations from both the "*Principles of Professional Conduct*" of the Medical Society of the State of New York and the "*Regulations on Advertising*" of the New York State Board of Regents. The county medical societies were also advised to use the above "*Principles*" and "*Regulations*" as guidelines when answering members of their societies regarding questions concerning advertisements and solicitation.

A letter was received from a physician stating a personal problem with another physician concerning the treatment of a member of his family. This physician was advised that this problem should be adjudicated by the local county medical society.

The Committee on Ethics believes that the MSSNY should have a policy statement on the use of a "No Code" order for terminally-ill patients in the event of cardiac or respiratory arrest. This policy is important because of the increasing publicity being given to the care of terminally-ill patients and because of the increasing interference in the care of these patients by courts and public officials. Some hospitals in the State of New York have instituted in-house procedures to deal with this matter and the committee has received inquiries from hospitals concerning this matter. The validity of "No Code" orders was upheld by the Massachusetts Appeal Court in 1978. A request for the adoption of a policy on this matter was sent to the Council of the MSSNY but was rejected.

The Medical Society of the State of New York received a request from Father John Paris of the Holy Cross College of Worcester, Massachusetts, asking the Society to submit an "amicus curiae" paper in the Brother Joseph Charles Fox case which was before the New York State Court of Appeals. This case involved the withdrawing of death-forestalling mechanical devices from the body of a terminally-ill comatose patient. The Council approved this request and the "amicus curiae" supporting the withdrawal of the mechanical devices was sent to the Court of Appeals on December 5, 1980. On March 31, 1981, the New York State Court of Appeals ruled in favor of withdrawing the mechanical devices in this case because Brother Fox, while competent, had expressed a desire not be be artificially maintained.

Revision of the "*Principles of Professional Conduct*" was submitted to the House Committee on Bylaws. I attended the meeting of the Committee on Bylaws on May 6, 1981, at which time the Committee on Bylaws, after carefully reviewing the revisions and making several changes, agreed to accept the revisions as a substitute for Resolution 80-27.

The Committee on Ethics would like to express its deep appreciation for the counseling and cooperation given to it by J. Richard Burns, J.D., and Donald R. Moy, J.D., and also to Mrs. Joan Grimm for her cooperation and assistance.

The chairman would like to express his appreciation to the members of the Committee on Ethics for their cooperation and understanding.

Respectfully submitted,
Joseph G. Zimring, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Ethics be filed for information.

⟹. . . *The report of the Committee on Ethics was* **FILED FOR INFORMATION** . . .

FEDERAL LEGISLATION

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Federal Legislation are as follows:

William P. Clark, M.D., *Chairman*	Westchester
John C. Bivona, Jr., M.D.	Orange
William A. Dolan, M.D.	Monroe
Irwin Felsen, M.D.	Allegany
Joseph R. Fontanetta, M.D.	Kings
Seymour L. Halpern, M.D.	New York
Lawrence Ravich, M.D.	Nassau
* Arthur Perry	Albany

General Overview. The major activity of the 97th Congress has focused on the budget reconciliation process and the Reagan Administration's proposed cuts in various federal spending programs. As a result, the Committee on Federal

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* Medical Student

Legislation has postponed its usual Spring meeting until late summer or early fall when it is expected that, once the budgetary process has been completed, it will be possible to more accurately assess the viability of particular health legislation in Congress. In the meantime, the Committee has been closely monitoring developments in Congress including the introduction of health-related proposals.

Major issues which arose during the early portion of the new Congress included the President's proposed phase-out of funding for the health planning program and for PSROs, the proposed cap on Medicaid expenditures, and the proposed replacement of public health categorical grants with a block grant approach.

Cooperation with AMA. Following our established practice of cooperating fully with the AMA in furthering mutual objectives, your Committee, in conjunction with MSSNY's administration, responded to an AMA request for action on H.R. 3666 which would repeal the health planning law (PL 93-641), by communicating to our New York State Congressional delegation the support of the State Medical Society for this proposal.

Headquarters Activities. Your Committee, through the activities of the Division of Governmental Affairs, keeps abreast of the latest developments in Congress through three reporting services. Current files are maintained on the major bills pending in both houses, copies of statutes enacted are also obtained, and the *AMA Legislative Round-up* and *AMA Newsletter* providing latest data on federal proposals are mailed to each committee member. The regulatory activity of all federal agencies dealing with health and medicine is monitored by the division through the *Federal Register.* As issues arise requiring action by our Society, the division works with the administration and other staff divisions on the preparation of mailings to our Congressional representative and to governmental agencies. The division also cooperates in the preparation of reports on federal legislation for the *News of New York.*

Acknowledgments. Your chairman is most grateful to the members of your Federal Legislation Committee for their excellent assistance and cooperation. We appreciate the help given by numerous other individuals, including John H. Carter, M.D., Chairman, Commission on Governmental Affairs; Edward Siegel, M.D., Executive Vice-President; Martin J. Tracey, J.D., Director, Division of Governmental Affairs; Paul A. Tagliaferro, J.D., Assistant to the Director; and Vita Chilleme and Darlene DeMatteo, our secretarial staff. Finally, we should also like to thank the representatives of the American Medical Association, who have worked so effectively with us and rendered invaluable assistance.

Respectfully submitted,

William P. Clark, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman*

⟹ Your reference committee recommends that the report of the Committee on Federal Legislation be filed for information.

⟹ . . . *The report of the Committee on Federal Legislation was* **FILED FOR INFORMATION** . . .

STATE LEGISLATION (ANNUAL)

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on State Legislation are as follows:

John H. Carter, M.D., *Chairman*	Albany
Frank A. Bersani, M.D.	Onondaga
Roger D. Billig, M.D.	Richmond
Philip C. Bonanno, M.D.	Westchester
Stephen I. Braitman, M.D.	Suffolk
Philip Cohen, M.D.	Kings
John A. Finkbeiner, M.D.	New York
James M. Flanagan, M.D.	Wayne
Samuel M. Gelfand, M.D.	Nassau
Alexander L. Hastie, M.D.	Madison
Henry W. Kaessler, M.D.	Westchester
Robert M. Kohn, M.D.	Erie
Dattatraya Lanjewar, M.D.	Bronx
Robert Mickatavage, M.D.	Westchester
Richard E. Murphy, M.D.	Clinton
Richard B. Nolan, M.D.	New York
Wilfred Reguero, M.D.	New York
Felix Rosenhain, M.D.	Queens
Richard E. Sullivan, M.D.	Broome
Wayne C. Templer, M.D.	Steuben
* Lawrence J. Levitan	Nassau
Mrs. Margaret Furlong, *Advisor*	Albany

GENERAL OBSERVATIONS

At the time this report is being written in late June, 1981, the State Legislature is still in session but is expected to recess for the summer and reconvene during the summer or early fall to act on major problems requiring urgent consideration, among which, we hope, will be the medical malpractice crisis and MSSNY's proposed legislative solutions. The information, therefore, contained in this report is submitted to the House of Delegates as a progress report. An updated review will be presented in our supplementary report in September. Also, in this report we will submit the recommendations of your Committee, scheduled to meet in September, for MSSNY's 1982 State Legislation Program.

REPORT FORMAT

This report is divided into four major parts:

I. 1981 Session of the New York State Legislature — Overall Commentary;

II. Committee actions on resolutions and directives referred by the House and Council, as well as Council actions on your Committee's recommendations;

III. Review of activities of MSSNY's Legislative Director and Legislative Counsel in Albany and staff operations at Lake Success; and

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* Medical Student

IV. Summary of miscellaneous matters.

I. 1981 SESSION — NEW YORK STATE LEGISLATURE — OVERALL COMMENTARY

In accordance with the directives of the House of Delegates in October, 1980, and with the subsequent approval of the Council, our basic State Legislative Program for 1981 was prepared and presented to the 1981 State Legislature. A detailed description of each bill, as well as identification numbers, and present status, will be found later in this report.

In order, however, to give the House a general understanding of developments before setting forth details, the following evaluation is presented.

OVERALL COMMENTARY

The Medical Liability Insurance Crisis was the focal point of attention for your Committee and MSSNY during the current 1981 Session of the New York State Legislature. While the session began favorably for MSSNY with the introduction of MSSNY's 1981 State Legislation Program, the passage of our Uniform Health Claim Forms Bill and its signing by the Governor (Chapter 11, Laws of 1981), the announcement of a proposed 71% increase in medical liability insurance premiums, effective July 1, forced your Committee and MSSNY to concentrate its legislative endeavors on immediate malpractice reform legislation.

The following is a brief report of the legislation advocated by MSSNY through our Legislative Counsel and Director to accomplish MSSNY's goals in regard to solutions to the malpractice crisis:

1. *Reduction of Awards by Collateral Sources of Payments* — would require the court in a medical malpractice action to reduce the award granted to a successful plaintiff by the amount of cost or expense which the trier of fact has found to have been replaced or indemnified from any collateral source of insurance, minus any premiums paid for such insurance benefits for two years prior to the malpractice action. (A.7741-A, Tallon; S.6489, Flynn) (CHAPTER 269, Laws of 1981)
2. *Medical Malpractice — Structured Awards* — would require that in any action for medical malpractice in which an award is granted to the plaintiff for future pain and suffering which exceeds $100,000 after payment of attorney's fees, the court shall determine the most appropriate means of ensuring regular periodic payments out of such excess for the remainder of the plaintiff's life. Would also provide for the payment of damages for loss of earnings, medical expenses, hospital charges, and other expenses as such expenses are accrued or incurred, under court supervision. (A.1330, Tallon) (S.2421, Pisani) (A.3658, P. Sullivan)
3. *Medical Catastrophe Fund* — would create a State administered fund which would be financed by a surcharge on all amounts paid for indemnification for the costs of health care services. The amount of any judgment, rendered in a medical malpractice action, in excess of $100,000 would be paid out of the fund. (S.6977, Marchi; A.8806, Bianchi)
4. *Medical Malpractice Insurance Act* — would create a Patient's Compensation Fund which would be financed by an annual surcharge of not more than 10% of the cost to each health care provider for the maintenance of financial responsibility in the amount of $100,000. The total amount recoverable for any injury or death of a patient would be limited to $500,000, and the liability of any individual provider would be limited to $100,000. Payments of any amounts awarded in excess of the liability of any individual provider, up to the maximum amount recoverable, would be made out of the fund.
5. *Contingent Fees for Attorneys* — would limit the amount of a contingent attorney's fee in a medical malpractice action based on the net sum recovered after deducting (a) expenses and disbursements for expert medical testimony and investigative or other services properly chargeable to the enforcement of the claim or prosecution of the action; (b) the costs as taxed, including interest upon a judgment; and (c) costs of medical care incurred by the plaintiff.

The first proposal, Collateral Sources, was passed by the Assembly and Senate with only one negative vote and signed into law by the Governor (Chapter 269, Laws of 1981). The Catastrophe Fund Bill and the Structured Awards Bill have been introduced in both houses. The other two proposals have been submitted to the leaders for their consideration and action.

In addition, there were several other malpractice proposals before the Legislature which include the following:

1. *Investment Fund — Pain and Suffering Over $100,000 — Malpractice Only* — would limit the lump sum payment of a malpractice action award for "pain and suffering" to $100,000. The court would be required to order any excess of that amount, after payment of attorney's fees and expenses, placed in one or more specified depositories or invested on behalf of the plaintiff as specified in the bill. Upon the death of the plaintiff, the principal invested would revert to the insurance carrier which paid on behalf of the defendant. (S.6609, Lombardi)
2. *Constitutional Amendment — Malpractice Only* — would provide that the constitution shall not limit the power of the Legislature to enact laws relating to compensation for personal injury to or for the death of persons resulting from malpractice by health care providers, with or without trial by jury. (S.6610, Lombardi)
3. *Malpractice Study Commission* — would create a commission on medical malpractice to examine and study in depth the entire malpractice system and recommend a mechanism for compensation for injuries suffered as a result of medical treatment. The commission would be required to make a preliminary report to the Governor and the Legislature by April 1, 1982, and a final report by April 1, 1983. (S.6608, Lombardi)
4. *Malpractice Rate Freeze and Study Commission* — would prohibit the Superintendent of Insurance from approving any increase in malpractice insurance premium rates until the first day of January next succeeding the date of submission of the final report to the Governor and the Legislature from a temporary state commission on

medical malpractice insurance. (A.7764, Morahan)

5. *Malpractice Panel Bond* — would require the plaintiff to post a bond to cover the defendant's costs of defending a medical malpractice suit if the malpractice mediation panel finds against the plaintiff and he still proceeds to trial and judgment is rendered in favor of the defendant. (A.1517, Nadler)

6. *Malicious Prosecution Actions* — would codify the action for malicious or reckless prosecution, abolishing the current special damage requirement and clarifying the element of malice. (A.6765, Weprin) (A.4712, H. Miller)

7. *Meritless Suits — Attorney's Fees* — would provide that where a jury reaches a unanimous verdict for the defendant and finds that the plaintiff's action was completely without merit, the court shall direct the unsuccessful plaintiff to pay such reasonable attorney's fees as were actually charged to the defendant. (S.409, Floss; A.648, Robach)

To promote these numerous legislative solutions to the medical malpractice crisis, your Chairman and Committee, through our Director and Legislative Counsel, engaged in numerous activities on the Hill in Albany. Following up almost daily communications with the leaders of the Legislature, the offices of the Governor and Lieutenant Governor, the health commissioner and other State agency leaders, they regularly participated in conferences with key legislators, including the Chairmen of the Health, Insurance and Codes Committees in both the Assembly and Senate. In many of these meetings our MSSNY leaders were joined by representatives of our insurance company (MLMIC), the Trial Lawyers' Association, Medical Malpractice Insurance Association (MMIA), Voluntary Hospital Association, and a consumer representation. A continuous day-to-day effort was maintained throughout the session to inform all involved about all possible solutions including MSSNY's malpractice legislation proposals, to convince them of the soundness of MSSNY's views and to persuade them to endorse MSSNY's program of solutions.

In brief, the individual legislators and leaders of the Legislature, as well as the Governor, Lieutenant Governor, and other key State officials have been thoroughly informed about the issues, have been supplied with numerous specific malpractice legislative solutions and are well aware of the problems involved in the current malpractice crisis. At report time, all are awaiting the decision of the Superintendent of Insurance regarding a rate increase, which action is expected by October 1. The leaders of the Legislature are expected to review the situation following the superintendent's decision and, at that time, take whatever action, if any, which is appropriate. At report time, our Director and Legislative Counsel, following numerous contacts with individual legislators and the leaders of the Legislature, including visits to the offices of all members of the State Legislature, believe that the general attitude is favorably disposed towards the medical profession. If the leaders in the Assembly and Senate agree on legislative solutions at the post-recess session and present them to the legislators for their consideration and action, the legislators, from present indications, probably would vote affirmatively on the submitted measures.

As reported elsewhere to the House, our State Medical Society conducted an all out campaign to obtain legislative solutions to the medical liability insurance crisis. Conducted by the office of our Executive Vice-President, our President and President-Elect, the campaign was most effective in Albany. The Conference of County Medical Society Leaders and the Physicians' Rally for action on the medical malpractice insurance crisis proved to be highly successful in carrying MSSNY's views to the members of both houses. Your Chairman, Committee, and our Albany representatives were pleased to have participated in these constructive legislative projects.

As set forth later in this report, MSSNY's 1981 Legislation Program bills on subjects not directly related to the malpractice crisis were submitted and are being considered by the members of the New York State Legislature. In addition, many objectionable measures were opposed and at report time had not been passed by the Legislature. These included bills on generic drug substitution, optometrist use of drugs, and the nurse practitioner act.

Three Major Bills Opposed. The following are three bills which MSSNY opposed and continues to oppose at the 1981 session of the New York State Legislature:

Generic Drugs Substitution. Several discussions were held with the sponsor of the bill, Assemblyman Alexander B. Grannis, who had introduced A-5626-A, which would modify the current "generic drug law" to eliminate the two-line prescription form and require the prescriber to write in his own handwriting "dispense as written" if he desires to disapprove the substitution of a generic drug for the drug prescribed. The Assemblyman had notified MSSNY that the compromise which the Council had approved in regard to his bill involving checking a box or using initials to indicate the physician's desire that the prescription be dispensed as written had been objected to by representatives of pharmacy and State agencies. They maintained that the initials could be forged. The Assemblyman proposed that a further alternative might be considered, namely, writing the letters "DAW" to indicate, without spelling out, "dispense as written." Our representatives informed Assemblyman Grannis that this alternative was not acceptable to MSSNY and, therefore, our State Medical Society would oppose this bill. MSSNY's strong opposition has been made to all members of the Assembly and Senate Education Committee through the distribution of our memorandum opposing A.5626-A and S.4128-A (Lack). The Grannis bill barely passed the Assembly, after debate, by the required 76 votes. At report time, it was in the Senate Rules Committee. The Lack bill was still in the Senate Education Committee.

Optometric Drug Bill. S.2020, Bernstein; A.2020, Lasher, came to life again when the Senate Education Committee considered a revised version, S.2020-A, and delayed action to consider further amendments. Both amendments were not acceptable to MSSNY and our State Medical Society continued very strong opposition to this proposal. Our opposition memoranda to S.2020-B, the latest version of the bill in the Senate, have been distributed to the Senate Education Committee. The bill, which permits optometrists to use drugs under certain conditions, at report time had been sent to the Rules Committee in the Senate and the Ways and Means Committee in the Assembly.

Nurse Practitioner Act. This proposal would permit professional registered nurses to apply for authorization to engage in the expanded practice of nursing (S.6650, Lombardi). Expanded practice of nursing is defined as including initial diagnosis of illness, immunization against preventable diseases, and performing therapeutic and corrective measures, including issuing prescriptions for drugs other than controlled substances. MSSNY representatives, including our President, our Executive Vice-President, our Director and Legislative Counsel, met with the bill's sponsor in his office in Albany and discussed the bill at length. They voiced strenuous objections to the Senator's bill as presently worded. After lengthy discussions in which the Senator listened carefully to MSSNY's objections, he indicated that he would consider the medical profession's views and would consult with us at a later date. Other bills of a similar nature included S.6361 (Pisani); S.6525 (Donovan); and A.7721 (Shaffer). At report time, all bills were dormant in committee.

1981 MSSNY STATE LEGISLATION PROGRAM

The following is a detailed report on our basic State Legislation Program, previously mentioned, which was presented to the 1981 Session of the New York State Legislature. Although the first two proposals have already been reported, we are including them in this summary in order to present a report on the entire basic program. Appropriate identification numbers and present status of each bill are indicated.

1. *Medical Malpractice — Structured Awards* — would require that in any action for medical malpractice in which an award is granted to the plaintiff for future pain and suffering which exceeds $100,000 after payment of attorney's fees, the court shall determine the most appropriate means of ensuring regular periodic payments out of such excess for the remainder of the plaintiff's life. Would also provide for the payment of damages for loss of earnings, medical expenses, hospital charges, and other expenses as such expenses are accrued or incurred, under court supervision. (A.1330, Tallon; S.2421, Pisani); (A.3658 P. Sullivan) In the Senate and Assembly Codes Committees

2. *Reduction of Awards by Collateral Sources of Payments* — would require the court in a medical malpractice action to reduce the award granted to a successful plaintiff by the amount of cost or expense which the trier of fact has found to have been replaced or indemnified from any collateral source of insurance, minus any premiums paid for such insurance benefits for two years prior to the malpractice action. (A.7741-A, Tallon; S.6489, Flynn) Signed into law, Chapter 269, Laws of 1981 (Approval Memo #16).

3. *No-Fault Insurance Law Amendment* — would amend the No-Fault Insurance Law to provide that health service charges shall not exceed usual and customary charges as determined by a committee of the county medical society wherein such services were performed, provided, however, that in counties wherein such committees do not exist, the superintendent shall determine such charges based upon the usual and customary charges imposed for the performance of the same or similar services in such counties. (S.1235-A, Marchi; A.3983-A, Connelly) In the Senate and Assembly Insurance Committees.

4. *Professional Service Corporation Tax Law Amendments* — would amend the Tax Law to permit contributions paid on behalf of shareholders of Professional Service Corporations to pension plans to be accorded the same tax treatment as is afforded to shareholders of other business corporations. (A.281, Robach; S.972, Pisani); (S.4810, Marchi; A.4490, Kremer) In the Senate Tax Committee and the Assembly Ways & Means Committee.

5. *Insurance Coverage for Emergency Medical Treatment in Physicians' Offices* — would require every group insurance policy which provides for physicians' services to include coverage for emergency medical services provided in physician's offices. (A.1855, Tallon) In Assembly Ways and Means Committee.

6. *Medical Society Involvement in Physician Discipline* — would require the State committee on professional conduct to expand its scope to include a newly created county board of professional conduct to function at the county level. Such board would transmit its findings, conclusions, and recommendations to the State committee for its consideration and final recommendations to the State Health Commissioner. County board would be made up of not less than 5 physicians, members in good standing of a county medical society, a component part of MSSNY. (S.5177, Pisani) In the Senate Health Committee .

II. COMMITTEE ACTIONS

Your Committee met in Albany on March 2, 1981, to review activities in Albany and to consider items referred to the Committee by the House of Delegates, the Council, and others and to make recommendations to the Council. Included in the agenda were matters reported under the following headings pertaining to the House and Council:

HOUSE OF DELEGATES RESOLUTIONS — 1980

The following resolutions and actions were referred to the State Legislation Committee from the 1980 House of Delegates. These resolutions were reviewed carefully by your Committee, and the following actions were taken:

1. **Resolution 80-35, Interest on Unpaid Medical Bills Due from Third Party Payors. Adopted and referred by the House of Delegates.**

   Resolved, That the Medical Society of the State of New York seek to introduce and support legislation requiring third party payors to pay interest on unpaid bills of thirty days or more duration, such interest to be computed at the rate of $1\frac{1}{2}\%$ per month, retroactive to the date the bill was rendered.

   RECOMMENDATION — Preliminary negotiations have been held with representatives of the Blues and further meetings will be arranged in order to determine whether the objective of this resolution might be accomplished through agreement with the carriers.

2. **Resolution 80-41, Reopening of Closed Workers' Compensation Board Cases. Adopted and referred concurrently to this Committee and to the Committee on Workers' Compensation and Occupational Health.**

Resolved, That the Medical Society of the State of New York attempt to introduce and support action and seek legislative changes which will clearly state that if said case is reopened the physician who has examined the claimant for such reopening shall be paid usual, customary, and prevailing rates by the compensation insurance carrier.

RECOMMENDATION — Pursuant to a recommendation of the Workers' Compensation Committee, the Council, at its meeting on January 22, 1981, approved a motion that: "the physician involved in reopening a WC case should be paid for an initial visit in keeping with the Workers' Compensation Medical Fee Schedule, pending the attainment of the usual, customary, reasonable fees, for all services rendered under workers' compensation." Your State Legislation Committee was informed that this motion is being implemented by the Workers' Compensation Committee.

3. **Resolution 80-42, Elimination of Workers' Compensation Board Ratings for Physicians Treating WCB Patients. Adopted and referred concurrently to this Committee and to the Committee on Workers' Compensation and Occupational Health.**

Resolved, That the Medical Society of the State of New York support legislation, or take other action to eliminate Workers' Compensation Board physician qualification requirements and accept a valid New York State medical registration and license. These physicians duly registered and licensed should be permitted to treat all patients in accordance with established medical standards.

RECOMMENDATION — Your Committee noted the report to the Council by the Workers' Compensation Committee on January 22, 1981, which indicated that they are continuing their efforts to convince the Chairman of the desirability of this proposal. The Committee was also advised that the Chairman is considering legislation. Your State Legislation Committee will continue to monitor the situation and will be prepared to act accordingly should legislation be introduced regarding this matter.

4. **In lieu of Resolution 80-44, Notification of Results of Hearings, the House reaffirmed Resolution 77-51, which reads as follows:**

Resolved, That the Medical Society of the State of New York petition the Chairman of the Workers' Compensation Board to modify the regulations to mandate notification of decisions and awards be sent to treating physicians and other interested physicians; and be it further

Resolved, That if in the opinion of counsel, legislation to this effect is required, the House of Delegates authorize the Medical Society of the State of New York to seek introduction of such legislation, and urgently press for its passage.

RECOMMENDATION — Your Committee noted that MSSNY representatives on the Advisory Committee on the Medical Fee Schedule and Allied Problems have been seeking the implementation of this proposal for several years and that these representatives have been informed that the Chairman of the Workers' Compensation Board has indicated that he is inclined to effectuate the goal of this resolution. Your Committee will continue to monitor the situation.

5. **Resolution 80-23, Countersuits for Frivolous, Specious or Groundless Medical Malpractice Suits. Adopted and referred by the House of Delegates.**

Resolved, That the Medical Society of the State of New York urge the Legislature of the State of New York to enact legislation to allow countersuits for legal fees and other costs against attorneys who bring or permit to be brought frivolous, specious, or groundless medical malpractice suits.

RECOMMENDATION — Several bills introduced into the Legislature during the current session were designed to discourage frivolous lawsuits and received the full support of this Committee. Included among these bills were: A.6765 (Weprin) which would codify an action for malicious or reckless prosecution and abolish current special damage requirements; A.4712 (M. H. Miller) which would allow professionals to counterclaim against a plaintiff for costs incurred in defending a frivolous claim; A.1517 (Nadler) which would require a plaintiff to post a bond to cover the defendant's costs when the malpractice panel has reached an unanimous determination in favor of the defendant and the plaintiff chooses to proceed to trial; and A.648 (Robach) which would provide for the payment of attorneys' fees and costs incurred by the defendant as a result of defending a suit found to have been totally without merit. To date, these bills are still being considered by the Legislature.

6. **Substitute Resolution for Resolution 80-7, Malpractice Crisis. Adopted and referred by the House of Delegates.**

Resolved, That the Medical Society of the State of New York again advise the government of the State of New York that a malpractice crisis exists today; and be it further

Resolved, That the Medical Society of the State of New York continue to urge the Governor and Legislature of the State of New York to adopt the recommendations of the McGill Commission and the legislative program of the MSSNY.

RECOMMENDATION — Considerable time and effort was expended during the current session to inform the Legislature of the seriousness of the current malpractice crisis and to obtain immediate legislative relief.

7. **Substitute Resolution for Resolutions 80-39 and 80-53 relative to the Triplicate Prescription Program. Adopted and referred by the House of Delegates.**

Resolved, That the Medical Society of the State of New York recommend to the New York State Legislature that the authority of the Commissioner of Health of the State of New York to add a controlled substance to the New York State Triplicate Prescription Program in an emergency situation expire after 60 days, unless specifically authorized for continuation by the legislature; and be it further

Resolved, That the Triplicate Prescription Program be studied by an independent group five years from January 1, 1978, by which time enough evidence may have been accumulated to evaluate its continuation.

RECOMMENDATION — In response to the transmission of this resolution to the Legislature, two proposals have been drafted and are the subject of continuing negotiations between our representatives and the Legislature seeking the development of final proposals which will satisfactorily accomplish our goals.

8. **Resolution 80-6, Determination of Death. Adopted and referred by the House of Delegates.**

Resolved, That the Medical Society of the State of New York wholeheartedly support an amendment to Section 1, p 4140-a of the public health law of the State of New York, which reads as follows:

> Determination of death. A person shall be dead when in the announced opinion of a duly licensed physician, based on prevailing standards of medical practice, such person has experienced an irreversible cessation both of spontaneous respiratory and circulatory functions. If the use of artificial means of support precludes a determination that these functions have ceased, a person shall be dead if in the announced opinion of a duly licensed physician, based on prevailing standards of medical practice, such person has experienced a total and irreversible cessation of brain function.

RECOMMENDATION — No such legislation has yet been introduced into the New York State Legislature; however, we have fully supported such legislation in the past and will continue our support as soon as such legislation is introduced.

9. **Resolution 80-34, Drug Information to Expectant Mothers Required by Chapters 484 and 485 of the Laws of 1978. Adopted and referred concurrently to this Committee and the Committee on Maternal and Child Health.**

Resolved, That the Medical Society of the State of New York continue the legislative effort to repeal Chapters 484 and 485 of the New York State Laws of 1978 which require that the physician or nurse-midwife in attendance shall inform the expectant mother of the drugs that they expect to employ during pregnancy, and of the obstetrical and other drugs that can be used at birth, and of the possible effects of such drugs on the child and mother; and be it further

Resolved, That the MSSNY formulate a program that will meet the needs for providing appropriate information to expectant mothers in cooperation with the American College of Obstetricians and Gynecologists (ACOG), the American Academy of Pediatrics (AAP), and voluntary health agencies who are concerned with caring for expectant mothers.

RECOMMENDATION — Legislation which would substantially modify the present requirements of the law in accordance with recommendations approved by the Council in February, 1980, has been introduced into the Legislature with the support of this Society. A memorandum has been issued to the entire Legislature urging the enactment of the modifications. (S.3942, Trunzo; A.5285, Cochrane)

COUNCIL ACTIONS

1. At its meeting on October 30, 1980, the Council approved and referred to this Committee, a recommendation of the Committee on Alcoholism that the Medical Society of the State of New York support the passage of S.3293 (Padavan); A.4497 (Passannante) with an amendment to make the proposed insurance coverage for alcoholism treatment mandatory rather than optional.

The bill referred to in the recommendation of the Committee on Alcoholism was introduced during the 1979–1980 legislative session and had to be reintroduced under a new number in the 1981 session. A similar bill, S.1314 (Padavan); A.1684 (Passannante) was introduced early in the 1981 session, passed by the Legislature and was signed into law on March 24, 1981. (Chapter 28, Laws of 1981.) It was felt by our legislative representatives that the provision for optional coverage should be enacted before attempting to amend the bill to make such coverage mandatory.

2. At its meeting on January 22, 1981, the Council approved a resolution prepared by the Committee on Aging and Nursing Homes which required that the MSSNY "support proposed changes in the New York State law that would provide legal and financial protection for physicians who serve as clinical consultants to review and survey long-term health care facilities."

RECOMMENDATION — Your Committee, at its meeting on March 2, 1981, was informed by our Legislative Counsel that this resolution will be pursued with the Health Department. In addition, several bills which have been introduced into the Legislature and which deal with the provision of liability protection to physician consultants are being reviewed to determine whether they would satisfy the requirements of this resolution.

3. At its meeting on February 19, 1981, the Council approved a recommendation of the Committee on Hospital and Professional Relations that Resolution 80-21, *Use of Ambulatory Care Facilities for Diagnostic Studies, Evaluations, and Treatment*, be brought to the attention of the Committee on State Legislation for preparation of necessary legislation for introduction at the current session.

RECOMMENDATION — Legislation designed to accomplish the purpose of this resolution was drafted by our Legislative Counsel and was transmitted to the Chairmen of the Senate and Assembly Health Committees for possible introduction. Similar legislation which would accomplish the purpose of this resolution was introduced late in the current session, A.7905 (Vann), and our Legislative Council issued a memorandum in support.

III. ALBANY OPERATIONS AND HEADQUARTERS ACTIVITIES

ALBANY OPERATIONS

The Director, as he has for many years, represented our State Medical Society at the State Capitol during the 1981 session of the State Legislature. Working closely with the Society's Legislative Counsel, the Director contacted key lawmakers and their staffs to discuss bills of interest to the medical profession and to promote the implementation of MSSNY's legislative program. As part of MSSNY's all-out campaign to obtain legislative solutions to the malpractice insurance crisis, the director personally visited the office of each one of the 210 legislators (150 in the Assembly and 60 in the Senate).

During the time the Legislature is in session, an answering service is in operation in Albany to assist the Director in maintaining communication with the legislators and their staffs, county medical societies, individual physician members, and the State Society headquarters.

Our State Medical Society's weekly legislative bulletin, *Capitol News*, has been published in Albany during each session of the State Legislature since 1965. This publication was delivered each week to all members of the Legislature, county medical society officers and executives, and key physicians throughout the State. The *Capitol News* is designed to keep its readers abreast of important developments in health legislation in New York State and to advise them of the opinion of the State Medical Society on the key health issues which are being discussed in the Legislature. To date, 23 issues have been distributed this year.

HEADQUARTERS ACTIVITIES

Working under the supervision of the Director our division headquarters' staff, guided by the assistant to the director, provided vital support for our Albany activities. Over the entire session, more than 130 memoranda addressed to specific bills were prepared in cooperation with legislative counsel and sent to the legislators. This teamwork of personal contact and written communication was the key to success in gaining legislative approval of some of our bills and averting a massive number of undesirable measures.

The division staff, working under the supervision of the Director, is responsible for analyzing all State and federal legislation involving health care and practice of medicine. Extensive files are maintained on key topics and issues which arise concerning the relationship of medicine and government, as well as on individual bills which are introduced in the State Legislature.

Thousands of Bills Reviewed. Approximately 16,000 bills were introduced in the State Legislature during the 1981 session. These bills were screened by the Director, his assistant, and Legislative Counsel. Those involving health care (more than ten percent) were referred for analysis and comment to the appropriate Interspecialty Committee representatives and to the chairmen of the appropriate State Society committees. These comments, as well as recommendations from county medical society leaders via the Legislation Opinion Report of *Capitol News*, were considered along with information in division files in establishing the State Society's positions on all health legislation. Position statements and memoranda were prepared in cooperation with our Legislative Counsel and disseminated to the legislators and governmental officials. The staff also cooperated with other Society divisions by providing them with necessary information and seeking their advice and recommendations on pending legislation and regulations.

Memoranda setting forth MSSNY's position on the over 130 individual legislative proposals previously mentioned were drawn up and sent, not only to legislators, but also to members of the State Society's Council, Board of Trustees, the State Legislation Committee, and to the staff members of county medical societies.

Center of Information. Information and materials for publication in the *News Of New York* were provided by the staff of the division through its Legislation Information Center. Varied requests for information from county medical societies, individual members, the AMA, and others were answered as quickly as possible. In addition, suggestions and opinions obtained from individual members and county medical societies regarding legislative issues were tabulated and recorded for use in preparing the State Society's positions on specific legislation.

Special Publications. The Division continued to distribute the publication entitled "*A Physician's Guide to the New York State Legislature,*" which describes the procedure of the State Legislature and contains necessary information and advice on how to contact legislators effectively. The Division also prepared and distributed its publication entitled "*1980 Health Legislation*" which is a concise report on health bills of major interest to the medical profession acted upon during the session of the New York State Legislature. A similar report for the current 1981 session will be prepared and distributed after the vital information necessary is available.

LEGISLATIVE COUNSEL

The activities of our State Medical Society at the Capitol is a result of a joint effort by our Division and our Legislative Counsel, the law firm of Rice & Conway. Mr. Rice and Mr. Conway established their own law firm after many years with the law firm of DeGraff, Foy, Conway, and Holt-Harris, where they worked on MSSNY matters.

Communications setting forth MSSNY's views and positions on important health legislation were drawn up and reviewed in close cooperation with the division staff, which played a vital role in their preparation and mass distribution. The statements were filed with the Governor, the leadership in both chambers of the Legislature, chairmen and members of committees considering health bills, the sponsors of the bills, and individual members of both houses. To reinforce these written statements, our Legislative Counsel and Director regularly met the lawmakers personally to discuss in detail the bills and the issues to which they related in more detail. Our Legislative Counsel also worked closely with our Director and other State Society representatives on government regulatory matters.

IV — MISCELLANEOUS MATTERS

PUBLIC HEARINGS & PRIVATE CONFERENCES

Since last September, our State Medical Society has presented a number of statements at public hearings conducted by governmental agencies and legislative committees. In addition, Society representatives, including our Director and Legislative Counsel, have met privately with key administrative officials and lawmakers on a variety of important matters. Among the major topics addressed have been the no-fault auto insurance fee schedule and pending lawsuit, malpractice reform legislation, professional licensure and discipline, nurse practitioner legislation, the optometric drug bill, and generic drug legislation.

NEW YORK STATE ASSOCIATION OF THE PROFESSIONS (NYSAP)

Your Committee, through our Director, worked very closely with the New York State Association of the Professions in regard to numerous legislative problems of common interest. Our Director continued to serve on NYSAP's Board of Directors. He also served not only as a member of NYSAP's Legislation Breakfast Committee but acted as Chairman of the Legislation Committee.

MSSNY's involvement in NYSAP's activities was productive during 1981. The primary bill on NYSAP's legislation program was MSSNY's Professional Service Corporation Tax Benefits Bill. As the result of a mailgram sent by NYSAP to the Governor supporting MSSNY's Collateral Sources Bill, the Governor mentioned NYSAP in his memorandum approving our proposal.

COMMITTEE MEETING — ANNUAL CONFERENCE

As mentioned frequently in this report, your Committee is scheduled to meet in September, at State Medical Society headquarters, for the primary purpose of developing recommendations for MSSNY's 1982 State Legislation Program and your Committee's future activities, which will be submitted in the fall to the House. Our second annual conference of county medical society legislative representatives was held in Albany on March 3, 1981, during which county society representatives discussed medicine's views in personal visits with legislators in their offices at the State Capitol. We believe that this meeting was a vital part of the successful effort to obtain passage of the Collateral Sources Bill and in gaining other favorable legislator reactions. Your Committee plans to continue this successful new-type Albany Conference in early 1982 as a replacement for the fall meeting formerly held in Syracuse.

ACKNOWLEDGMENTS

On behalf of your Committee, and especially your Chairman, we thank all who cooperated with us. To Legislative Counsel, John C. Rice, Esq., and Gerard L. Conway, Esq., we are indebted for their work in furthering our legislative goals. We also express our gratitude to Edward Siegel, M.D., Executive Vice-President, who was continuously involved with our Committee at the decision-making level. Thanks also go to Martin J. Tracey, J.D., Director, Division of Governmental Affairs; Paul A. Tagliaferro, J.D., Assistant to the Director; and to Vita Chilleme and Darlene DeMatteo, Division secretarial staff.

Respectfully submitted,

John H. Carter, M.D., *Chairman*

STATE LEGISLATION (SUPPLEMENTARY)

To the House of Delegates, Ladies and Gentlemen:

This report supplements the information contained in our annual report which was prepared in late June, 1981.

1981 LEGISLATIVE SESSION

At the time that our annual report was prepared in late June, the New York State Legislature was still in session but was winding-up its activities in preparation for the summer recess. As indicated in that report, our Collateral Sources Bill had just been signed into law (Chapter 269, Laws of 1981) and our other major malpractice proposals, the Medical Catastrophe Fund Bill (S.6911, Marchi; A.8806, Bianchi) and the Structured Awards Bill (A.1330, Tallon; S.2421, Pisani) has been introduced into the Legislature.

Governor Carey's approval of the "collateral sources" legislation immediately enabled the Medical Liability Mutual Insurance Company, whose request for a 71% increase of malpractice insurance premiums triggered MSSNY's all-out drive for legislative relief, to agree to reduce its request to 52%. The physician-owned company also agreed with State Insurance Superintendent Albert B. Lewis to postpone its request pending the findings of an independent actuary hired by the State.

During the summer recess, the State Medical Society continued to press for further meaningful legislative action in the fall to solve "once and for all" the crisis situation in regard to medical malpractice insurance premiums. Immediately following the release by the Insurance Department on September 9, 1981, of the preliminary report from the Department's independent consulting actuary which recommended an increase of 107% in medical malpractice insurance premiums, the activity of the division and of our legislative representatives in Albany was again intensified. Arrangements were made immediately to meet with legislative and governmental leaders to determine what responsive action they intended to take to resolve the now independently confirmed malpractice insurance crisis. Arrangements also were made to testify at the hearings scheduled by the Insurance Department to review "alternative forms of providing medical malpractice insurance which may affect premium costs."

At this time, the legislative leadership is awaiting the decision of the Superintendent of Insurance regarding a rate increase, which action is expected during October. The leaders of the Legislature are expected to review the situation following the superintendent's decision and, at that time, take whatever action, if any, appropriate in view of the superintendent's findings.

A complete final report summarizing health bills of major interest to the medical profession acted upon during the 1981 session of the New York State Legislature, entitled "*1981 Health Legislation,*" will be available at the House of Delegates.

COMMITTEE MEETING

Your Committee met at Society headquarters on September 24, 1981, to develop MSSNY's 1982 State Legislation Program. Since it was impossible to schedule a meeting of the State Legislation Committee in time to present a report to the Council, this report is being submitted directly to the House of Delegates.

Your Committee reviewed all major developments during the 1981 session of the New York State Legislature, including our own State Legislation Program, as well as the medical malpractice insurance crisis, the Nurse Practitioner Act, and many other important issues.

Following in-depth discussions, your Committee voted to recommend that the following proposals be included in our *1982 State Legislation Program:*

1. *Medical Catastrophe Fund* — would create a State administered fund which would be financed by a surcharge on all amounts paid for indemnification for the costs of health care services. The amount of any judgment, rendered in a medical malpractice action, in excess of $100,000 would be paid out of the fund. (S.6977, Marchi; A.8806, Bianchi)
2. *Malpractice Panel Bond* — would require the plaintiff to post a bond to cover the defendant's costs of defending a medical malpractice suit if the malpractice mediation panel finds unanimously against the plaintiff and he still proceeds to trial and judgment is rendered in favor of the defendant. (A.1517, Nadler)
3. *No-Fault Insurance Law Amendment* — would amend the No-Fault Insurance Law to provide that health service charges shall not exceed usual and customary charges as determined by a committee of the county medical society wherein such services were performed, provided, however, that in counties wherein such committees do not exist, the superintendent shall determine such charges based upon the usual and customary charges imposed for the performance of the same or similar services in such counties. (S.1235-A, Marchi; A.3983-A, Connelly)
4. *Professional Service Corporation Tax Law Amendments* — would amend the Tax Law to permit contributions paid on behalf of shareholders of Professional Service Corporations to pension plans to be accorded the same tax treatment as is afforded to shareholders of other business corporations. (A.281, Robach; S.972, Pisani); (S.4810, Marchi; A.4490, Kremer)
5. *Insurance Coverage for Emergency Medical Treatment in Physicians' Offices* — would require every group insurance policy which provides for physicians' services to include coverage for emergency medical services provided in physicians' offices. (A.1855, Tallon)
6. *Medical Society Involvement in Physician Discipline* — would require the State committee on professional conduct to expand its scope to include a newly created county board of professional conduct to function at the county level. Such board would transmit its findings, conclusions, and recommendations to the State committee for its consideration and final recommendations to the State Health Commissioner. County board would be made up of not less than 5 physicians, members in good standing of a county medical society, a component part of MSSNY. (S.5177, Pisani)

FOR APPROVAL BY THE HOUSE OF DELEGATES

REGENTS LEGISLATIVE CONFERENCE

The Board of Regents conducted its perennial Annual Legislative Conference in Albany on September 11, 1981. The purpose of this meeting is to give to each profession regulated by the State Education Department an opportunity to present its legislative recommendations and comments on the Regents' legislative proposals for the coming year. MSSNY's views were set forth in a statement by your Chairman on behalf of our Executive Vice-President. Among the topics covered by our State Medical Society were the optometric drug bill, the malpractice situation, and proposed legislation which would expand the practice of nursing. In addition, MSSNY strongly urged that the Regents consult with concerned professionals during the initial stages of the development of specific legislative proposals rather than after a proposal, such as the one involving nurse practitioners, has been drafted.

Once again, your Chairman, on behalf of your Committee, conveys our thanks to all who participated in our endeavors during the 1981 session of the New York State Legislature. Your Chairman personally is most grateful to the members of the Committee for their continuing wholehearted cooperation. Your Chairman would also like to take this opportunity on behalf of the entire Committee to express our best wishes for a speedy recovery to Mr. Martin J. Tracey, J.D., our Director of Governmental Affairs, who is recovering from a recent operation.

Respectfully submitted,
John H. Carter, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

⟹ Your reference committee recommends that the annual and supplementary reports of the Committee on State Legislation be filed for information.

⟹ . . . *The annual and supplementary reports of the Committee on State Legislation were* **FILED FOR INFORMATION** . . .

The supplementary report of the Committee on State Legislation was reviewed.

Featured within the report was a presentation of the Medical Society of the State of New York's State Legislation Program for 1982 which includes the following measures:

1. Medical Catastrophe Fund. (S.6977, Marchi; A.8806, Bianchi)

2. Malpractice Panel Bond. (A.1517, Nadler)
3. No-Fault Insurance Law Amendment. (S.1235-A, Marchi; A.3983-A, Connelly)
4. Professional Service Corporation Tax Law Amendments. (A.281, Robach; S.972, Pisani); (S.4810, Marchi; A.4490, Kremer)
5. Insurance Coverage for Emergency Medical Treatment in Physicians' Offices. (A.1855, Tallon)
6. Medical Society Involvement in Physician Discipline. (S.5177, Pisani)

⟹ Your reference committee recommends approval of this proposed legislative program.

The House amended the program to include opposition to: Workers' Compensation — Maximum Fee Schedule (A.7305, Engle).

⟹. . . *The House, after discussion, voted to* **ADOPT** *this portion of the reference committee report as* **AMENDED** . . .

JUDICIAL COUNCIL

To the House of Delegates, Ladies and Gentlemen:

The members of the Judicial Council are as follows:

Thomas S. Bumbalo, M.D., *Chairman*	Erie
George L. Collins, Jr., M.D.	Erie
Ralph S. Emerson, M.D.	Nassau
Joseph J. Kaufman, M.D.	Wayne
Carl Goldmark, Jr., M.D.	New York
Ralph M. Schwartz, M.D., *President, ex officio*	Kings
Victor J. Tofany, M.D., *Secretary, ex officio*	Monroe

In accordance with the requirements of Article VII, Section 3 of the Bylaws, the Judicial Council held an organizational meeting on October 2, 1980, immediately following the close of the Annual Meeting of the House of Delegates. Thomas S. Bumbalo, M.D., was elected chairman.

On June 18, 1981, the Judicial Council met to hear an appeal by a physician from a decision of the Medical Society of the County of Westchester refusing to grant a hearing concerning the appellant's complaint against a fellow physician member. After due deliberation of those members of the Judicial Council present and voting, they adopted unanimously that the county medical society be directed to grant a hearing concerning the appellant's complaint.

There are no other appeals pending before the Judicial Council at the time of the preparation of this report.

The Judicial Council, through its chairman, wishes to thank J. Richard Burns, J.D., General Counsel, and Donald R. Moy, J.D., Staff Attorney, for their legal advice and administrative assistance in the conduct of the activities of the Judicial Council. A special vote of thanks to Mrs. Joan Grimm for her most efficient activities as recorder and secretary.

Respectively submitted,

Thomas S. Bumbalo, M.D., *Chairman*

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Judicial Council be filed for information.

⟹ . . . *The report of the Judicial Council was* **FILED FOR INFORMATION** . . .

NEW YORK STATE ASSOCIATION OF THE PROFESSIONS

To the House of Delegates, Ladies and Gentlemen:

The representatives of the New York State Association of the Professions are as follows:

Henry I. Fineberg, M.D.
Carl Goldmark, Jr., M.D.
Martin J. Tracey, J.D.

The New York State Association of the Professions (NYSAP) was organized to promote legislation favorable to professions licensed to practice under the laws of the State of New York, and to their constituents, and to oppose any undesirable legislation. This objective includes regulations, primarily those of the State Education Department and the Board of Regents.

Eight organizations make up NYSAP. These are: New York State Association of Architects; New York State Society of Certified Public Accountants; Dental Society of the State of New York; Medical Society of the State of New York; New York State Council of Landscape Architects; New York State Society of Professional Engineers; New York State Veterinary Medical Society; and Pharmaceutical Society of the State of New York.

Many years ago, our State Medical Society was largely responsible for the establishment of NYSAP and was one of the founding organizations. Since its creation, MSSNY has been a principal and formidable supporter of the organization, not only through active participation in its activities but through financial contributions.

Our State Medical Society has three members on NYSAP's Board of Directors, two of them, Carl Goldmark, Jr., M.D., Past-President of MSSNY, and MSSNY's Executive Vice-President Emeritus, Henry I. Fineberg, M.D., were among the founding fathers. The third director, Martin J. Tracey, J.D., MSSNY Director, Division of Governmental Affairs, has been long active in the activities of the organization, particularly in regard to legislation.

In belonging to NYSAP, our State Medical Society has the unique opportunity to join with other licensed professions in presenting a united front on issues of common interest. Such opportunity presents itself frequently not only in the area of State legislation, but in the field of regulations by State governmental agencies.

Through the work of its Director of the Division of Governmental Affairs, MSSNY plays an important role in NYSAP's activities. As Chairman of NYSAP's Committee on

Legislation, he is in a prime position. Our director not only advises the organization concerning our State Medical Society's views regarding health legislation in general, but strongly advocates and works for endorsement of MSSNY's annual State legislation program. He has been successful in obtaining such endorsements and in gaining support of NYSAP in opposing poor health proposals.

MSSNY benefited in numerous ways from its participation in NYSAP during 1981. An excellent opportunity was afforded our representatives on the Board to meet key State legislators when they participated in NYSAP's fourth annual legislation breakfast held in Albany, March 24, 1981. Our director, not only served on the arrangements committee, but made the opening remarks as NYSAP's Legislation Committee Chairman. Strong support was given to major MSSNY legislative proposals when our Professional Service Corporations Tax Benefits Bill was made the primary bill in NYSAP's 1980 Legislation Program. As the result of a mailgram sent by NYSAP to the Governor supporting MSSNY's Collateral Sources Bill, the Governor cited NYSAP in his memorandum approving our bill.

We are unanimous in the belief that NYSAP has an extremely important function to perform in presenting the views of the licensed professions in New York State to the State legislators in Albany on a united front basis. As a means of strengthening NYSAP, we feel that more individual members are needed. Once again, therefore, we recommend that a notice briefly explaining NYSAP and urging MSSNY members to become members of NYSAP be published, if feasible, in an appropriate MSSNY publication, such as the *News of New York* and the *New York State Journal of Medicine*.

Respectfully submitted,

Henry I. Fineberg, M.D.
Carl Goldmark, Jr., M.D.
Martin J. Tracey, J.D.

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the New York State Association of the Professions be filed for information.

⟹ . . . *The report of the New York State Association of the Professions was* **FILED FOR INFORMATION** . . .

PROFESSIONAL MEDICAL LIABILITY INSURANCE AND DEFENSE BOARD

To the House of Delegates, Ladies and Gentlemen:

The members of the Professional Medical Liability Insurance and Defense Board are as follows:

Herbert Lourie, M.D., *Chairman*	Onondaga
Ronald A. Andree, M.D., *Vice-Chairman*	New York
Charles F. Begg, M.D.	New York
James H. Cosgriff, Jr., M.D.	Erie
Robert E. Fear, M.D.	Suffolk
Samuel M. Gelfand, M.D.	Nassau
Robert Gordon, M.D.	Kings
William G. Hamilton, M.D.	New York
John F. Spring, M.D.	Broome
Harold N. Schwinger, M.D., *Advisor*	Kings
M. Theodore Tanenhaus, M.D., *Advisor*	Kings
Ralph M. Schwartz, M.D., *ex officio*	Kings
Victor J. Tofany, M.D., *ex officio*	Monroe
John A. Finkbeiner, M.D., *ex officio*	New York
J. Richard Burns, J.D., *General Counsel*	Nassau
ex officio	
Donald J. Fager, J.D., *Executive Secretary, ex officio*	New York

Last year, I concluded my report to you with the following observation:

> "Our experience with the malpractice picture leads us to the inescapable conclusion that the malpractice crisis is very much with us and is worsening. We hope that the advice given to the members of the Society will help to improve the safety of our patients and in some small measure reduce liability exposure but we cannot make any impact upon the numbers of claims and the severity of awards without meaningful tort legislation."

Unfortunately, our impression was borne out only too painfully when the Medical Liability Mutual Insurance Company found it necessary to request an increase for policy year July, 1981 to 1982, of 71%. (Now reduced to 52% by the enactment of the Collateral Source Bill.) While the Superintendent of Insurance will not render a decision on the Company filing until October 1, 1981, we must make every effort to convince the State officials that the malpractice problem is seriously jeopardizing the health care system in that State.

Inevitably, public discussion of the inordinate costs of malpractice insurance results in a few shrill cries about "incompetent" doctors. The fact is, of course, that the basic problem is not due to incompetent physicians, but to a system which permits recovery for serious medical injury often without fault. In this connection, it is worthwhile to recall a little-noticed finding of the McGill Commission that "the number of malpractice claims against physicians and hospitals continues to rise *without any necessary relationship to negligent medical care, and our best hospitals and specialists are frequently sued.*" (*Emphasis added.*)

However, as in any profession, there are problems and the Board is keenly aware of its obligation to identify those doctors whose methods of practice fall below acceptable standards.

It is interesting, and somewhat ironic, that in the first few years of the Company's existence, State officials would not permit the denial or cancellation of coverage unless the physician in question was a drug addict or a convicted felon. Fortunately, officials of the Company and members of this Board refused to accept that this rule was in the interest either of the physicians insured or of the company at large. And in one notable case in which the Company had to pay a large award (but, more importantly, a young patient was seriously injured), because of inadequate treatment by an aged physician, the Company announced that it was prepared to cancel the doctor's insurance. The doctor chose retirement, but the principle was firmly established. The Board could, after due deliberation, recommend termination of coverage and the Company could take such action whenever in the opinion of the Board members the doctor's attitude, conduct, methods of practice or loss experience was such a great hazard as to make insuring him an unsound business practice or an unfair burden to the other policyholders. Since my last report, we have recommended that several doctors be rejected for coverage or have their policies cancelled. As a matter of policy, the Board never takes such action without a thorough review of all the circumstances and without inviting the doctor to appear for a personal interview. In many cases, the physician is also afforded an interview with the Board Subcommittee in his specialty.

The Board will also on occasion recommend that coverage be provided but only in areas of demonstrated competence. For example, during the past year, the Board on two occasions agreed to recommend coverage for physicians but only in the classification of General Practice, Minor Surgery; no coverage would be afforded for major surgical procedures. In another case, the Board declined to recommend insurance coverage in the field of Plastic and Reconstructive Surgery because the physician, in the opinion of his peers, had not had adequate training and experience in that specialty.

In recent days we have heard many suggestions from the media that doctors who have unacceptable claim records should pay higher premiums than manual rates. It is not surprising to find that the public is unaware of our program, but it is astonishing to find that many physicians around the State still do not appreciate the fact that this Board has for many, many years been identifying physicians who should pay a surcharge premium because of their experience.

Prior to the advent of the Medical Liability Mutual Insurance Company, the Board either agreed or disagreed with the fact of a surcharge and left the amount of that surcharge to the insurance company. However, with the Company the Board actually recommends the amount of the surcharge. Surcharges vary widely from 10% of the normal premium to a high of 200% and are reviewed annually. A surcharge is not recommended simply because a doctor has a number of claims or even because there may have been awards against him, but rather, it is the totality of his experience indicating to his peers that certain aspects of his practice are below standard and are leading to unacceptable claim results.

It is disappointing to note that last year we saw a repetition of many of the problems that we have called attention to in the past. Poor record keeping continues to be a very serious problem. The manner in which some doctors maintain records, or, maybe it would be more accurate to say, don't maintain records, is frightening. Time and time again, we have had to remind physicians of the importance of keeping an accurate record which clearly documents the patient's complaints, findings, and treatment. While inadequate and incomplete record keeping does not, of itself, result in claims, in a broader sense it may well reflect an indifferent approach that is extremely dangerous in the practice of medicine. And, of course, poor records make a physician extremely vulnerable in a lawsuit. I share entirely the sentiments of Dr. Mannix, Company President, who said in his Annual Report to the policyholders: "It is most discouraging to find cases, defensible on the merits, weakened by poor record keeping. Too often warnings in this regard have gone unheeded. We are going to make this a matter of high priority and insist that doctors who want to be insured in this Company maintain good records." I am sorry to report that in a few cases we have seen evidence that doctors have changed records after a claim was made against them. Those doctors have good reason to regret their deplorable conduct after a Board appearance.

Permit me to set forth some of the problem areas and the advice we have given to physicians which I think is applicable to all practitioners:

1. Be cognizant of the need to establish a good relationship with your patients, taking the time to listen to their complaints and empathizing with them.
2. Do not create unreasonable expectations about the results of treatment.
3. Be aware of the necessity of communicating to your patient, in simple layman's language, the generally recognized risks and complications of the methods of treatment you recommend and alternative modes of treatment. Further, you should make a note in your record to the effect that you have given the patient such information.
4. Carefully review at frequent intervals your patient case load to insure that your volume of work does not make it difficult to devote adequate time to each patient.
5. When involved in the care of a patient with other physicians make sure that there is a clear delineation of responsibility for overall management of the patient's condition.
6. In surgical cases, you should write a preoperative note documenting your findings and proposed treatment.
7. You should carefully monitor your methods for collecting overdue accounts. No action should be taken to collect a bill until you have carefully reviewed all of the circumstances.
8. Be sure to seek consultation in difficult cases.

With higher premiums projected, physicians continue to seek separate classifications, many of them related to their own individual practices. The Board sympathizes with the concerns of such physicians, but once again I must point out that we must have a classification system based on credibility and we cannot in fairness to all the policyholders create classifications to respond to the request of one or a relatively small group of doctors. However, in conjunction with the Company's Special Committee on Relativities between Territories and Specialties, we have taken further steps to acquire relevant data for the specialty of Obstetrics and Gynecology. A questionnaire was sent to all physicians in that specialty in an effort to identify those who restricted their practice to Gynecology. Only about 10% of 1,000 physicians who replied indicated that they appeared to so restrict their practice. This year the Company's classification list does contain a separate heading for "Gynecology Only" and the doctors who fall into that category will be so classified although, of course, the premium remains the same as doctors classified as "Obstetricians and Gynecologists." The stage has therefore been set for the comparison of data on premiums collected and losses paid in these two categories.

In the past year our Specialty Subcommittees have been extremely busy and the Board is deeply grateful for their invaluable assistance. I am pleased to report that the expanded Subcommittee on Cosmetic and Plastic Surgery under the able direction of Edgar P. Berry, M.D., Chairman, has had a very auspicious beginning. I wish to thank Carl Goldmark, Jr., M.D., Chairman of the Subcommittee on Obstetrics and Gynecology, George Froehlich, M.D., Chairman of the Subcommittee on Orthopedic Surgery, Victor J. Tofany, M.D., Chairman of the Subcommittee on Anesthesiology, and all of their Committee members. Further, I wish to especially commend Paul M. DeLuca, M.D., who recently resigned as Chairman of the Specialty Subcommittee on Neurosurgery after many years of distinguished service. His post has been ably filled by Howard Freedman, M.D., working with an outstanding group of neurosurgeons.

Robert A. Breault, M.D., of Schenectady, and Antonio F. LaSorte, M.D., of Broome, have completed their terms as Board members. Drs. Breault and LaSorte were conscientious and diligent Board members and we are sorry to lose them. Drs. Harold Schwinger and M. Theodore Tanenhaus, both from Brooklyn, made equally valuable contributions to the Board, but, although they reached the end of their terms, fortunately they agreed to serve an additional year as consultants.

Respectfully submitted,

Herbert Lourie, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Professional Medical Liability Insurance and Defense Board be filed for information.

⟹ . . . *The report of the Professional Medical Liability Insurance and Defense Board was* **FILED FOR INFORMATION** . . .

AD HOC COMMITTEE TO MEET WITH THE ASSOCIATION OF TRIAL LAWYERS

To the House of Delegates, Ladies and Gentlemen:

The members of the Ad Hoc Committee to meet with the Association of Trial Lawyers are as follows:

John H. Carter, M.D., *Chairman*	Albany
Arthur Mannix, Jr., M.D.	Westchester
Milton Rosenberg, M.D.	Suffolk

Your committee met with representatives of the New York Trial Lawyers Association on Thursday, January 21, 1981, at the Chemist Club in New York City. The meeting was held to discuss MSSNY's proposed malpractice legislation involving Collateral Sources and Structured Awards for the primary purpose of removing the trial lawyers' opposition and for the secondary purpose of gaining their support.

The participants were:

MSSNY—Ralph M. Schwartz, M.D.; Edward Siegel, M.D.; Milton Rosenberg, M.D.; John H. Carter, M.D.; Allison B. Landolt, M.D.; Donald J. Fager, Esq.; James Durkin; Martin J. Tracey, J.D.; Gerard L. Conway, Esq.; and John C. Rice, Esq., Legislative Counsel;

TRIAL LAWYERS—Harvey Weitz, President, New York Trial Lawyers Association; Sherry Albert, Past President, New York State Trial Lawyers Association; and Don Boyle, Association Lobbyist; and

NEW YORK LEGISLATURE—Assemblyman Melvin Miller, Chairman, Assembly Codes Committee; Philip Pinsky, Counsel, Senate Majority Leader Anderson; Assistant to Mr. Pinsky; and Jay Adolph, Counsel; and Assembly Speaker Fink.

The meeting began with introductory remarks by Assemblyman Miller, followed by general comments by Mr. Conway.

Mr. Durkin and Mr. Fager outlined the present situation in regard to medical malpractice insurance and the problems currently existing and anticipated in the future. They supported their conclusions with specific details underscoring their concern that a medical malpractice insurance crisis was on the horizon.

After a great deal of discussion and questioning by the Trial Lawyers and the Legislature's representatives, there seemed to be a recognition on the part of the Legislature's representatives that there was a problem concerning increases in medical malpractice insurance costs and that a crisis might be imminent. The Trial Lawyers were unconvinced of the seriousness of the situation but agreed to analyze it further.

Assemblyman Miller emphasized that the State had a stake in the medical malpractice situation because of its involvement in health care costs and was, therefore, concerned about having the lawyers and doctors get together to agree on some practical solutions by way of legislation.

Following discussion, there was an agreement that the Collateral Source Bill was a practical solution and that a bill concerning same probability would pass both houses and, hopefully, be signed by the Governor in 1981. The representatives of the Trial Lawyers indicated that they would not oppose such legislation and would probably support same.

On the question of Structured Awards, there was a great deal of discussion and no final agreement. However, while the Trial Lawyers' representatives began the discussion with strong opposition, particularly on the part of Mr. Weitz, there seemed to be an atmosphere of reluctant acceptance of the general concept of structured awards.

At the conclusion of the meeting, Assemblyman Miller strongly recommended that a smaller group discuss specific examples of structured awards which might form the basis of a Structured Award bill. He suggested that the details of such legislation be handled by Mr. Boyle and Mr. Conway.

Since the January meeting Mr. Boyle and Mr. Conway have communicated and met on several occasions and have also communicated their discussions to Assemblyman Miller. In the meantime, of course, the MLMIC filed for a 71% rate increase and intensive MSSNY activity followed on all fronts. Meetings were held with all involved elected and appointed government officials, including legislative leaders, Insurance Department officials, Health Department officials, Governor Carey and his aides, the Lieutenant Governor, and others.

The Collateral Sources legislation was passed overwhelmingly and signed by Governor Carey, thereby allowing a reduction in the requested rate increase from 71% to 52%. It is clear, however, that no further legislative steps will be taken until the Superintendent of Insurance announces his decision, expected by October 1, following his independent actuarial analysis relative to whether an increase in malpractice insurance premiums is necessary at the time. Since there has been no meeting of the minds on a Structured Awards bill, the Trial Lawyers will, in all likelihood, not support such a bill nor our other proposed solutions, but we must continue to urge upon them the seriousness of our problem and the equitable nature of our solutions.

Respectfully submitted,
John H. Carter, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters.* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*
⟹ Your reference committee recommend that the report of the Ad Hoc Committee to Meet with the Association of Trial Lawyers be filed for information.
⟹ . . . *The report of the Ad Hoc Committee to Meet with the Association of Trial Lawyers was* **FILED FOR INFORMATION** . . .

Resolution 81-6, Curtailment of Subpoena Powers of the Board for Professional Medical Conduct

Introduced by Medical Society of the County of Erie

Whereas, Paragraph (k) of subdivision (10) of Section 230 of the Public Health Law confers on the Board for Professional Medical Conduct the power to issue subpoenas requiring persons to appear before the Board and be examined with reference to a matter within the scope of inquiry or investigation being conducted by the Board and to produce books, papers, records, or documents pertaining thereto; and

Whereas, Such use of the subpoena power can include the subpoenaing of a physician who has provided psychiatric care and treatment to another physician, if such patient-physician is being investigated by the Board; and

Whereas, The patient-physician would be in no position to resist the subpoena but would depend entirely on the treating physician to resist the enforcement of the subpoena; and

Whereas, This practice, if unchallenged, may deter physicians from obtaining necessary psychiatric care; therefore be it

Resolved, That the Medical Society of the State of New York seek to amend subdivision (10) of Section 230 of the Public Health Law so that the Board for Professional Medical Conduct will be specifically prohibited from subpoenaing a physician or his medical records concerning psychiatric treatment rendered to another physician, when the patient-physician is the subject of an inquiry or investigation by the Board, and when such patient-physician voluntarily sought the psychiatric care, unless the patient-physician expressly waives the physician-patient privilege.

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters.* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*
⟹ Your reference committee recommends that Resolution 81-6 be adopted.
⟹ . . . *The House, after discussion, voted to* **REFER** *Resolution 81-6 to the Council* . . .

Resolution 81-24, Physicians Lien Law

Introduced by Medical Society of the County of Queens, Inc.

Whereas, Physicians render medical services pursuant to an expressed or implied contract, whether oral or written; and

Whereas, The purpose of such a contract is to provide for medical care to the patient and reimbursement for services rendered; and

Whereas, Attorneys, mechanics, and others are protected by lien laws; therefore be it

Resolved, That the Medical Society of the State of New York vigorously pursue the enactment of legislation to provide for a Lien Law in favor of physicians.

PAST HOUSE ACTION: Resolution 74-71

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*
⟹ Your reference committee recommends that Resolution 81-24 be adopted.
⟹ . . . *The House, after considerable discussion, voted to* **ADOPT** *Resolution 81-24* . . .

Resolution 81-15, Legalized Abortion

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, To quote Joseph Boyle, M.D., Chairman of the Board of Trustees of the American Medical Association: "Under the bill (the Human Life Statute considered by Congress) the physician would be responsible for the welfare of every fetus, whose legal and health interest would, in the eyes of the law, be equal to, but may be in conflict with those of the woman"; and

Whereas, Abortion performed by qualified physicians during the first trimester of pregnancy has been shown to be less hazardous to the woman's health than childbirth; and

Whereas, With a return to a pre-legalized abortion era a return to the serious public health menace of illegal abortions that are self-induced or performed by unskilled practitioners can be expected; therefore be it

Resolved, That in the interest of safeguarding the health of the people of New York State, the Medical Society of the State of New York oppose legislation which will place in jeopardy the current legal status of abortion.

PAST HOUSE ACTION: Resolutions 71-55, 71-80, and 72-36

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

The majority of the reference committee agrees with the intent and principle of the resolution; however, since the issue of abortion has already been addressed in a comprehensive statement which is contained in the official position papers of the Medical Society, your Committee felt that this resolution should not be adopted.

⟹ . . . *The House, after discussion, voted to* **REAFFIRM** *the Medical Society of the State of New York's Position Paper on Abortion (page 648) in lieu of Resolution 81-15 . . .*

Resolution 81-35, Malpractice Crisis

Introduced by Medical Society of the County of Westchester, Inc.

Whereas, A malpractice crisis has always existed and still does exist; and

Whereas, The present cost of professional medical liability insurance for physicians just entering private practice, those with established practices, and those who are near retirement, is outrageously high; and

Whereas, The cost of professional medical liability insurance plays a large role in the escalating costs of health care delivery; and

Whereas, The Medical Liability Mutual Insurance Company was established by members of the Medical Society of the State of New York in good faith to address a portion of the malpractice problem, and the costs of such a problem have escalated far beyond what was ever anticipated; and

Whereas, The recommendations of the McGill Commission, appointed by Governor Carey, have for the most part been ignored; and

Whereas, The result of actions taken by the Legislature and the Governor to date has been the passage of laws that reflect only minimal movement towards resolution of the malpractice problem; therefore be it

Resolved, That the Medical Society of the State of New York again advise the government of the State of New York in no uncertain terms that a malpractice crisis state exists today; and be it further

Resolved, That MSSNY urge the government of the State of New York to permit the Medical Liability Mutual Insurance Company to impose a rule that only members of MSSNY may participate in the insurance plan; and be it further

Resolved, That MSSNY continue to urge the Governor and Legislature of the State of New York to adopt the recommendations of the McGill Commission; and be it further

Resolved, That the MSSNY advise the Medical Liability Insurance Company that organized medicine cannot accept any further increases; and be it further

Resolved, That MSSNY continue to press for complete resolution of the entire malpractice problem regardless of passage of insufficient legislative remedies.

PAST HOUSE ACTION: Resolution 80-7

and

Resolution 81-48, Equal Medical Liability Insurance Premiums for All Physicans

Introduced by Section on Neurosurgery

Whereas, The medical liability insurance problem concerns all physicians, regardless of specialty or location of practice in New York State; and

Whereas, The medical profession must depend on remedial legislation for relief; therefore be it

Resolved, That the Medical Society of the State of New York take the position that insurance premiums be equal for all physicians, regardless of specialty or location of practice until legislation is passed to ameliorate the present medical liability insurance situation.

and

Resolution 81-52, Opposition to "Claims Made" Medical Liability Insurance Coverage

Introduced by Section on Neurosurgery

Whereas, The medical liability insurance situation in New York State is of crisis proportion; and

Whereas, The "claims made" type of insurance protection has been proposed; and

Whereas, This "claims made" insurance represents inadequate coverage and places an unbearable burden upon individuals at the termination of their coverage; and

Whereas, The premium for the "tail" is unacceptably high; and

Whereas, The acceptance of such insurance would create a false image to the public that the problem had been solved; therefore be it

Resolved, That the Medical Society of the State of New York strongly oppose the "claims made" medical liability insurance coverage.

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

Your reference committee considered Resolutions 81-35, 81-48, and 81-52 together as they dealt with the same subject.

Your committee, recognizing the paramount importance of the subject to which each of these resolutions is addressed felt it essential that the sense of the House relative to the subject of the resolution be reflected in a single comprehensive resolution which clearly sets forth the position of organized medicine on this issue. Therefore, your committee wishes to present the following substitute resolution:

Resolved, That the Medical Society of the State of New York continue to advise all appropriate government officials and the public that a medical liability crisis exists which poses a grave threat to the quality of health care available to the people of this State, and that no further increase in the cost of medical liability insurance is acceptable; and be it further

Resolved, That the Medical Society of the State of New York continue to advise all appropriate government officials that the mere approval by the New York State Department of Insurance of a "claims made" form of insurance is not, should not, and will not be regarded as a solution to this crisis in that "claims made" insurance availability in no way decreases the expanding risk being insured against; and be it further

Resolved, That the Medical Society of the State of New York continue to seek passage of a legislative program which includes meaningful solutions to this crisis. These proposals will restore equity and fairness to the liability adjudicatory process.

After discussion, the House amended the substitute resolution to read as follows:

Resolved, That the Medical Society of the State of New York continue to advise all appropriate government officials and the public that a medical liability crisis exists which poses a grave threat to the quality of health care available to the people of this State, and that no increase in the cost of medical liability insurance is acceptable; and be it further

Resolved, That the Medical Society of the State of New York unequivocally oppose "claims made" policies because such policies do nothing to reduce the cost of medical liability insurance; and be it further

Resolved, That the Medical Society of the State of New York continue to seek passage of a legislative program which includes meaningful solutions to this crisis. These proposals will restore equity and fairness to the liability adjudicatory process.

⟹ . . . *The House, after considerable discussion, voted to* **ADOPT** *the substitute resolution as* **AMENDED** *in lieu of Resolutions 81-35, 81-48, and 81-52* . .

Resolution 81-54, Mutual Disclosure and Medical Liability Insurance Coverage Requirements Between Medical Staffs and Their Hospitals

Introduced by George Lim, M.D., as an Individual

Whereas, Many hospitals are mandating that medical staff members carry medical liability insurance as a requirement for staff membership and hospital privileges; and

Whereas, Such requirements are being accepted as a reasonable requirement and in the public interest in spite of some medical staff objection that such requirements are unreasonable; and

Whereas, There is little doubt that part of the motivation for such policies is to protect the hospital from financial loss even if it be at the expense of the medical staff; and

Whereas, Such requirements are sometimes extended to include detailed information on current suits and past loss experience; and

Whereas, Such requirements for medical liability insurance coverage and disclosure of risk factors, loss experience, and current suits are not now required of hospitals in dealing with their medical staffs; and

Whereas, Such disclosure regarding malpractice can and should be on a mutual and interdependent basis; therefore be it

Resolved, That the Medical Society of the State of New York adopt a policy regarding mandatory medical liability insurance coverage by physicians of a hospital medical staff, that the hospital itself conform to corresponding criteria, including equal dollar amounts of coverage, terms of coverage, disclosure of current suits, and past loss experience; and be it further

Resolved, That without such corresponding conformity and disclosure by the hospital such requirements not be imposed upon the members of the medical staff.

PAST HOUSE ACTION: Resolution 80-3

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

The intent of this resolution was addressed by the House last year under Resolution 80-3 and was approved. The Council has taken action on this.

⟹ Your reference committee recommends that Resolution 81-54 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-54* . . .

Resolution 81-51, Commission to Address Tort Reform

Introduced by Section on Neurosurgery

Whereas, Professional Medical Liability Insurance was intended to compensate patients for medical malpractice; and

Whereas, The premiums collected for this purpose are increasing at astronomical rates; and

Whereas, The cost to society in general for liability premiums is excessive and creates economic disincentives for business, consumers, and physicians who live in New York State; and

Whereas, The premium dollars are not paid in a reasonable proportion to the injured party; and

Whereas, The Professional Medical Liability Premium represents two percent of the premiums paid for all liability insurance; and

Whereas, It is difficult to develop legislation dealing solely with professional medical liability insurance without considering the legislation necessary to address the other areas of liability, such as automobile and product liability; and

Whereas, The meaningful recommendations of the McGill Commission have largely been ignored; therefore be it

Resolved, That the Medical Society of the State of New York convene a commission, in the next ninety days, composed of leaders of labor, consumers, manufacturers, business representatives, and physicians to examine the imbalances which have developed, not only within the professional medical liability system, but in the areas of automobile and product liability, and to make recommendations to the Legislature regarding the nature of tort reform required to redress the social and economic disturbance.

Fiscal Note: Approximately $50,000

and

Resolution 81-32, Formation of a Coalition to Preserve Quality Medical Care in New York State

Introduced by Onondaga County Medical Society, Inc.

Whereas, The medical liability insurance crisis in New York State endangers the health and well-being of eighteen million residents of this State; and

Whereas, The recently released report of an independent actuary to the State Superintendent of Insurance provides definitive proof of the magnitude of this problem; and

Whereas, A significant overhauling of the existing tort laws is necessary in order to establish a better system which is fair and equitable to all the citizens of New York State; and

Whereas, In the past the Governor and the New York State Legislature have been hesitant to adopt such action, including recommendations made by the McGill Commission, and the Medical Society of the State of New York; and

Whereas, Such action will be enacted only if a coalition of representatives of business, labor, consumers, hospitals, and the entire health care field is effectively mobilized; therefore be it

Resolved, That the Medical Society of the State of New York exercise leadership in this vital matter by convening "The Coalition to Preserve Quality Medical Care in New York State," involving the leaders of business, labor, consumer groups, hospitals, and related health care industries; and be it further

Resolved, That this coalition meet no later than November 15, 1981, and that it be charged with presenting its final recommendations to the Governor and the New York State Legislature by January 15, 1982.

Fiscal Note: $5,000 for initial planning and organization. The complete project not to exceed $50,000.

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman*.

The committee discussed Resolutions 81-51 and 81-32 together since they addressed the same subject.

The committee noted that the Medical Society is already involved in enlisting the cooperation of industry and other concerned persons and organizations working as a coalition toward encouraging corrective measures for the medical liability crisis.

It was the feeling of the committee that the scope of these activities should not only continue but should be broadened and increased; therefore, the committee is offering the following substitute resolution:

Resolved, That the Medical Society of the State of New York formalize an ongoing coalition with members of business, industry, labor, consumer groups, hospitals, related health care industries, and others; and be it further

Resolved, That this coalition function on a continuous basis to develop recommendations for tort reform and other legislative measures relating to the liability crisis. It should also consider other matters which may develop that would jeopardize the preservation of the quality of medical care in New York State.

⟹ Your reference committee recommends the adoption of the substitute resolution for Resolutions 81-51 and 81-32.

After discussion, the House amended the second resolved of the substitute resolution by the deletion of the sentence "It should also consider other matters which may develop that would jeopardize the preservation of the quality of medical care in New York State" and the insertion of the phrase "and that the formation of this coalition be pursued with vigor as an effort of primary importance and that this effort include county medical societies" after the word "crisis" in the second resolved. The amended substitute resolution would then read as follows:

Resolved, That the Medical Society of the State of New York formalize an ongoing coalition with members of business, industry, labor, consumer groups, hospitals, related health care industries, and others; and be it further

Resolved, That this coalition function on a continuous basis to develop recommendations for tort reform and other legislative measures relating to the liability crisis and that the formation of this coalition be pursued with vigor as an effort of primary importance and that this effort include county medical societies.

⟹ . . . *The House, after considerable discussion, voted to* **ADOPT** *the substitute resolution as* **AMENDED** *in lieu of Resolutions 81-51 and 81-32 . . .*

Resolution 81-19, Acupuncture Legislation

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The practice of acupuncture has been severely restricted under existing New York State law; and

Whereas, Application of acupuncture techniques has proved to be beneficial in physician-conducted trials for chronic pain relief and mild anesthesia without medication; and

Whereas, New York State residents are frequently obligated to travel great distances to other states to obtain acupuncture therapy; therefore be it

Resolved, That the Medical Society of the State of New York review, for report to the House of Delegates at its next annual meeting, the current New York State law and regulations governing acupuncture relative to stringent practice restrictions.

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

The Medical Society already has an official policy concerning acupuncture. The committee carefully reviewed Resolution 81-19 and the Medical Society of the State of New York's position and found that the existing position is adequate.

⟹ Your reference committee recommends that Resolution 81-19 be not adopted.

⟹ . . . *The House, after discussion, voted to* **NOT ADOPT** *Resolution 81-19 . . .*

Resolution 81-17, Student Textbook Purchase Tax-Exemption

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The cost of medical education is becoming prohibitive for many students as tuition and living expenses rise annually; and

Whereas, For many students governmental and private loans, already borrowed to the maximum allowed, represent the sole means for financing their medical education; and

Whereas, The cost of a single medical textbook averages $50.00 to $75.00, with many professors requiring the student to purchase multiple volumes; therefore be it

Resolved, That the Medical Society of the State of New York support legislation to exempt students of medicine and of osteopathy enrolled in respective programs of study in New York State from paying State and local sales taxes, when purchasing medical textbooks and medical equipment.

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

The committee carefully considered this resolution and felt that its overall effect on the total cost of a medical education would be miniscule. In addition, the resolution addresses the special interests of a limited group of students.

⟹ Your reference committee recommends that Resolution 81-17 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-17* . . .

Resolution 81-60, New York State Income Tax Tuition Deduction

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The State of New York allows for a tuition deduction of up to $1,000.00 from annual New York State Resident Income Tax, reflecting part of the cost of tuition paid for each dependent who attends a college in New York State; and

Whereas, Many students enrolled in New York State colleges, especially at the professional level, are married, and wholly or partly dependent financially upon their spouses' incomes for sustenance and support, including payment of college related costs; and

Whereas, New York State, for the purposes of the Tuition Assistance Program (TAP), recognizes the dependent nature of this above relationship in marriage by allowing a married student the status of financial independence from his/her parents and further by calculating TAP award amounts on the basis of income earned by the spouse; and

Whereas, The present regulations do not allow a spouse of a student enrolled in a New York State college to take the tuition deduction, thereby not recognizing this dependent status — this being in direct opposition to the above described status granted by the State itself as regards student-spouses for the purposes of the TAP Program; therefore be it

Resolved, That the Medical Society of the State of New York sponsor and support legislation pertaining to a change in the regulations regarding the ability of a husband/wife to claim as a dependent, for the purposes of the Income Tax Tuition Deduction, his/her student-spouse, such that the said husband/wife might be properly eligible to take such a deduction.

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

After careful consideration, the committee agreed with the intent of the resolution, but felt that further in-depth study of the problem is necessary.

⟹ Your reference committee recommends that Resolution 81-60 be referred to the Council.

⟹ . . . *The House, after discussion, voted to* **REFER** *Resolution 81-60 to the Council . . .*

Resolution 81-2, Establishment of an Organization for United Action on Behalf of Physicians and Their Patients

Introduced by Richmond County Medical Society

Whereas, The problems of physicians in New York are increasing and multiplying, primarily due to the State government's interference with and prejudice against the medical profession; and

Whereas, This is changing the status of physicians to that of second class citizens; and

Whereas, The Medical Society of the State of New York has been powerless to reverse the situation because it cannot give weight to negotiation by advising the profession on courses of united action for fear of losing it's tax-exempt status and violating antitrust laws; therefore be it

Resolved, That the Medical Society of the State of New York, as a matter of extreme urgency, investigate the establishment of an organization that would be empowered to lead the medical profession into united action to safeguard the interests both of physicians and their patients, even if such an organization has to be a union.

PAST HOUSE ACTION: Resolutions 73-93 and 78-21
New York Resolution Referred to the AMA 86(A-73)

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

The committee carefully considered the many viewpoints expressed in the extensive debate during its hearing. Since this resolution involves many legal and regulatory ramifications, the committee felt that further in-depth study is required.

⟹ Your reference committee recommends that Resolution 81-2 be referred to the Council.

⟹ . . . *The House, after discussion, voted to* **REFER** *Resolution 81-2 to the Council . . .*

Resolution 81-55, Combining of NYMPAC and EMPAC into a Single Political Action Committee

Introduced by George L. Collins, Jr., M.D., as an Individual

Whereas, The value of the Medical Political Action or the PAC movement has been shown to be effective nationally and statewide; and

Whereas, The 1977 House of Delegates of the Medical Society of the State of New York has already gone on record as favoring the concept of political action by approving the formation of the New York Medical Political Action Committee (NYMPAC) for State political action and of utilizing the Empire Medical Political Action Committee (EMPAC) for federal political action, each functioning independently; and

Whereas, After establishing a Joint Council for Political Action for NYMPAC and EMPAC in 1979, the administrative difficulty of efficiently and effectively managing two closely related, but independently functioning PACs, has become increasingly evident; and

Whereas, After several years of experience the Joint Council is convinced that a single PAC, functioning within all legal and ethical parameters, encompassing both federal and State goals, governed by a single Board of Directors and a slate of elected officers, is administratively more effective; and

Whereas, It is necessary for MSSNY to actively and fully support the PAC movement in every way legally and ethically possible to insure increasing interest and membership; therefore be it

Resolved, That the House of Delegates of the Medical Society of the State of New York support the combining of the currently existing Political Action Committees, i.e. the New York Medical Political Action Committee (NYMPAC) and the Empire Medical Political Action Committee (EMPAC) into a joint PAC to be called New York Combined Medical Political Action Committee (NYCOMPAC); and be it further

Resolved, That the Board of NYCOMPAC direct its activities at all times to the State and federal levels, as appropriate; and be it further

Resolved, That MSSNY give full support to "NYCOMPAC" within the limitations imposed by federal and New York State Law and medical ethics; and be it further

Resolved, That this resolution be referred to the Council of MSSNY for organizational development and implementation at the earliest possible date, in such a manner as to conform to all legal requirements and equitable statewide geographic representation.

■

⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

After careful consideration, the committee agreed with the resolution. One member of the committee expressed concern about the actual mechanism for the distribution of the collected funds between State and federal activities.

⟹ Your reference committee recommends that Resolution 81-55 be adopted.

The House considered the following amended resolution:

Resolved, That the House of Delegates of the Medical Society of the State of New York support the combining of the currently existing Political Action Committees, i.e. the New York Medical Political Action Committee (NYMPAC) and the Empire Medical Political Action Committee (EMPAC) into a joint PAC; and be it further

Resolved, That the bylaws of the unified PAC specifically provide for two standing subcommittees:

1. A standing subcommittee concerned with federal elections and federal issues.
2. A standing subcommittee concerned with State elections and State issues; and be it further

Resolved, That for the foreseeable future the present division of contributions to the PAC remain at 65 percent for State elections and affairs and 35 percent for federal elections and affairs after administrative expenses; and be it further

Resolved, That any changes in the present distribution of contributions, after administrative expenses, be determined by a majority vote of the contributors to the PAC; and be it further

Resolved, That the Medical Society of the State of New York give full support to Political Action; and be it further

Resolved, That this resolution be referred to the Council of MSSNY for organizational development and implementation at the earliest possible date, in such a manner as to conform to all legal requirements and equitable statewide geographic representation.

⟹ . . . *The House, after considerable discussion,* **REFERRED** *the entire matter to the Council . . .*

Resolution 81-27, Medical Society of the State of New York Legislative Consultants

Introduced by Suffolk County Medical Society, Inc.

Whereas, The legislative program of the Medical Society of the State of New York over the last 10 to 15 years leaves a great deal to be desired; and

Whereas, This lack of success cannot be attributed to any one factor; it is apparent that we must make changes in the manner in which we have conducted our legislative activities; and

Whereas, Successful legislative endeavors involve a great deal of concerted time and effort on the part of those legislative consultants hired by the Medical Society; and

Whereas, This required concerted effort, in order to be successful, cannot be compromised by having our consultants working for multiple clients; therefore be it

Resolved, That the Medical Society of the State of New York engage its own legislative consultants (lobbyists) who will work solely for them and have no other clients.

Fiscal Note: Cost to be no more than the annual budget of MSSNY's Division of Governmental Affairs including what is paid to our present legislative consultants (lobbyists).

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⟹ *Report of the Reference Committee on Governmental Affairs and Legal Matters:* The following report was presented by Samuel M. Gelfand, M.D., *Chairman.*

The committee carefully reviewed the extensive testimony given during its hearing and feels that the Medical Society of the State of New York is being properly represented in its lobbying activities.

⟹ Your reference committee recommends that Resolution 81-27 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-27* . . .

⟹ . . . *The House voted to* **ACCEPT** *the reference committee report as acted upon by the House* . . .

PUBLIC HEALTH AND EDUCATION

AGING AND NURSING HOMES

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Aging and Nursing Homes are as follows:

Robert Collins, M.D., *Chairman*	Onondaga
Ernest T. Anderson, M.D.	Monroe
Albert F. R. Andresen, Jr., M.D.	Westchester
Evelyn P. Dooley, M.D.	Kings
Eli A. Leven, M.D.	Monroe
Edward J. Lorenze, III, M.D.	New York
Stuart J. Miller, M.D.	Chemung
James A. Moore, M.D.	Albany
Jack R. Muth, M.D.	Suffolk
Leon M. Rothman, M.D.	Kings
Paul W. Sum, M.D.	Cattaraugus
Garrett W. Vink, M.D.	Putnam
George M. Warner, M.D., *Advisor*	Albany

The Committee met on December 12, 1980; April 3, 1981; and May 15, 1981. Since the last commission report, the Committee:

. . . devoted part of each meeting to working sessions with the staff of the New York State Health Department for a thorough evaluation of its programs in regard to the Sentinel Health Events (S.H.E.) project. Changes in the proposal followed recommendations of this Committee. Field tests have been completed, and the program is scheduled for implementation in 1981.

. . . noted the growth of the New York State Medical Directors Association and the expansion of its responsibilities.

. . . encouraged through a subcommittee the New York State Health Department's training proposal for staff in Residential Health Care Facilities.

. . . after study, passed a resolution which was approved on January 22, 1981, by the Council of the MSSNY stating:

> "That the Medical Society of the State of New York support proposed changes in the New York State Law that would provide legal and financial protection for physicians who serve as clinical consultants to review and survey long-term health care facilities."

. . . again endorsed free choice of physician for patients in Residential Health Care Facilities.

. . . considered the statewide dilemma of insufficient Residential Health Care Facility beds with a backup of long-term care patients in acute care facilities. This continues as a primary concern of the Committee.

. . . participated in the Grid Matrix Project of the NYSHD in analyzing DMS 1 data to plan future long-term care services in the state. Increased attention to patient service needs is expected as a result of this project.

. . . endorsed and forwarded to the Council of the MSSNY a resolution stating:

> "Because not every physician that goes to a nursing home can comply with the existing state code regulations requiring that the patient be visited no less than every thirty days, we, the Medical Society of the State of New York, suggest to the authorities to amend this ruling to thirty plus or minus five days."

This was approved by the Council of the MSSNY.

. . . evaluated the role of the physician assistant in long-term care and recommended to the Council:

> "That the initial assessment of the patient including the history, physical examination, and plan of care should be performed by the physician and that orders should be written by the physician."

This recommendation was approved by the MSSNY Council at its meeting of June 18, 1981.

. . . noted that the New York State Public Health Association had conferred on Dr. George M. Warner, Advisor of this Committee, the Herman M. Biggs Memorial Award for Outstanding Achievement in Public Health in New York State.

The Chairman thanks members of the Committee for their time and effort during the past year.

The Committee is grateful for the assistance of George J. Lawrence, Jr., M.D., George M. Warner, M.D., and Mrs. Elizabeth Daepp.

Respectfully submitted,

Robert J. Collins, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Aging and Nursing Homes be filed for information.

⟹ . . . *The report of the Committee on Aging and Nursing Homes was* **FILED FOR INFORMATION** . . .

ALCOHOLISM

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Alcoholism are as follows:

Stanley E. Gitlow, M.D., *Chairman*	New York
Sheila B. Blume, M.D.	Suffolk
Pasquale A. Carone, M.D.	Suffolk
James F. Castleman, M.D.	Albany
Sidney S. Greenberg, M.D.	New York
Edward Hanin, M.D.	Westchester
William L. Holt, Jr., M.D.	Albany
Robert R. Morgan, M.D.	New York
Brian R. Nagy, M.D.	Chemung
Hans J. Nieporent, M.D.	Kings

Cedric M. Smith, M.D. ....Erie
* Debbie Esernio-Jennsen ....Monroe
Andrew McBride, M.D., *Advisor* ....Albany

The Committee on Alcoholism met repeatedly through the fall, winter, and spring of 1980 – 81. Its primary concerns had to do with:

1) restructure of New York State law such that the Physicians' Committee could restart its endeavors on behalf of our impaired cohorts. With major assistance from Dr. Blume of the Division of Alcoholism and Alcohol Abuse, the necessary legislative changes were finally achieved. The Committee on Alcoholism played a major role in formulating techniques whereby the reconstitution and day-to-day function of the Physicians' Committee could be effected. That Committee is awaiting final clearance by the Commissioner of Health as of this writing. It is anticipated that as soon as this noncoercive arm of the disciplinary system is functioning, work can be initiated on problems which physicians experience in attempting to reenter professional activities following their rehabilitation;

2) the formulation of an educational program on the Fetal Alcohol Syndrome. As a major preventable cause of birth defects, it was originally designed to be presented in cooperation with the Sections on Pediatrics, Obstetrics, and Gynecology; the Committee was unable to obtain interest in a tripartite presentation of FAS at this particular time. Nonetheless, the following program was presented from 2 – 4 p.m. on 6/26/81:

ALCOHOL AND THE UNBORN

Brian R. Nagy, M.D., Elmira, *Moderator*
Medical Director of Southern Tier Alcoholism Rehabilitation Service (STARS); Assistant Professor of Psychiatry, University of Rochester School of Medicine and Dentistry

Objective: The symposium will inform physicians of the importance of being alert to the signs and symptoms of alcoholism in the pregnant patient so that a diagnosis can be made and appropriate treatment of both mother and newborn can be instituted. It will also examine the possible role of casual alcohol ingestion to birth defects.

FETAL ALCOHOL SYNDROME AND ALCOHOL RELATED BIRTH DEFECTS
Harold M. Nitowsky, M.D., the Bronx
Professor of Pediatrics and Genetics; Director of Genetic Counselling Program, Rose F. Kennedy Center of the Albert Einstein College of Medicine

DRINKING AND PREGNANCY — REVIEW OF CURRENT RESEARCH
Marcia Russell, Ph.D., Buffalo
Research Scientist IV, Research Institute on Alcoholism

WOMEN AND ALCOHOL
Sheila Blume, M.D., Albany
Director, New York State Division of Alcoholism and Alcohol Abuse

FETAL ALCOHOL SYNDROME
Amol Lele, M.D., Buffalo
Assistant Professor of Obstetrics and Gynecology, Division of Maternal Fetal Medicine, State University of New York School of Medicine at Buffalo

PANEL DISCUSSION

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3) the development of private carriers of adequate medical insurance for alcoholism in New York State. To this end we recommended, and the Council supported, a change in Bill S-3293 (A-4497) to necessitate health insurance coverage for alcoholism in all group contracts offered in New York State;

4) to formulate health insurance coverage which would include alcoholism for all physician members of the Medical Society of the State of New York. Despite the fact that the majority of individual county societies have failed deplorably and inexcusably to formulate health insurance programs which would adequately protect their membership from the ravages of chemical dependency, and despite the fact that the House of Delegates saw fit to rectify this circumstance years ago, an adequate program formulated by the State Medical Society has yet to be offered to its membership. The Committee on Alcoholism has repeatedly called upon the Council as well as the Committee on Insurance to conclude their respective responsibilities in this matter. It is still awaited;

5) testifying at the Califano hearing on the state of the medical care delivery system for chemical dependency in New York. The Chairman of the Alcoholism Committee testified on 4/2/81:

a) it is anticipated that federal funds will be decreased and that those that are available will likely be in a form (block grants) which previously led to serious underfunding of research and clinical services in alcoholism.

b) Whereas substantive portions of our population may nonetheless obtain adequate medical care for their illnesses through health insurance coverage, such is *not* the case with alocholism because of the failure of the carriers to offer such coverage routinely. This, despite the fact that there is an inherent socioeconomic advantage to treatment of alcoholism rather than its organic complications (which such health insurance does cover).

c) Whereas our citizens anticipate the possibility of cancer and heart disease and therefore purchase appropriate health insurance, no one anticipates alcoholism and the "denial" pathognomonic of the illness further prevents adequate health insurance for this disease. This, despite the fact that it represents the major cause of death between 15 and 45 years of age.

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* Medical Student

d) Not only do we have facilities that are not commensurate with the size of this health problem, but our research regarding prevention and our medical school education is lacking as well.

e) Therefore, it is recommended that all group health insurance offered for sale in New York State be mandated to include coverage for alcoholism comparable to that of any other illness, that career teacher programs be maintained and augmented to provide medical school education on alcoholism, that public education especially about the Fetal Alcohol Syndrome and relationship of ethanol to accidental death be supported, and that research regarding potential techniques for prevention of alcoholism be vigorously assisted;

6) and finally, a new program for health education of the public regarding alcoholism is currently under evaluation by the Committee on Alcoholism.

Respectfully submitted,
Stanley E. Gitlow, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Alcoholism be filed for information.

⟹ . . . *The report of the Committee on Alcoholism was* **FILED FOR INFORMATION** . . .

CANCER

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Cancer are as follows:

Charles E. Rogers, M.D., *Chairman*	Nassau
I. Joseph Aprile, M.D.	Queens
Daniel Burdick, M.D.	Onondaga
Richard J. Calame, M.D.	Kings
Richard G. Cooper, M.D.	Erie
John A. Finkbeiner, M.D.	New York
Richard H. Lange, M.D.	Schenectady
Daniel G. Miller, M.D.	New York
Charles D. Sherman, Jr., M.D.	Monroe
Arthur A. Stein, M.D.	Albany
Herbert Volk, M.D.	Bronx
* Charles Morrow	New York
Dwight Janerich, D.D.S., *Advisor*	Albany

It is a privilege and a pleasure to again be permitted to present to you a report of the deliberations and recommendations of the Committee on Cancer.

The Committee on Cancer deliberated over a number of issues and concerns in the 1980–1981 year, some old and some new.

The Committee noted with approval that legislation had been passed in June of this year, and signed by the Governor, which amended the statute enacted last year permitting the use of marijuana for cancer patients. The 1981 amendment renamed the program The Antonio G. Oliveri Controlled Substances Research Program and permitted the State Patient Qualification Review Committee to delegate the review of eligibility qualification to hospital research or qualification committees.

Commissioner Axelrod named the Chairman of the Medical Society of the State of New York's Committee on Cancer to chair the State Qualification Review Committee and gave us two superb staff people in David Solomon and Thomas Coffey to help the Committee. We should soon be ready to approve the distribution of the effective ingredient in "grass," THC, to qualified patients in New York State. The hold-up — Federal Bureaucracy.

The laetrile issue was again reviewed by the Committee. It took note of an Assembly Bill A5112, which would exculpate a physician or pharmacist who prescribed or dispensed laetrile. The Committee was unanimous in passing a recommendation that the Medical Society of the State of the New York vigorously oppose the introduction or passage of *any* legislation which legalizes or permits the use of laetrile in the treatment of cancer patients.

The most recent reports from Memorial Sloan-Kettering Cancer Center and the National Cancer Institute, fail to show any benefit from the use of laetrile in studies employing protocols embodying dietary, megavitamin therapy and other treatment adjuncts, approved by the staunchest of laetrile's protagonists.

How can we, members of a scientific profession, stand by silently while such a therapeutic misadventure is elevated to a proven status, by statute, in the face of no clinical demonstrating efficacy?

One of the main concerns of the Committee this year was improved and more effective cancer control. Increased emphasis on public awareness in the anti-smoking activities, in breast self-examination, occult blood testing and such programs is needed. Both public and professional education concerning cancer require a great deal of stimulus. Programs identifying high risk population groups and geographical areas must be enlarged and supported. Mapping of cancer incidence and delineating high occurence regions must continue and assessment of the value of various intervention programs is needed in order to recognize the deficits in types and locations of such programs. Does a cancer education program prolong the survival or improve the quality of survival of the patient afflicted by cancer?

Broader utilization of the data now available in the New York State Cancer Center Registry should be encouraged. The recent preliminary report of the high incidence of breast cancer in Nassau County by the Bureau of Cancer Control is but the first step in a program of identification of conventional and high risk factors affecting the women in Nassau, Suffolk, and Queens Counties.

Voluntary agencies report a sharp decline in the number of free cancer screening activities because of unwillingness of physicians to give their services in the face of the rising malpractice problems. The agencies have little or no coverage for the physician volunteers. The Committee felt that consideration should be given to a broadening of the Good

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* Medical Student

Samaritan Law to include hold harmless protection for physicians giving their time in such acts of public service.

The Committee continues to feel that a Cancer Remedies Act to diminish quackery activities in New York State should be enacted. Recognizing that the Medical Society of the State of New York is virtually totally occupied for the present with other more burning issues such as malpractice, the members are considering actions as individuals via their own legislators and through their personal associations with voluntary health agencies.

The recommendations for a change in the State Health Code requiring occult blood testing on all hospitalized patients over twenty-one years of age was again restated.

The matter of the Delaney Amendment, Federal legislation, was considered to be a national problem, best handled by the American Medical Association. The Committee recommended a resolution concerning it to the Council.

The Committee's opinion concerning the licensing of commercial laboratory services to conduct tests to determine the reaction of tumors to certain chemicals, was sought by Dr. Janerich. The consensus was that such testing was yet in the realm of research and as such, should not be licensed as a commercial enterprise.

The Bureau of Cancer Control and the Committee jointly drafted a letter concerning DES, to be published over the signatures of Dr. Axelrod and Dr. Schwartz. A copy of the letter follows as Appendix "A."

Respectfully submitted,

Charles E. Rogers, M.D., *Chairman*

APPENDIX "A"

JOINT LETTER FROM THE COMMISSIONER OF HEALTH OF THE STATE OF NEW YORK AND THE PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

In August of 1978, Governor Carey signed into law a bill mandating the development of a program by the New York State Department of Health to deal with the health problems associated with DES (diethylstilbestrol), particularly related to its use during pregnancy. This program was to be developed by the Bureau of Cancer Control and required the inclusion of activities involving screening, registering exposed individuals for the purpose of long-term follow-up, and both public and professional education.

Educational programs were developed and are ongoing to advise physicians, health professionals, and the nonmedical public concerning the seriousness and the long-range potential hazardous health effects of the use of DES during pregnancy on the women and their offspring.

As so frequently occurs in matters of this nature, the message of the dangers of the use of DES use during pregnancy has been incorrectly interpreted by many to include *all* DES uses.

There do exist FDA approved uses of DES including the following:

- estrogen replacement therapy in young (nonpregnant) women with decreased ovarian function and hypogonadism
- after surgical removal of both ovaries (surgical menopause)
- as therapy for severe and disabling natural menopause symptoms such as hot flashes, sweats, atrophic vaginitis, and so forth
- therapy of suitable patients with advanced cancer of breast and prostate

PRACTITIONERS ARE CAUTIONED THAT THEY SHOULD CONSULT PACKAGE INSERTS AND FDA PRESCRIBING INFORMATION FOUND IN THE MOST RECENT PDR BEFORE PRESCRIBING DES. THIS LETTER IS NOT INTENDED TO BE A SUBSTITUTE FOR SUCH INFORMATION AND DOES NOT CONSTITUTE AN ENDORSEMENT OF DES BY THE SIGNATORIES NOR BY THE MSSNY OR THE STATE OF NEW YORK DEPARTMENT OF HEALTH. It is intended to be only an advisory clarifying what has been perceived by some to be a confusing situation.

DAVID AXELROD, M.D., *Commissioner*
State of New York Department of Health
RALPH M. SCHWARTZ, M.D., *President*
Medical Society of the State of New York

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Cancer be filed for information.

⟹ . . . *The report of the Committee on Cancer was* **FILED FOR INFORMATION** . . .

CARDIOVASCULAR DISEASE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Cardiovascular Disease are as follows:

Charles A. Bertrand, M.D., *Chairman*	Westchester
William J. Breen, M.D.	Erie
Joseph T. Doyle, M.D.	Albany
Abraham Jezer, M.D.	Bronx
Russell Knope, M.D.	Chemung
Jerome A. Schack, M.D.	New York
Joseph Schluger, M.D.	Kings
* Lawrence H. Durban	New York
Richard Rothenberg, M.D., *Advisor*	Albany

The Committee on Cardiovascular Disease mainly serves as a coordinating committee among the three Heart Associations in New York State — the New York Cardiological Society, the New York Heart Association, and the American Heart Association (New York State Affiliate). The three heart organizations cooperate well in developing annual scientific programs. For example, at our last Scientific Session, Dr. William Messinger was moderator of a panel on the application of nuclear medicine to cardiovascular disease, and the panel included Dr. David Blood, Dr. Jeffrey S. Borer, Dr. Anthony J. Tortolani, and Dr. John Morrison. It was an excellent program and very well received.

From time to time material is referred to the Chairman regarding questions of information, and these are processed without any great difficulty. If matters are more complex, or of greater import, they are then discussed before the entire Committee. For example, during the past year we heard from New York City's Emergency Medical Services section with regard to the use of certain emergency devices. This was reviewed by members of the Committee and informed opinions were given, which were of considerable help.

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* Medical Student

The Committee usually meets by telephone conference call, except if the nature of the material is of such great complexity or importance that an actual meeting is required, and then it takes place at the Medical Society of the State of New York headquarters. The advantages of a telephone conference are numerous — the attendance is high, the great virtue of brevity usually prevails, and since conference calls are recorded, the minutes are easily done and are quite complete. Last of all, the saving in dollars is considerable.

The Committee would like to thank Edward Siegel, M.D., George J. Lawrence, Jr., M.D., and Mrs. Elizabeth Daepp for their great assistance during the past year.

Respectfully submitted,

Charles A. Bertrand, M.D.,
Chairman

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Cardiovascular Disease be filed for information.

⟹ . . . *The report of the Committee on Cardiovascular Disease was* **FILED FOR INFORMATION** . . .

CHILD ABUSE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Child Abuse are as follows:

Marvin L. Blumberg, M.D., *Chairman*	Queens
Eliza H. Caldwell, M.D.	Westchester
Dominick J. DiMaio, M.D.	Kings
Vincent J. Fontana, M.D.	New York
Donald Lynn, M.D.	Chemung
Arnold H. Matlin, M.D.	Livingston
Aaron R. Rausen, M.D.	New York
Lester Schiff, M.D.	Niagara
Doris L. Wethers, M.D.	New York
* Ricki Friedman-Goldstein	New York
Frederic R. Kunken, D.M.D., *Advisor*	Nassau
Andrew C. Fleck, Jr., M.D., *Advisor*	Albany

The Committee on Child Abuse met four times during the past year with a membership that includes an oral surgeon and a medical student. Because of the multifaceted aspect of the subject of child abuse, including familial, psychosocial and legal as well as medical factors, the Committee has been extending its efforts vigorously in several directions.

A letter was sent to the president or executive director of every county medical society in New York State alerting them concerning the high incidence of child neglect and abuse including sexual abuse and urging them to notify all physicians and hospitals in their areas to recognize, to report, and to manage cases properly. The emphasis must be on multidisciplinary management with the intention, whenever possible, to help to reunite the family in crisis.

Another letter was sent to all of the rehabilitation facilities in New York State that work with disabled children and adolescents. A list of these agencies was compiled from the 1980 Membership Directory of the National Association of Rehabilitation Facilities. This letter indicated the frequent risk of abuse or neglect of disabled or handicapped children by frustrated, stressed or guilt ridden parents. The Committee advised that the agency personnel be sensitive to parental attitudes and thereby counsel and help them. Furthermore, children with physical injuries suspicious of adult abuse should be reported or referred to proper medical facilities.

Several appreciative responses were received by the Committee from some county medical societies and from some agencies. The letter to county societies was printed in the monthly bulletin of the Queens County Medical Society (January, 1981). Furthermore, in two issues of *News of New York* of the Medical Society of the State of New York, there were items alerting physicians to recognize and to report child abuse, (11/1/80), and sexual abuse of children and adolescents, (1/15/81).

The Committee has been exerting its influence in the governmental, judicial, and legal spheres. On October 15, 1980, the chairman, representing the Medical Society of the State of New York and the Committee on Child Abuse, testified before the Select Committee on Child Abuse of the State Assembly, along with several notables from the New York City Council and other agencies. The chairman has appeared in family courts and in criminal courts many times testifying in child abuse cases, sometimes from his own hospital and sometimes as an expert witness in other cases.

On February 17, 1981, representatives of the District Attorneys of the Counties of New York, Kings, Queens, and the Bronx met by invitation with the Committee. In a very productive and stimulating discussion plans were suggested and considered concerning the interaction of physicians and the local District Attorneys in the matter of reporting, following, and managing cases of child abuse, the misdemeanors as well as the felonies.

On May 19, 1981, the Committee met with representatives of the Human Resources Administration and the New York State Department of Social Services who discussed computerizing reported information concerning abused children throughout the state and integrating reports and actions with the local district attorneys. A very worthwhile exchange of ideas produced suggestions for coordinating efforts of these agencies, district attorneys, medical, and other professionals involved in the care of children, for prevention and treatment of child abuse and for rehabilitation of nuclear families when feasible. The Commissioners of the 58 local social services districts in New York State will be contacted to advise them of the ongoing activities and to urge their participation and exchange of ideas.

Members of the Committee have been continuing to lecture to various professional groups on all of the broad aspects of child abuse and neglect. The audiences at different times consist of physicians, graduate school professors and students, social workers, court psychologists, school teachers, and so on. Three articles have been published in the past year on the subject of child abuse:

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* Medical Student

Child Abuse in Our Violent Society, Blumberg, M.L., *New York State Journal of Medicine*, 80:6:921, May 1980

The Abusing Mother — Criminal, Psychopath or Victim of Circumstances, Blumberg, M.L., *American Journal of Psychotherapy*, 34:3:351, July 1980

The Dentist's Involvement With Child Abuse, Blumberg, M.L. and Kunken, F.R., *New York State Dental Journal*, 47:4:65, February 1981

By invitation, the Chairman, representing the Committee on Child Abuse, spoke on the subject on the radio, on WINS on 1/29/81 and on WQXR on 2/6/81. On 4/10/81, again representing the Committee, he was taped on a panel on physical and sexual abuse, on cable television and this was broadcast subsequently. It is felt that the Committee's efforts and influence have been reaching the lay public as well as the professional areas.

The Committee will approach the deans of the schools of medicine and dentistry in New York State as to whether they would accept a model curriculum recommended by the Committee for educating students concerning the subject of child abuse. It is the opinion of the Committee that early indoctrination and sensitization of professionals on this matter will have a most beneficial impact.

The Osteopathic Society will be contacted to alert their members concerning recognition of child abuse and the state mandate to report. The Committee will offer any information and assistance that is requested by that society.

Respectfully submitted,

Marvin L. Blumberg, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Child Abuse be filed for information.

⟹ . . . *The report of the Committee on Child Abuse was* **FILED FOR INFORMATION** . . .

CONTINUING MEDICAL EDUCATION (ANNUAL)

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Continuing Medical Education are as follows:

Peter B. Farnsworth, M.D., *Chairman*	Westchester
Melvin H. Becker, M.D.	New York
Edward D. Coates, M.D.	Ulster
John S. Davis, M.D.	Otsego
Louis J. Delli-Pizzi, M.D.	Nassau
William C. Felch, M.D.	Westchester
Michael H. Grieco, M.D.	New York
Solomon Hershey, M.D.	Bronx
Marilyn M. S. Kritchman, M.D.	Nassau
George Robert Lovell, M.D.	Monroe
William F. Mitty, Jr., M.D.	New York
William Mullin, M.D.	Kings
William P. Nelson, III, M.D.	Albany
Stephen Nordlicht, M.D.	New York
James R. Nunn, M.D.	Erie
Ward L. Oliver, M.D.	Schoharie
Robert Lee Patterson, Jr., M.D.	New York
Richard L. Pearlman, M.D.	Richmond
Richard N. Pierson, Jr., M.D.	New York
Bernard Saul Post, M.D.	Nassau
Theodore J. Prowda, M.D.	Oneida
Sheldon H. Putterman, M.D.	Queens
Charles D. Sherman, Jr., M.D.	Monroe
John F. Spring, M.D.	Broome
Tamarath K. Yolles, M.D.	Suffolk
Julia Freitag, M.D., *Advisor*	Albany
Bernard J. Pisani, M.D., *Advisor*	New York

Since the last House of Delegates meeting of the Medical Society of the State of New York, the Continuing Medical Education Committee has met two times: October 24, 1980, and March 6, 1981.

Survey Activities. Since our last report, the Committee has received five applications for accreditation surveys and eighteen applications for resurveys. Some institutions were found to be ineligible for survey on the basis of information received. The activities of the CME survey subcommittee and recommendations resulted in the accreditation of the following institutions:

Our Lady of Lourdes Memorial Hospital — Provisional accreditation for 2 years

New York State Bureau of Disability Determinations — Provisional accreditation for 2 years

New York State Society of Internal Medicine — full 4 year accreditation

St. Vincent's Medical Center for Richmond — full 4 year accreditation

Catholic Medical Center — Provisional accreditation for 2 years

Brooklyn Academy of Medicine — Provisional accreditation for 2 years

St. John's Episcopal Hospital — full 4 year accreditation

Two institutions were surveyed and found to have deficiencies in certain areas of their CME programs. It was decided to put off making a decision on accreditation for both institutions to allow the deficiencies to be corrected.

The Creedmoor Psychiatric Center was surveyed, and recommendations for its accreditation will be submitted to the CME Committee in September.

The following institutions were resurveyed, and the recommendations for continued accreditation will also be submitted at the September meeting:

Manhattan Eye, Ear & Throat Hospital
New York State Psychiatric Association
Academy of Medicine of Queens County
Harlem Valley Psychiatric Center
Suffolk Academy of Medicine
Booth Memorial Medical Center

At the time this report was written, the following institutions were scheduled for resurveys:

Central New York Academy of Medicine
Ellis Hospital
Staten Island Hospital
Glens Falls Hospital
New York City Department of Health

The CME Committee adopted a new format for the resurvey procedure. This year institutions whose resurvey applications were accepted were invited to MSSNY headquarters at Lake Success where the resurvey was conducted. Generally, the institutions being resurveyed were represented by that person responsible for the continuing medical education program and one administrative representative. The CME resurvey team consisted of one chairman and two committee members. Through this mechanism, the Committee was able to survey four to five institutions during one day. This new procedure appears to be very satisfactory and effective.

MSSNY Requirement for CME. The CME Committee monitored, with interest, the impact of CME requirements for MSSNY members which became effective March 1, 1981. Waivers and exemptions have been referred to county medical societies, and the counties' decisions are being approved by the Council. The special method for MSSNY members (No. 6) appears to be a popular pathway for members to fulfill their CME requirements.

As a result of discussion regarding correspondence received from the American Psychiatric Association inquiring about the CME status for life members of the APA, the CME Committee recommended that the Council approve the policy that a member of MSSNY who has fulfilled the CME requirements of a recognized specialty society, including a life membership exemption by the specialty society, be considered to have fulfilled the CME requirements of MSSNY. During the April 16, 1981, meeting, the Council approved this recommendation.

CME Council of the State of New York, Inc. The Committee has continued to work closely with the CME Council of the State of New York, Inc. This Council is composed of representatives from each of the following bodies: the Associated Medical Schools of New York, the Association of Medical Specialty Societies of New York, and the Medical Society of the State of New York. This Council has advisors from the New York State Department of Health and from the New York State Department of Education. Currently, the CME Committee is working with the Council to develop a CME educational and consultative statewide meeting. A letter was sent to CME sponsors throughout the state seeking to define the interest in this type of meeting. The return mail demonstrated a definite interest in this proposal, and the Council will proceed with planning and development of such a program, tentatively planned for the spring of 1982, to be located in a centrally located area of the state.

In conclusion, the Committee wishes to gratefully acknowledge the support and guidance provided by George J. Lawrence, Jr., M.D., and his staff.

Respectfully submitted,
Peter B. Farnsworth, M.D., *Chairman*

CONTINUING MEDICAL EDUCATION (SUPPLEMENTARY)

To the House of Delegates, Ladies and Gentlemen:

This report is to supplement the material presented in our annual report of 1981.

The Committee on Continuing Medical Education met a third time this year on September 11, 1981. The purpose of the meeting was to review the reports on eleven institutions in New York State and to decide upon the type and length of accreditation to be granted. Below is a list of those institutions and the action taken by the Committee.

The following institutions were resurveyed:

Name	Type/# of Years
1. Glens Falls Hospital	accreditation/4
2. Harlem Valley Psychiatric Center	probationary/1
3. Manhattan Eye, Ear & Throat Hospital	accreditation/4
4. Academy of Medicine of Queens County	accreditation/4
5. New York State Psychiatric Center	accreditation/4
6. New York City Department of Health	provisional/2
7. Booth Memorial Medical Center	provisional/2
8. Suffolk Academy of Medicine	accreditation/4
9. The Staten Island Hospital	accreditation/4
The following institutions were surveyed for the first time:	
1. Our Lady of Lourdes Memorial Hospital	provisional/2
2. Creedmoor Psychiatric Center	provisional/2

Respectfully submitted,
Peter B. Farnsworth, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the annual and supplementary reports of the Committee on Continuing Medical Education be filed for information.

⟹ . . . *The annual and supplementary reports of the Committee on Continuing Medical Education were* **FILED FOR INFORMATION** . . .

DRUG ABUSE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Drug Abuse are as follows:

Ronald J. Dougherty, M.D., *Chairman*	Onondaga
Richard S. Blum, M.D.	Nassau
Sidney S. Greenberg, M.D.	New York
Leonard L. Heimoff, M.D.	Bronx
Sanford A. Kaplan, M.D.	Westchester
Allison B. Landolt, M.D.	Westchester
Benjamin Lanier, M.D.	Kings
Anthony Markello, M.D.	Erie
* James Cech	Monroe
Mr. William Leavy, *Advisor*	Albany

* Medical Student

The Committee was represented at the White House Conference on Prescription Drug Misuse, Abuse, and Diversion in November, 1980. The rationale for such a conference was the fact that approximately 7 million Americans, or about 3% of the population, use legal drugs such as barbiturates, tranquilizers, amphetamines, and narcotics for purposes other than for which they were intended, frequently with disastrous and sometimes fatal results. Approximately one billion dollars annually is derived from the illegal sale of licit drugs. There are more accidental overdose deaths resulting from prescription drug abuse, especially sedative hypnotics, than all of the illicit drugs combined. The abuse of legal drugs is thought to be involved in 7 out of every 10 reports of drug-related injury or death, both accidental and suicidal. Diversion of controlled substances occurs on a retail level distribution system with only a small percentage of practitoners and pharmacists actually being involved. It is recognized that only limited controls can be exerted on a federal level; whereas specific practitioner problems can be successfully addressed through joint efforts of state and local agencies, more specifically, those agencies that are involved in identification, education, regulation, licensing, and enforcement with regard to diversion of controlled substances.

The main items which occupied the time and interest of the Committee were as follows:

a. The Committee discussed the recent rescheduling of the short acting barbiturates into Schedule II which requires that they be prescribed on Triplicate Prescription Forms. The drugs in question, amobarbital, pentobarbital, and secobarbital, are recognized nationally as having high abuse potential and they contribute to more than 20% of the suicide deaths in New York State. The minimum therapeutic dose and the minimum lethal dose for these drugs are within a dangerously close range so that relatively small doses over long periods of time can lead to respiratory depression and death.

The Committee feels that it is reasonable that the prescribing physician should see the patient at least monthly to determine if the drug is still indicated and the dosage is appropriate. Also by changing the scheduling of these drugs it will make prescription data available which may reveal significant changes in the suicide figures due to these drugs. It was reported for Committee information that ARCOS* figures are now available for base line information and it can therefore be determined after a certain period of time whether or not fewer prescriptions are being written for the short acting barbiturates and more prescriptions for drugs with less potential for abuse.

It was also pointed out that the rescheduling of these drugs will bring New York State regulations into conformity with existing Federal regulations.

The Committee reiterated that it is common knowledge that most drug misuse is not by physicians, pharmacists or other professional people and does not involve those drugs that are in most armamentaria of physician and pharmacy practice. The Committee agreed that most of the drugs which create the headlines are street drugs such as marijuana, LSD, and "angel dust" — substances that the professions do not manufacture, prescribe, or stock — therefore, the Committee recommended:

"That the Medical Society of the State of New York no longer oppose the rescheduling of short acting barbiturates in Schedule II."

This recommendation was disapproved by the Council at its meeting on January 22, 1981.

b. The Committee believed that the present position of the Medical Society of the State of New York concerning the use of amphetamines is outdated in view of the fact that additional uses of amphetamines are becoming acceptable (e.g., use with narcotics for enhancement of their pain relieving effect in cases of terminal cancer with intractable pain). It felt that the present MSSNY position could proscribe future legitimate uses of amphetamines as they are developed.

The Committee therefore recommended that the MSSNY position be changed from "that amphetamines be limited to use in hyperactive children and narcolepsy" to:

"it is the position of the Medical Society of the State of New York that amphetamines should not be used in the management of weight control problems, however, it recognizes that there are legitimate reasons for prescribing amphetamines (e.g., narcolepsy, minimal brain damage, and in conjunction with narcotics in control of intractable pain) and that where amphetamines are prescribed, the indications for their use should be stated on the prescription form."

At its meeting on January 22, 1981, the Council amended this motion by deleting the phrase "and that where amphetamines are prescribed, the indications for their use should be stated on the prescription form," and approved the amended version.

c. Draft Bill 20-81 would permit the Commissioner of Health to remove a practitioner's privilege to prescribe Schedule II drugs in cases where, in the Commissioner's opinion, an imminent danger is imposed to the health of the State.

In spite of the fact that the Commissioner must provide a hearing for the practitioner within 15 days, the Committee felt that the bill was so generally and nonspecifically worded that it could be variously misinterpreted and be very difficult if not impossible to implement. The Committee felt that there is also a distinct threat to the right of a physician to exercise his considered judgment in the legitimate and ethical treatment of his patients. It, therefore, recommended disapproval of the bill as presently written.

The Council approved the Committee's recommendations.

d. The Committee reported that the use of THC for cancer and glaucoma patients would be available in the spring of 1981. The protocol drafted by the State must be approved by the FDA and applications for the use of marijuana must be reviewed by a State Patient Qualifications Review Board.

e. The Committee supported the proposed rescheduling of Phencyclidine (PCP) from Schedule II to Schedule I and recommended approval by the Medical Society of the State of New York.

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* ARCOS — Automation of Reports and Consolidated Orders System (under the United States Drug Enforcement Administration)

The Council approved the Committee's recommendation.

f. The new edition of the Desk Reference on Drug Abuse has been distributed to all physicians in the State.

Respectfully submitted,

Ronald J. Dougherty, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Drug Abuse be filed for information.

⟹ . . . *The report of the Committee on Drug Abuse was* **FILED FOR INFORMATION** . . .

EMERGENCY HEALTH SERVICES

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Emergency Health Services are as follows:

David N. Kluge, M.D., *Chairman*	Monroe
Julius P. Duic, M.D.	Westchester
Irving G. Frohman, M.D.	Queens
John C. Herrman, M.D.	Lewis
Norman Morris, M.D.	Kings
Surrendra M. Sharma, M.D.	Orange
John E. Spoor, M.D.	Otsego
Sheldon Zuckerman, M.D.	Nassau
* Harry Stulbach	New York
Robert J. Huszar, M.D., *Advisor*	Albany

Emergency medical services (EMS) are becoming better organized, better recognized, and of better quality in New York State.

The New York State Emergency Medical Services Council under the auspices of the New York State Health Department includes four members of this Committee, and your Chairman is the current Chairman of the Council for a one-year term. The Council meets monthly in Albany and is involved in emergency medical technicial (EMT) and advanced EMT (paramedic) training, the quality of ambulance services, hospital emergency department liaison with prehospital emergency medical care and proposed legislation that impacts on emergency medical care. This provides a statewide organizational approach to EMS.

The public, physicians, and State agencies are more cognizant of EMS quality care, training, and problems in the system as the system becomes better known. More ambulances in the State now provide a trained and certified EMT on each ambulance trip. There are now forty advanced life support systems throughout the State providing advanced levels of care for shock, airway management, cardiac problems, and other life threatening conditions.

The following resolution of this Committee was adopted at its April 2, 1981, meeting as a result of the Joint Commission on Accreditation of Hospitals' decision to rescind its mandate for hospital staff privileges to be granted only to those physicians who have demonstrated CPR proficiency:

> **Resolved,** That the Medical Society of the State of New York recommends and encourages that all physicians acquire and maintain proficiency in CPR.
>
> **Resolved,** That hospital medical staffs implement this principle.

The Council at its June, 1981, meeting approved the first resolved and disapproved the second resolved.

Further training for advanced cardiac life support as developed by the American Heart Association has been endorsed as a necessity for those physicians who provide medical control for advanced cardiac life support systems. It was requested, and the Council approved the Committee's request, that the New York Chapter of the American College of Emergency Physicians supervise this training for physicians in New York State. A program for advanced trauma life support has recently been developed under the auspices of the American College of Surgeons.

Legislation is needed in New York State to establish freedom from liability for those physicians who provide medical control in advanced life support. There is no doctor-patient relationship and no charge for the advice given over the radio to the advanced EMTs at the scene and en route to the hospital. The patient may not be transported to the hospital in which the medical control is located.

Legislation is also needed in New York State to establish freedom from liability for hospitals teaching the clinical experience required for advanced EMT training by the New York State Health Department.

The Committee again wishes to emphasize the support of returnable container legislation to decrease broken glass injuries. It also favors nonremovable flip tops to prevent foot injuries and the aspiration of these flip tops. It supports stricter enforcement of hand gun laws and mandatory sentencing in cases of illegal use and possession of guns. Since over 50 percent of auto fatalities involve the abuse of alcohol, it supports stricter enforcement of Driving While Intoxicated (DWI) laws. This was approved by the Council.

There have been occasions when difficulties have developed between ambulance attendants and physicians at the scene of an accident. Methods of better identification of physicians and improved rapport are being considered.

The Committee recognizes the need to develop better categorization of hospital facilities, especially for trauma care, which continues to be an issue in many regions of New York State.

There is continuing improvement in this aspect of medicine in the State through the activities of this Committee's members and the many other physicians in New York State who provide quality emergency care to patients at all levels. Much, however, remains to be accomplished.

Respectfully submitted,

David N. Kluge, M.D., *Chairman*

* Medical Student

⇒ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⇒ Your reference committee recommends that the report of the Committee on Emergency Health Services be filed for information.

⇒ . . . *The report of the Committee on Emergency Health Services was* **FILED FOR INFORMATION** . . .

ENVIRONMENTAL QUALITY

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Environmental Quality are as follows:

Ronald Stritzler, M.D., *Chairman*	Queens
Ephraim J. Felderman, M.D.	Nassau
Louis A. Sasso, M.D.	Richmond
Donald K. Stockdale, M.D.	Monroe
Donald B. Thomas, M.D.	Erie
Nicholas Vianna, M.D., *Advisor*	Albany

Our Committee meeting continued last year's principal theme concerning the hazards of drinking water. Dr. Walter Hang, the author of a comprehensive, highly critical, and controversial document entitled "Toxics on Tap," was invited to discuss his project. His work, sponsored by the New York Public Interest Research Group (NYPIRG), is a two-year detailed study of the sources, hazardous health effects, and types of toxic organic chemicals discharged into Long Island's groundwaters, the sole source of drinking water for over 3 million people.

The following are a few of the conclusions of this report:

— National and State Pollutant Discharge Elimination Systems' (N/SPDES) permits, issued to 1,453 Long Island industrial, municipal and other dischargers, are totally inadequate to control the release of toxic organic chemicals. Consequently, scores of industries discharge a complex spectrum of highly toxic and carcinogenic chemicals directly into the Island's groundwaters and surrounding seas.

— Contaminated landfills pose a serious threat to Long Island's water quality and the health of residents living in the vicinity of dumps. The most dangerously polluted known sites are contaminated by Hooker Chemicals and Plastics Corporation, including the company's property at Hicksville, New York, where approximately 38,000,000 gallons of waste water containing an estimated 380,000 pounds of vinyl chloride were dumped between 1956 and 1975. He stated that landfills in Syosset and Bethpage were equally dangerous due to Hooker dumping.

— A total of 66 industries avoid direct regulation under the permit program by discharging nearly 10 million gallons per day of contaminated waste waters into eleven municipal sewage systems. These facilities are unable to handle these toxic wastes, consequently, the effluents become a source of contamination.

— Local, state, and federal monitoring programs have failed to assess the full scope of Long Island's pollution problems. Comprehensive testing is nonexistent for the wide variety of toxic pollutants in water supplies, groundwater, industrial waste waters, and landfill leachates.

— Nassau County's age adjusted cancer mortality rates for its caucasian population rank in the top 10 percent of the nation, and this might be related to toxic pollutants consumed in water.

— It is to be noted that Nassau County was chosen for this study because it has one of the best departments and programs for control of drinking water pollution in the country.

To respond to Dr. Hang's report, Francis V. Podar, P.E., M.C.E., Deputy Commissioner for Environmental Health, was invited to the meeting. Mr. Podar's general comments about "Toxics on Tap" stated "conclusions are highly speculative, exaggerated, unsubstantiated, and replete with unfounded references and insinuations." Comments on specific conclusions were:

— "Pollutant Discharge Systems are totally inadequate to control the release of toxic chemicals."

> *Comment:* General understanding of potential effects of organic chemicals in drinking water and sophisticated testing capability did not exist between 1977. Since then his department has surveyed over 3,200 potential sources of groundwater contamination, has identified 561 sources, and has regulated 370 with the remainder in process of control.

— "Adequate strict discharge standards have not been set to comprehensively limit the release of toxic pollutants."

> *Comment:* It is recognized that the present state discharge standards do not address all organic chemicals likely to be encountered in a full nationwide spectrum of industrial waste waters; such a list is not needed to properly regulate industrial waste waters found on Long Island.

— "Contaminated landfills pose a serious threat to residents living in the vicinity of dumps."

> *Comment:* The testing of numerous wells in the vicinity of landfills in Nassau County demonstrate no unusual adverse water quality.

— "Sixty-six industries avoid regulation by discharging nearly 10 million gallons per day of contaminated waste water into (sewer) systems" and "are unable to treat toxics."

> *Comment:* Industries located in sewered areas do not "avoid" regulation but are required to discharge to municipal sewage systems with appropriate pretreatment. Control of industrial pretreatment is not generally effective, however, and is awaiting the setting of national discharge standards and treatment criteria by the EPA.

It is difficult to draw clear conclusions from the differing testimony of these two apparently sincere and competent experts, but surely the Long Island study should be a warning for the rest of the state — and the nation. New York has some of the toughest environmental controls in the country, and if significant chemical pollution is happening to Long Island waters, then it is occurring everywhere.

Respectfully submitted,

Ronald Stritzler, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Environmental Quality be filed for information.

⟹ . . . *The report of the Committee on Environmental Quality was* **FILED FOR INFORMATION** . . .

FORENSIC MEDICINE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Forensic Medicine are as follows:

Leslie I. Lukash, M.D., *Chairman*	Nassau
Michael M. Baden, M.D.	New York
Dominick J. DiMaio, M.D.	Kings
Elliot Gross, M.D.	New York
Gary Paparo, M.D.	Westchester
Robert L. Sullivan, M.D.	Schenectady
Sidney B. Weinberg, M.D.	Suffolk
* Paul Romanello	Onondaga
George M. Warner, M.D., *Advisor*	Albany

The Forensic Medicine Committee convened to discuss multiple problems concerned with the medico-legal investigation of death.

Dr. Lukash informed the Medical Society of the death of Judith M. Lehotay, M.D. The Committee expressed its deep sorrow by informing the family of its feelings and also with a moment of silence.

For the past several years, Dr. James Aquavella, ophthalmologist from Rochester, has been concerned about the need for the development of a more efficient corneal tissue donor system in the State. This year, he circulated information on how other states handled the corneal tissue donor program and asked for input from the Committee in proposing a legislative change, which would provide for a better system in New York State. The Committee supports the principle of facilitating the retrieval of corneal tissue for the transplantation; however, the responsibility of removal of corneal tissue must be undertaken by the Eye Bank after proper authorization is presented by the nearest of kin of the family of the deceased. It was felt that the authority of the Medical Examiner should not be compromised in any legislation for corneal tissue retrieval. At the June 18th meeting the Council approved the principle of facilitating the retrieval of corneal tissue for transportation.

The Committee has addressed itself again, as in prior years, to the problem of physicians' responsibility in pronouncement of death of those patients who expire under their care, as well as to make themselves available for certification of death. The pronouncement of death continues to be a problem. Some Medical Examiner's Officers have authorized trained, nonphysicians for the pronouncement of death. The Committee understands the position of the Medical Society and hopes that MSSNY will stress the importance of the immediate availability of physicians in the pronouncement and certification of death. In June the Council approved the need to make physicians aware of the importance of being available to pronounce and certify death.

The Committee discussed a longstanding concern, namely, that the medico-legal investigation of death in the State of New York should be upgraded. It recognizes that the Coroner system in many small counties exists because of economic reasons, which in small counties could be overcome by regionalization. The Committee is willing to recommend that an Ad Hoc Committee be formed to assist the Governor's Office in looking into the improvement of the Medical Examiner's system in certain areas in the State of New York.

For many years, the Medical Examiner's Offices were independent and funded by local county and city budgets. In 1960, the Health Department proposed to the State Government that Medical Examiner's Offices under their jurisdiction be reimbursed up to 50 percent of their existing budget. Local governments have availed themselves of such funding for obvious economic reasons and placed functioning independent Medical Examiner systems under the local Health Departments.

The State Health Department currently is establishing priority of reimbursements and the Medical Examiner's Office does not fall into one of the important groups to be funded by the State Health Department. Several members of the Committee discussed the hypocrisy of the State Health Department offering monetary reimbursement to local governments up to 50 percent and now that most of the Medical Examiner systems are under the local health jurisdictions, the Health Department does not feel that the Medical Examiner's Office falls in the high priority Classification for maximum reimbursement. The Committee has decided not to take a stand at this time, but will await the results of the efforts of the different governmental institutions to increase greater allocations of monies to the Medical Examiner's Office via the conduit of the Health Department.

Respectfully submitted,

Leslie I. Lukash, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Forensic Medicine be filed for information.

⟹. . . *The report of the Committee on Forensic Medicine was* **FILED FOR INFORMATION** . . .

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* Medical Student

HEALTH CARE IN CORRECTIONAL INSTITUTIONS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Health Care in Correctional Institutions are as follows:

Russell C. Johnson, M.D., *Chairman* . . . . Orange
Stephen Nordlicht, M.D. . . . . New York
Robert D. Reinecke, M.D. . . . . Albany
Elwood G. Weisenburn, M.D. . . . . Greene
Allison B. Landolt, M.D., *Advisor* . . . . Westchester

The MSSNY Jail Health Care Project terminated on May 31, 1981. Since its inception 18 months ago, the Project has worked with 13 of some 62 county correctional facilities in New York State. During this time, 25 facilities applied to the Project. Also during this time, only one jail was able to demonstrate an ability to meet the American Medical Association (AMA) Jail Health Care Standards. These standards are part of the national standards for correctional facilities, having been incorporated into the standards of the American Correctional Association and the U.S. Department of Justice. While a number of jails have worked hard to achieve compliance with the standards, it is a very serious matter that more of the jails are not now able to meet these standards. The problems for not meeting the standards seem to lie in three areas: (1) well-intentioned, but frustrated efforts on the part of jail administrators to provide funding and direction in their facilities; (2) failure on the part of county legislators to provide sufficient funding to allow for appropriate levels of staff and physical plant facilities; and (3) failure on the part of the state through the Commission of Correction to provide sufficient leadership, direction, technical assistance, and training programs as mandated by law. The Committee finds the situation to be intolerable and recommends that appropriate action be taken immediately by state and county officials to insure that proper levels of health care are achieved and maintained in county jails.

During our 18-month evaluation and technical assistance program to county jails, we found those jails that applied to be genuinely interested in the improvement of health care and medical services. We feel very gratified by the tireless and dedicated efforts put in by the jail personnel, medical and correctional, who cooperated so well with us in this project.

We are well aware that the county jails represent only one part of the correctional picture and because of the condition of the health care in the county jails we fear that health care in juvenile facilities, adult prisons, and police lock-ups may be inadequate as well. There are too many suicides and other deaths that occur in these facilities which could probably be prevented. In addition, there is inadequate transfer of important health care information between jails, other jails, and prisons. We call upon the State of New York to exercise the leadership necessary to remedy this serious situation.

Poor health care delivery is just one component of the overcrowded and overstressed correctional system in New York State. The availability of appropriate and proper health care plays a major role in the morale of both the incarcerated offenders and the staff that must work with them.

Respectfully submitted,
Russell C. Johnson, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Health Care in Correctional Institutions be filed for information.

⟹ . . . *The report of the Committee on Health Care in Correctional Institutions was* **FILED FOR INFORMATION** . . .

HOME HEALTH CARE AND HOSPICE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Home Health Care and Hospice are as follows:

Lawrence Kryle, M.D., *Chairman* . . . . Nassau
Albert F. R. Andresen, Jr., M.D. . . . . Westchester
Bruce E. Baker, M.D. . . . . Genesee
Roger Boulay, M.D. . . . . Monroe
Gerald D. Dorman, M.D. . . . . New York
Nicetas H. Kuo, M.D. Queens
Sheldon H. Putterman, M.D. . . . . Queens
Donald H. Schultz, M.D. . . . . Ulster
Jane C. Brady Wiles, M.D: . . . . Erie
[*] Nachum Katlowitz . . . . New York
Allison B. Landolt, M.D., *Advisor* . . . . . . Westchester
Michael McGarvey, M.D., *Advisor* . . . . Albany
George M. Warner, M.D., *Advisor* . . . . Albany

The Committee on Home Health Care and Hospice met once this past year, on Wednesday, September 2, 1981.

Ms. Grace Kermish, Director of the Home Health Care and Planning Program, and Vincent Vinciguerra, M.D., co-chief of the Division of Oncology, were invited guests representing North Shore University Hospital, which has a rather successful home health care and hospice program.

Ms. Jeanne Dennis, Director of the Thanas Program, was also a guest. This is a newly founded organization which deals with the bereavement of families that have lost a loved one and offers support services.

Ms. Kermish and Dr. Vinciguerra reported on the status of the home health care and hospice programs at North Shore University Hospital, and a discussion of these programs in general ensued.

Dr. Vinciguerra pointed out that his program at North Shore University Hospital had been developed due to the demands of cancer patients and their families to be treated at home. It was started as a program of medical support for these families and later expanded into a medical team equipped to deal with home treatment. The team includes physicians, nurses, social workers, dieticians, volunteers, technologists, and clergy. This program is called "HOME" — Home Oncology Medical Extension — and was established in 1975. A van was purchased in October, 1978 to transport the medical team. It serves approximately 125 patients per year and is a privately funded program. This service is available four days a week. It is required that the patient has been diagnosed as having cancer and is being treated by oncologists. The patient must be referred by a staff physician but does not necessarily have to be a patient at North Shore University Hospital as long as the necessary records are made available. The private physician is constantly apprised of the actions of the team. In New York State an average of 15% of cancer patients die at home, while in the North Shore University Hospital plan an average of 50% of cancer patients die at home. The program is receiving some funding from the National Cancer Institute (NCI) because data is needed on the relative value of hospital care vs. home care. This will also be used to try to convince the third party payors to pay for home care.

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[*] Medical Student

Recently a project in Roslyn, Long Island, to set up a "free standing hospice" has been challenged and is being looked into further. A community group, Friends of Hospice, wanted to buy a building and set up a program with physicians from North Shore University Hospital. However, some parties have indicated that the cost would be prohibitive. It is also felt that this would merely act as a respite care facility for families of terminally ill patients, which is not an admissible diagnosis in the United States. The Committee is most interested in the final outcome of this project.

The Committee is also interested in the results of a 2-year demonstration program on hospice that is being carried out by the Health Care Financing Administration (HCFA) and is federally funded. This program was approved for certain hospitals throughout the United States which already had home health care departments. Only Cabrini Medical Center and the Genesee Region Home Care Association were given such approval in New York State. This demonstration program began in October, 1980 and will continue through October, 1982.

Ms. Kermish gave a report on the status of the Home Health Care Program at North Shore University Hospital, which cares for patients ranging from infants to the elderly. This program is funded by Blue Cross, Medicare, and Medicaid. Other methods of reimbursement are looked into for those patients who are unable to pay and do not have any insurance coverage; however, no patient is turned away even if the hospital has to pay the expenses itself. As in the "HOME" program, teamwork is extremely important, and North Shore relies heavily on home health aides and visiting nurses.

North Shore Hospital also has a program of self-supporting group discussions and individual counselling sessions for the bereaved families of patients. It is usually a ten-week program, but some studies indicate that perhaps a year program would be more beneficial.

The Committee agreed that there are three types of support which should be available to the dying in the United States — home care, acute care facilities, and subacute care facilities. Subacute care facilities or hospices must be developed for those patients who do not need acute care while in the process of dying and to help provide more services than the family of these patients can provide in the final days. Hospices should also act as respite care facilities to help alleviate the strain on these families.

It was also pointed out that the third party payors do not know what programs should be supported in the field of home health care and hospice. The National Hospice Organization has set standards for these facilities, but actual reimbursement will only be decided through legislation. This Committee is ready to offer its help and advice in setting up further standards.

George Warner, M.D., of the New York State Department of Health, who is Advisor to this Committee, gave an update on the legislation that has occurred during the past year and how it has affected home health care and hospice.

The Omnibus Reconciliation Act of 1980 mainly affected Medicare. It removed the $60 deductible, eliminated the 100-visit ceiling, and also eliminated the 3-day prior hospital stay. Additional therapy was included and the required examination by a speech pathologist was deleted. There was an increase in the money allotted for physical therapy services.

The Reconciliation Bill of 1981 encompassed changes in the Title XIX Medicaid program. Under the new legislation, states would be permitted with a waiver from the Secretary of HHS to provide home and community services that are not now recognized by Medicaid, such as respite services, hospices, day care services, and home care community support services. New regulations from HCFA are due to be released by October, 1981.

Another change in Title XIX is a policy change it is *not* required by legislation. It involves the percentage of payment allowable for certain services. The amount allowable has been changed from 20 hours a week to 6 hours a week.

Another piece of legislation that is of extreme interest and importance to New York State is a federal regulation that would allow the federal government to license home health agencies for both federal and state approval. Quite a number of proprietory agencies are waiting to be licensed, which would cause a conflict due to the fact that New York State does not have any statutes recognizing proprietory agencies. The capacity of the federal government to do inspections and keep up with quality control is in question. New York State is still trying to determine whether there must be a change in its legislation because of the federal legislation.

In response to these legislative changes, the Committee pointed out the position adopted by MSSNY in 1977, which is as follows:

> "The Medical Society of the State of New York encourages the stimulation of physician interest in and acceptance of home care as an integral part of the overall continuum of medical care. We also emphasize the need for medical school and internship program to educate medical students, interns, and residents and practicing physicians in the value and proper use of home health care programs. Hospital boards and medical staff should encourage community interest in support of home health care programs. Community health planning agencies should have representation from organizations concerned with providing home care services; and practicing physicians should involve themselves in developing home health care programs along with community health planning agencies.

> The Medical Society of the State of New York supports the concept that all home health agencies, voluntary or proprietary, should be subject to the same controls, regulations, and standards.
>
> The Medical Society of the State of New York also supports the concept that the physician is responsible for monitoring the home health care of his patients, or for the transferral of this *responsibility* to another physician."

Dr. Warner also pointed out that the local visiting nurse associations and visiting nurse services are in trouble. The County Health Departments are looking for funds because there has been a reduction in federal funding and no increase in state aid. When these programs cannot expand due to lack of funds and patients' inability to pay, proprietory agencies then come in and help to cause further deterioration in these programs.

Another source of potential problems is a regulation that allows the JCAH to accredit an institution and then it is also "deemed" to have federal accreditation. This "deeming" or granting "deem status" can also extend into areas other than hospitals, such as nursing homes.

Ms. Jeanne Dennis, Director of the Thanas Program, gave an insightful report of its goals and activities. She states that their goal is to "develop a center that will provide a range of support services for the bereaved survivors of a family death." The idea is to study how bereavement affects a family's unity, health, financial situation, etc.

The program believes in "therapy through education" — involving a multitude of activities. The program includes workshops, self-help groups, counselling on practical matters, i.e., making and probating a will, raising children on your own, insurance coverage, and how to deal with a violent or sudden death. The program also wants to serve as a debriefing session for those professionals in the field who come in constant contact with death to help alleviate the strain that naturally can develop.

The Thanas Program is sponsored, at least during its developmental period, by a nonprofit agency located in Manhattan, the Project Return Foundation. They are also doing active fund raising. A small fee is charged for the program's services; however, these charges are scaled to suit the economics of the individual family.

Since this program only started operation in July, it has not had a great deal of publicity nor enough time to compile any statistics on its success rate. Ms. Dennis promised to submit an annual report of the program to this Committee next summer, which will be reported to the 1982 House of Delegates.

Respectfully submitted,

Lawrence Kryle, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Home Health Care and Hospice be filed for information.

⟹ . . . *The report of the Committee on Home Health and Hospice was* **FILED FOR INFORMATION** . . .

INFORMATION TECHNOLOGY IN MEDICINE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Information Technology in Medicine are as follows:

William A. Bauman, M.D., *Chairman*	New York
Ralph L. Engle, Jr., M.D.	New York
Elemer R. Gabrieli, M.D.	Erie
Robert M. Klein, M.D.	Westchester
Leon Pordy, M.D.	New York
Charles T. Ryder, M.D.	New York
Arthur A. Stein, M.D.	Albany
* Chak Tom	New York
John Uppal, Sc.D., *Advisor*	Albany

The Committee continued to review Disease-Related Group methodology (DRG). The purpose of this computer dependent system is to classify hospital admissions according to the acuity of care. A patient's admission is classified into a cluster according to anticipated required hospital resources. DRG's may be useful for comparative studies of hospital resource needs and fiscal requirements. Reimbursement is then based on the particular cluster into which a patient falls. New Jersey, for reimbursement purposes, is experimenting with this system as an alternative to traditional hospital reimbursement. The Committee reiterates that the use of DRGs has little value for medical analysis, is confusing, and erodes established medical diagnostic classification systems.

Since information technolgy depends on precise medical language, and standard easy-to-use methods for coding medical information, the Committee endorses the continued use of the Internal Classification for Diseases — 9 for procedure coding. A proposal by H.C.F.A. to substitute Current Procedural Terminology will impair retrospective statistical analyses. The Committee applaudes the abandonment by H.C.F.A. of their proposed use of CPT.

The Committee requested and received a report from the Society's representative to the Data Protection Review Board of N.Y.S. Department of Health SPARCS. The report indicated that the Board has been effective in monitoring requests for confidential medical information from the Data Bank of the SPARCS system. The Committee has requested copies of the minutes of the Data Protection Review Board meetings.

The Committee was privileged to have Drs. Gabrieli and Uppal review the feasibility and capability of computer applications in office and hospital practice. Mr. Carl Cotroneo described retrieval of patient information using a computer based system. At the request of the Committee, Drs. Gabrieli and Uppal sponsored a seminar at the Annual CME Assembly of the Medical Society of the State of New York on Saturday, June 27, 1981.

Members of the Committee recognize that computer based medical information technology has assumed an essential role in a number of health care activities. In particular, the advent of the mini-computer and shared computer networks have brought modern information technology into the office practice of medicine. More recently, inexpensive microprocessors have become adapted for even small medical practices — useful for billing, accounts payable, scheduling, and statistical analysis of professional activities. Cost effective and reliable systems are available to the practicing physician. Committee members are prepared to help individual physicians evaluate such systems.

The Committee expresses its gratitude to Dr. George Lawrence, Jr., Mrs. E. Daepp and staff, and to the Officers and Trustees of the Medical Society of the State of New York for their continued interest and support of the deliberations and conclusions of this Committee.

Respectfully submitted,

William A. Bauman, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Information Technology in Medicine be filed for information.

⟹ . . . *The report of the Committee on Information Technology in Medicine was* **FILED FOR INFORMATION** . . .

MATERNAL AND CHILD HEALTH

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Maternal and Child Health are as follows:

Roderick McLean, M.D., *Chairman*	Onondaga
Richard Harold Aubry, M.D.	Onondaga
Peter A. M. Auld, M.D.	New York
Louis S. Blancato, M.D.	New York
John F. Dwyer, M.D.	New York
Myron Gordon, M.D.	Albany
Robert Gordon, M.D.	Kings
Rita Gilman Harper, M.D.	Nassau
Richard E. Murphy, M.D.	Clinton
Morton A. Schiffer, M.D.	Kings
Donald P. Swartz, M.D.	Albany
Walter Walls, III, M.D.	Erie
* Sharon Stotsky	New York
Mr. Andrew C. Fleck, Jr., *Advisor*	Albany

Consumerism today has gained such influence and made so many demands in the field of maternal and child care that it is imperative that the Health Department and medical profession continue to analyze and publish mortality and morbidity statistics. Patients, influenced by the forces in our population promoting change, are pressuring their physicians to perform their medical care in ways that are often contrary to their time-honored and proven methods.

Inhospital care of maternity patients over the past years accounted for a steady downward trend in maternal and perinatal mortality and morbidity. Since the publication of European perinatal statistics in 1967, medicine, through education and scientific research and development, has concentrated its efforts successfully toward the improvement of maternal and perinatal outcome.

If we as physicians are to be forced to accept these new trends in medical care, we must be very careful to analyze results. If the new methods are beneficial, they will prove themselves. However, if they are detrimental, the records will make it evident. By this mechanism, and only by this mechanism, can we ever justify the standards and practices of the medical profession.

The strict and mandatory rules and regulations of sterile technique, infection control, and hospital surveillance of our patients are being gradually subverted by patients who object to the physician's advice, but hold him responsible for a perfect outcome and survival of both mother and child.

There has never been a period in the history of medicine when analysis of our performance in providing medical care is more imperative and requires a more indepth study than at the present time.

The Medical Society of the State of New York, the Health Department, and physicians, responsible for the health and welfare of our maternity and newborn patients, must continue to record and review and publish our maternal mortality and morbidity statistics as well as related areas of concern such as fetal and perinatal morbidity and mortality, individual complication review, and a long range study of physical and mental outcome.

Without such analysis, we cannot demonstrate our success or failure. Education and research will lose direction. Progress will be hampered, and our goals and accomplishments will not be realized or documented.

The Maternal and Child Health Committee is developing a new grant proposal for submission to foundations which, hopefully, will support the reinstitution of our studies. We intend to discuss this with the New York State Department of Health with a request for their help in obtaining the grant and in assisting us in obtaining data on all maternal deaths in the state, in and out of hospitals.

Respectfully submitted,

Roderick McLean, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was prepared by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Maternal and Child Health be filed for information.

⟹ . . . *The report of the Committee on Maternal and Child Health was* **FILED FOR INFORMATION** . . .

MEDICAL ASPECTS OF SPORTS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on the Medical Aspects of Sports are as follows:

Donald T. Kasprzak, M.D., *Chairman*	Clinton
Albert B. Accettola, M.D,	Richmond
Arthur M. Bernhang, M.D.	Suffolk
Herbert Bessen, M.D.	Putnam
Kenneth E. DeHaven, M.D.	Monroe

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* Medical Student

Rodney Dusinberre, M.D.	Tompkins
Louis N. Frankel, M.D.	Nassau
Robert M. Israel, M.D.	New York
* Bruce Seideman	Nassau
Ms. Sandra Scott, Ph.D., *Advisor*	Albany
Mr. Joseph Abraham, Ph.D., *Advisor*	Ontario
Mr. Glenn Haughie, *Advisor*	Albany

The Committee on the Medical Aspects of Sports met on April 22, 1981. A number of subjects were taken under discussion.

1. Boxing. Several deaths due to boxing occurred during the past year, all of which were well publicized. Considerable discussion arose in the Committee regarding the safety of the sport. Bill S3323 was briefly discussed, this being an act to amend Chapter 1912 of the laws of 1920, relating to regulating boxing, sparring, and wrestling matches, and established a state commission, in relation to the submission of health and boxing records prior to bouts. The input to Dr. Edward Campbell, advisory physician to the Boxing Commission, was anticipated at the last meeting, but due to illness, Dr. Campbell was unable to attend. A letter to John Prenderville, Deputy Commissioner, New York State Department of Parks and Recreation, has been forwarded requesting further information concerning the qualifications of referees, ringside physicians, and ancillary boxing personnel. It was the feeling that the Committee could be of help in reviewing this aspect of the problem and perhaps contribute measures furthering safety in the sport of boxing. Dr. Campbell is to meet with the Committee in the near future to further discuss the situation.

2. Bill S4483. An act authorizing and directing the Commissioner of Education to conduct a comprehensive study of local school districts physical and medical examination policies for student athletes was reviewed.

This bill was formulated because of what was felt to be a rising number of serious injuries and sudden deaths among students participating in school athletics. The Committee felt that the concept of the bill is well meant, but that it would be of value to get further suggestions from the Committee on School Health, Bureau of Health Services, Medical Society of the State of New York, and the New York State Public High School Athletics Association. The value of a standardized school history and physical form was brought up once again, recognizing the inherent value of such a form, but also being aware that because each school district is an entity unto itself, agreement on a standardized form is not likely. A Sports Candidate Questionnaire form, which was developed by the Committee on School Health, was reviewed by the Committee and endorsed. This form was developed to update the participants' health during the school year when going from one sport to another after the initial physical examination done at the beginning of the school year.

3. Bill A1418. An act to amend the education law, in relation to indemnification of physicians' rendering medical services at school-sponsored sporting events in cities having a population of one million or more, was reviewed by the Committee. The Committee approved the principle, but doubted the practicality of the bill.

4. Selection and Classification. An update on the bill was presented by Dr. Sandra Scott from the New York State Public High School Athletics Association, and she reported that the bill has been approved by the New York State Board of Regents. Participation in the program on the part of private and public schools is completely voluntary with, at present, about 700 schools participating. To date the program has effectively proven to cut down on sports injuries. It was the hope of the Committee that the State Education Department would call for periodic review of the program to maintain its present high level of standards.

5. Boys Lacrosse Study. Increasing numbers of dental injuries have been reported over the past year. It was felt that the poorly fitting masks were probably the most important cause of this increase. A survey is being conducted this Spring by the State Lacrosse Committee of the N.Y.S.P.H.S.A.A. following which recommendations will be forthcoming. The mandatory use of mouth pieces is being considered, and in addition, the manufacturers of the protective masks are to be approached in the hope of designing more protective face guards.

6. Soccer. Considerable discussion arose as to the practicality of allowing participation in soccer by an athlete with the loss of one eye and protecting the remaining eye with protective eye gear. The Committee opposed this approach. Participation in soccer with any type of eye protective device is specifically prohibited by the rules of the game. The Committee felt that in such instances the athlete should be encouraged to participate in other sports. If there was insistence on the part of the parents to allow participation of the child, then there is access to the courts via the Dunne Bill. In another vein, the Committee also recommended the wearing of protective eye gear in all the racquet sports.

7. Nutrition and Physical Fitness. The Committee recognized the value of good eating habits not only in the athlete, but in the school population in general. It was felt that considerably more could be done through the school systems, especially in the prevention of obesity and hypertensive cardiovascular disease, through the entities of good nutrition and physical fitness. An excellent overview of the topic was presented by Dr. Sandra Scott with literature relating to the subject being readily available from: Educational Programs and Studies Information Services, EPSIS 330 EB, New York State Education Department, Albany, New York.

8. Wrestling Weight Control. The problem of weight control in interscholastic wrestling was brought under discussion, this being an age old problem in the sport. The standard weight classifications are still in effect including the 90-pound class. All the various method of losing weight so as to qualify at a certain weight level were disapproved by the Committee. It was the opinion of the Committee that the participant should be placed in the appropriate class after a period of conditioning, and without excessive weight loss. A slide series and script has been developed by Dr. Hubert Riegler, addressing this problem and will be available to all sections in schools very shortly through the N.Y. S.P.H.S.A.A.

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* Medical Student

9. Track. In the past a minimum of two nights rest between track competition was required. The Safety Committee of the N.Y.S.P.H.S.A.A. felt that this requirement should be waived, and the Committee completely concurred. It felt that competing on consecutive days raised no problems since the participants were in prime physical condition. The Committee did, however, feel that caution should be exercised in certain climatic conditions, especially on days of extremely high temperatures and high humidity.

10. Guidelines in Outdoor Running. Considerable discussion arose concerning the danger of running in cold weather. The greatest problem facing the majority of runners is that of hydration and frostbite. The Committee recommended protection to hands and face. With proper layered clothing, the Committee felt no great difficulty existed. The problem with winter running was most prevalent in the participants who had some type of underlying basic respiratory disorder such as asthma, and felt that this group should be cautioned about running in extremely cold weather. In normal healthy people, the nasal passages kept the inspired air at the level of hydration. A bigger problem on the school level is the running on streets and highways during training sessions. This is obviously due to the lack of training facilities. The Committee felt that this practice should be discouraged, especially since injuries which were incurred while running on streets and highways were not covered by the school insurance.

11. Protective Headgear in Equestrian Activities. Horseback riding accidents are a serious cause of head injuries with resultant death or permanent residual defects, and they are among the leading causes of injuries from recreational activities. The American Academy of Pediatrics recommends in its statement the following:

A. Educational programs be given to parents, riding instructors, show organizers, and managers emphasizing the risks in horseback riding and methods to minimize them.

B. A satisfactory protective hat be developed for each type of riding activity and worn when riding or preparing to ride.

C. All riding schools, horse shows, rodeos or other events in which young persons participate with horses should require that a protective hat be worn during activity, and that there be a points against system or disqualification if these requirements are not met.

The Committee unanimously approved and supported the concept that protective headgear be devised and used for equestrian participation.

The Chairman extends his thanks to the members of his Committee for their cooperation. In addition, thanks to Dr. George J. Lawrence, Jr., and Mrs. Elizabeth Daepp for their help and cooperation during the past year.

Respectfully submitted,

Donald T. Kasprzak, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Medical Aspects of Sports be filed for information.

⟹ . . . *The report of the Committee on Medical Aspects of Sports was* **FILED FOR INFORMATION** . . .

MENTAL HEALTH

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Mental Health are as follows:

Herbert S. Peyser, M.D., *Chairman*	New York
Harvey J. Bluestone, M.D.	Bronx
Lewis Glickman, M.D.	Kings
Abraham Halpern, M.D	Westchester
Edith Mila Jurka, M.D.	New York
Allison B. Landolt, M.D.	Westchester
William V. Lewit, M.D.	Westchester
Laurence Loeb, M.D.	Westchester
Judah Maze, M.D.	Nassau
Stephen Nordlicht, M.D.	New York
Donald H. Schultz, M.D.	Ulster
* Larry Sandberg, M.D.	Onondaga
Raymond Vickers, M.D., *Advisor*	Albany

The Committee on Mental Health met four times this year in addition to its other activities, which will be reported upon later. The first meeting was spent in completing the work of the previous year in forensic psychiatry. We had been concerned with the problem of the dangerous mental patient, had met with Mr. Harold Smith of the Office of Mental Health's (OMH) Forensic Bureau, and had held two joint meetings with the Committee on Psychiatry and Law of the New York State Psychiatric Association. We had pushed for a State blue ribbon panel to review the insanity defense, the post-verdict procedures, and competency-to-stand-trial matters. The Governor had appointed a Law Revision Commission, on which one of our members had served, and their recommendations had been forwarded to the Legislature which, rather quickly, passed these with a few changes and without hearings.

We received the new law which did not change the insanity defense but did tighten up post-verdict procedures. We disapproved of its failure to reconsider in any depth the problem of the insanity defense and its alternatives, e.g., "diminished capacity," and we disapproved of the Legislature's inclusion of psychologists as expert witnesses in these matters. This latter action was contrary to the recommendations of the Commission. Our concern about psychologists being involved here and in other such places will be discussed later in this report. In addition, we were deeply concerned about some of the post-verdict procedures in the new law. We felt that a clear differentiation had not been made between people who had committed violent acts and those who had committed non-violent acts, that the law was too restrictive in regard to furloughs by eliminating administrative furloughs and thus unnecessarily encumbering courts with prolonged hearings, and that non-governmental OMH-approved facilities were not being utilized. Thus the new law tended to be cumbersome, excessively restrictive, and in certain instances, ineffective by shifting too much control from the psychiatric profession to the already overburdened courts and district attorneys. We decided to request further information from the Office of Mental Health after a period of time of operation of the new law.

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* Medical Student

One of our main concerns has been to further our relationship with the state government, to hear what their plans were, to give input, and wherever possible, to participate in their activities. In accordance with this, we had a meeting devoted to the Office of Mental Retardation and Development Disabilities (OMRDD), continuing a policy of annual meetings with them begun the previous year. We were fully aware of the degree to which the medical societies, the psychiatric associations, and our profession in general has tended to neglect this area of human suffering. Some of the treating people in this field, not necessarily those people in OMRDD, often tend to exhibit a rather nonmedical and even antipsychiatric orientation. We met with and had a useful discussion with James Otis, Ph.D., Director of OMRDD's Bureau of Standards and Policy Analysis, and Matthew P. Janicki, Ph.D., Director of OMRDD's Bureau of Long Range Goals and Planning. They reviewed the OMRDD program in general for us, as well as their specific 1981–1984 program involving planning, monitoring, evaluation, advocacy, deinstitutionalization, provision of services, and protection of the rights of the disabled. Our Committee pushed for upgrading of and increasing the role of psychiatry in these programs, and Drs. Otis and Janicki agreed to this. We shall meet again next year and discuss these matters further. Our task of education and alteration of attitudes here will be a slow, long term, and delicate one.

As part of our program for increasing our contact with the Office of Mental Health the Commissioner of OHM responded to our request by appointing Dr. Raymond Vickers, Acting Director of OMH's Bureau of Health Services, as advisor to our Committee, and Dr. Vickers was able to attend the abovementioned meeting and to become acquainted with our work and with us. We had one meeting with Mr. Michael Kipp, Deputy Commissioner, OMH's Division of Policy Planning and Program Development, and Mr. Peter Trainer, Director of OMH's Division of Intergovernmental Relations. They discussed recent federal legislation and policies and then went on to describe how the state was involved in running its own mental health care delivery systems as well as funding other, in a sense, competing non-state, Governmental mental health structures. They are planning to shift the emphasis from the former to the latter, but are also concerned with better management of the state-run system to improve quality of care and decrease the drain on overall mental health care resources. They discussed new programs for carrying this out and then, in regard to the problem of the funding of mental health care delivery systems, requested us to give input into their standards and criteria for their performance contracts that they (OMH) use to evaluate the programs they fund. We agreed to do this in cooperation with the appropriate committee of the New York State Psychiatric Association. It is indeed a tall order and a very difficult problem, and we approach it in all humility. However, we feel we cannot neglect it. We medically and psychiatrically trained practitioners must have such input, and we must push for the use of the private sector in the overall care of the chronic mental patient as both therapeutically effective and cost effective. Furthermore, we are the actual workers in the field and the ones who are best fitted to give feedback on the operation of OMH-funded programs.

Our last meeting was with Ms. Joanne Hilferty, Deputy Commissioner, OMH's Division of Standards and Quality Assurance, who discussed this last matter in more detail and continued further with Mr. Kipp's presentation. OMH proposes the creation of a Mental Health Services Review and Planning Council to advise OMH and to improve the performance of the State mental health programs. In addition, they have targeted six state institutions for a pilot project in regard to various aspects of standards of care — to be reported on subsequently to us and to others.

In keeping with our policy of increasing our contact and relationship with the New York State Psychiatric Association, we invited the new President, Dr. Judah Maze, to become a member of our Committee. He did so and attended our last meeting. Dr. Harvey Bluestone, the previous President and new Recorder of the American Psychiatric Association, remains a most valuable member of our Committee.

We took stands on a number of other bills, notably the Calandra bill permitting reimbursement of psychologists for treatment of patients under Workers' Compensation. We opposed it and supplied material and position statements for Dr. Robert O'Connor and his Division of Medical Services of the MSSNY. Several of our points will be referred to shortly in this report for we are not sure to what degree the profession at large is aware of the problem that psychology presents to one of medicine's own branches, namely, psychiatry, and to the public at large.

We also, at the request of the President of MSSNY, Dr. Ralph Schwartz, took a position on the plans of Assemblyman Mark Siegel, Chairperson of the New York State Assembly's Higher Education Committee, for dissolving the Psychology and Social Work Registering and Licensing Boards and, instead, licensing, rather nonspecifically and with minimal requirements, mental health practitioners. We opposed this as very dangerous to the public, and several of us met with representatives of the Legislative Committees to New York State Psychiatric Association, the New York State Psychological Association, and the New York City Directors of Clinical Psychological Training. All four organizations are opposed to Assemblyman Siegel's ideas, and this led to a useful discussion. There were, however, some difficulties at the meeting. The psychologists insisted on bringing up their entire legislative program, containing many items we oppose and which they know we oppose — such as the Calandra bill. Psychology is struggling to present itself as a separate, independent, and autonomous mental health entity, equal to and not under the supervision of psychiatry. Psychiatry, on the other hand, both in our Committee and in the New York State Psychiatric Association, regards itself as a branch of medicine. Medicine is the field that has concerned itself with the total health problem of human beings for over two and a half millennia, and mental health, therefore, is really a part of the overall problem of health management. Mental health is seen by psychiatrists in a health-illness, medical model, but only a portion of the psychology profession sees it so. Many other psychologists see mental health and illness in a nonmedical, a more amorphous, "human services," activist, social, and even political model. The former group of psychologists is located in and trained in, for the most part, the major universities, and they oppose the latter group, which group comes, for their part, from free-standing clinics and institutions with very limited clinical material, inadequately trained instructors, and no basic science or research departments to speak of. Yet even the training of the former group is inadequate in clinical experience and in formal psychiatry in regard to psychoses, organic mental disturbances, neurophysiology, psychosomatic disorders, liaison work, psychopharmacology, etc. The latter group is, as noted, even more poorly trained. Thus psychiatry must supervise psychology and control and monitor diagnosis, disposition, management, and therapy. Psychology has its own useful role to play but it is nowhere as comprehensive as the psychologists wish it to be, and they will have to get their house in order before they begin to justify any significant position at all in these regards. Psychology certainly, even then with its limited scope and training, cannot claim equality with psychiatry when it comes to overall mental health care, comprising the entire spectrum of mental illness and treatments. Nevertheless, psychology has had very effective lobbying activities and has promoted itself quite forcefully in many places, including our state government. We wish to bring this serious issue to the attention of the rest of our profession.

These matters have been the major activities of our Committee over the year. Our next meeting in the fall will review with the OMH Forensic Bureau the consequences of the Insanity Defense Reform Law of 1980 and make further recommendations. We shall continue working with the state agencies and the specialty society on matters concerning the dangerously mentally disturbed, the chronic mental patient, and the retarded and developmentally disabled. We thank Dr. Allison B. Landolt, our advisor for his counsel and his activities, and we also thank the staff of the Medical Society of the State of New York for their help.

Respectfully submitted,

Herbert S. Peyser, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Mental Health be filed for information.

⟹ . . . *The report of the Committee on Mental Health was* **FILED FOR INFORMATION** . . .

METABOLIC DISEASES

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Metabolic Diseases are as follows:

Joel J. Schnure, M.D., *Chairman*	Broome
Joseph Armenia, M.D.	Erie
Robert S. Bernstein, M.D.	New York
Marshall Clinton, M.D.	Erie
Arthur H. Dube, M.D.	Onondaga
William W. Faloon, M.D.	Monroe
Howard Kolodny, M.D.	Nassau
Edward L. Socolow, M.D.	Westchester
Ian Porter, M.D., *Advisor*	Albany

During the past year the Committee discussed numerous matters. Among them was the need to have better Medicaid reimbursement for diabetic services. Dr. Bernstein pointed out that maintaining a tight glucose control can help keep diabetic patients' hospital stays to a minimum.

The Committee agreed that diabetic Medicaid patients should be reimbursed for the following when prescribed by a physician:

1) home glucose tolerance
2) apparatus for home glucose monitoring
3) special types of insulin and new delivery systems
4) nutritional services

The Committee decided to study what types of diabetes treatment and services should be made reimbursable by third party payors.

It was decided to explore the World Health Organization's criteria for the diagnosis of diabetes. The Committee endorsed these criteria and recommended that physicians review them and continue a judicious approach in making the diagnosis in the elderly.*

In discussing hyperglycemia and obesity, it was agreed that the only treatment that is needed in many cases is a proper diet. Dr. Kolodny stated that a vigorous attempt to achieve ideal weight by proper supervised diet therapy is the primary goal in the treatment of the obese diabetic, and the Committee was in agreement with this concept.

Bill S2803 was discussed, and the Committee approved the principle of the bill that funding should be provided for diabetes research, but has not recommended approval because it believes that the Diabetes Control System should be the conduit for the funding. (See Appendix A.)

As a follow-up on "Nutri Systems," the Committee was informed that the Council approved its recommendations that MSSNY reiterate its warning that high protein formulae should not be used in weight reduction programs.

When this matter was discussed at the Annual Commission Meeting in Albany last year, the New York State Department of Health reported that it is conducting a study to examine possibly fraudulent weight reduction systems in the state. It was decided to inquire of the NYSDH at the Annual Commission Meeting this July as to their findings.

Respectfully submitted,

Joel J. Schnure, M.D., *Chairman*

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* Diabetes Care, Vol. 4, No. 2, March–April 1981

APPENDIX "A"

STATE OF NEW YORK

2803

1981-1982 Regular Sessions

IN SENATE

February 11, 1981

Introduced by Sens. FARLEY, BRUNO, ACKERMAN, BABBUSH, BARCLAY, BERMAN, BERNSTEIN, CAEMMERER, DALY, GAZZARA, KNORR, LACK, LAVALLE, LEICHTER, LEVY, MARKOWITZ, PERRY, PISANI, ROLISON, SOLOMON, TRUNZO, WEINSTEIN, WINIKOW —read twice and ordered printed, and when printed to be committed to the Committee on Aging

AN ACT to direct the department of health to provide assistance for research and health risk reduction programs regarding diabetes and making an appropriation therefor

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Statement of legislative findings and necessity. Diabetes is a major health problem in the United States, particularly for the older population which is particularly prone to this disease. In deaths of persons over sixty years of age where the cause of death is listed as a cardiovascular complication, diabetes is frequently an associated condition but is often not recorded as such on the death certificate. Obesity and poor nutritional habits have been found to be associated with the development of diabetes in adults. When the disease is under proper control, diabetics may live full and active lives, however, the complications of diabetes develop slowly and eventually have a devastating impact.

Diabetes is a major cause of new cases of blindness and the fifth ranking killer among diseases. At least one-quarter of all diabetics will develop heart disease, representing approximately two percent of the total population. This disease also attacks more children than any other serious disorder.

New York state residents include at least nine hundred thousand diabetics, and this number is expected to increase. As the proportion of elderly citizens continues to rise, the fact that diabetes is more

EXPLANATION—Matter in italics (underscored) is new; matter in brackets [ ] is old law to be omitted.

LBD1-11-26-510

prevalent among older people insures an increase in the numbers of diabetics in the state.

Thus, the legislature hereby finds it necessary to contribute to the struggle to defeat diabetes by making the appropriation herein for the provision of increased research and health risk reduction programs, preventive programs, and improved intervention programs involving the use of medical care.

§ 2. The sum of three hundred fifty thousand dollars ($350,000), or so much thereof as may be necessary, is hereby appropriated from the state purposes fund to the New York state department of health for grants for research and other risk reduction, preventive and intervention programs regarding diabetes, such moneys to be administered by the diabetes control program within such department, for the funding of new programs and the expansion of existing programs. The moneys hereby appropriated, when made available pursuant to a certificate of approval of availability issued by the director of the budget, shall be paid from the state purposes fund on the audit and warrant of the comptroller on vouchers approved by the commissioner of health or his duly designated officer.

§ 3. This act shall take effect immediately.

◆

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Metabolic Diseases be filed for information.

⟹ . . . *The report of the Committee on Metabolic Diseases was* **FILED FOR INFORMATION** . . .

PHYSICAL MEDICINE AND REHABILITATION

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Physical Medicine and Rehabilitation are as follows:

William H. Georgi, M.D., *Chairman*	Erie
Fortunato Abello, M.D.	Monroe
James T. Demopoulos, M.D.	New York
Bruce Grynbaum, M.D.	New York
Edward J. Lorenze, M.D.	New York
Milton Lowenthal, M.D.	New York
Leon M. Rothman, M.D.	Kings
Asa P. Ruskin, M.D.	Kings
Samuel S. Sverdlik, M.D.	New York
* Marc Felberbaum	New York
William Taylor, M.D., *Advisor*	Albany

The Committee met on one occasion on Thursday, April 9, 1981.

The Committee discussed the resolution it submitted to the Council last year concerning the JCAH survey eligibility criteria and the JCAH evaluation of rehabilitative services. The Council referred the resolution and its discussion relative to the resolution back to the Committee on Physical Medicine and Rehabilitation for rewording.

The Committee discussed the Council recommendation and submitted the following resolution for Council approval with the suggestion that this be sent directly to the JCAH with copies to the AMA and the AHA to the attention of John Melvin, M.D., Chairman, Section on Rehabilitation and Chronic Disease:

> "*Whereas,* Acute and chronic disabling disorders arising from disease and aging are medical problems; and
>
> *Whereas,* The evaluation, care and treatment of such patients are the responsibility of physicians; and
>
> *Whereas,* When the JCAH survey teams visit institutions with Physical Medical and Rehabilitation Services, the Physical Medicine and Rehabilition department surveys are done by non-physicians while all other medical services are surveyed by physicians; therefore be it
>
> **Resolved,** That the evaluation of rehabilitation services should be performed by physicians."

The Council, at its meeting on June 18, 1981, approved the above resolution and recommendation of the Committee.

The Committee discussed Bill S1363 — An act to amend the education law, in relation to the practice of physical therapy by physical therapist assistants in residential health care facilities, in certain cases. The Committee recommended and the Council approved opposition of this bill because it allows physical therapist assistants to practice without physician supervision which is contrary to good quality medical care.

Dr. Ruskin distributed to the Committee for discussion and evaluation the Proposed Statute Article 136 — Physical Therapy and Physical Therapist's Assistant (New) Sections 6731, 6733, 6738 of the Education Law of the State of New York which was prepared by the New York State Society for Physical Medicine and Rehabilitation. (See Appendix A.) Dr. Ruskin explained that the New York State Society for Physical Medicine and Rehabilitation proposed and approved the underlined amendments and the MSSNY Committee on Physical

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* Medical Student

Medicine and Rehabilitation proposed those in parentheses.

Section 6731. Definition of Physical Therapy.

Part b. The use of roentgen rays or radium, or the use of electricity for surgical purposes such as cauterization, *or diagnostic purposes such as, but not limited to, invasive electromyography and surface electrode nerve conduction studies* shall not be included in the practice of physical therapy.

Part c. Delete "may be" and insert "should be" to read, "Such treatment shall be rendered pursuant to a referral which (should be) directive as to treatment . . ."

Section 6733. State Board for Physical Therapy.

The board shall be composed of not less than eight licensed physical therapists, *not less than one licensed physician* and not less than one public representative.

Section 6738. Definition of Physical Therapist Assistant.

A "physical therapist assistant" means a person certified in accordance with this article who works under the supervision of (a licensed physician or) a licensed physical therapist *or licensed physician. . . .*

The recommended replacement occurs five places in Section 6738.

A motion was made to approve the amendments made by the New York State Society for Physical Medicine and rehabilitation with the additional amendments made by the MSSNY Committee on Physical Medicine and Rehabilitation.

At its meeting on September 10, 1981, the Council approved the above motion.

The Committee appreciates the continued guidance and support of George J. Lawrence, Jr., M.D., and his most efficient staff.

Respectfully submitted,
William H. Georgi, M.D., *Chairman*

Appendix "A"

PROPOSED STATUTE
ARTICLE 136 — PHYSICAL THERAPY AND PHYSICAL THERAPIST'S ASSISTANTS (New)
SECTIONS 6731, 6733, 6738 OF THE EDUCATION LAW OF THE STATE OF NEW YORK

Section 6731. Definition of physical therapy.

Physical therapy is defined as:

a. The evaluation, treatment or prevention of disability, injury, disease, or other condition of health using physical, chemical, and mechanical means including, but not limited to heat, cold, light, air, water, sound, electricity, massage, mobilization and therapeutic exercise with or without assistive devices, and the performance and interpretation of tests and measurements to assess pathophysiological, pathomechanical, and developmental deficits of human systems to determine treatment, and assist in diagnosis and prognosis.

b. The use of roentgen rays or radium, or the use of electricity for surgical purposes such as cauterization, *or diagnostic purposes such as, but not limited to, invasive electromyography and surface electrode nerve conduction studies* shall not be included in the practice of physical therapy.

c. Such treatment shall be rendered pursuant to a referral which may be (should be) directive as to treatment by a licensed physician, dentist or podiatrist and in accordance with their diagnosis.

Added L. 1980, c. 618, Section 3.

Effective Date. Section effective September 1, 1980, pursuant to L. 1980, c. 618, Section 5.

Section 6733. State board for physical therapy.

A state board for physical therapy shall be appointed by the board of regents on recommendation of the commissioner for the purpose of assisting the board of regents and the department on matters of professional licensing and professional conduct in accordance with section sixty-five hundred eight of this title. The board shall be composed of not less than eight licensed physical therapists, *not less than one licensed physician* and not less than one public representative. An executive secretary to the board shall be appointed by the board of regents on recommendation of the commissioner.

Added L. 1980, c. 618, Section 3

Effective Date. Section effective September 1, 1980, pursuant to L. 1980, c. 618, Section 5.

Section 6738. Definition of physical therapist assistant.

A "physical therapist assistant" means a person certified in accordance with this article who works under the supervision of (a licensed physician or) a licensed physical therapist *or licensed physician* performing such patient related activiteis as are assigned by the supervising (licensed physician or) the supervising physical therapist *or licensed physician.* Duties of physical therapist assistants shall not include evaluation, testing, interpretation, planning or modification of patient programs. Supervision of a physical therapist assistant by a licensed physical therapist shall be on-site supervision, but not necessarily direct personal supervision. The number of physical therapist assistants supervised by (one licensed physician or) one licensed physical therapist assistant *or licensed physician* shall not exceed the ratio of our physical therapist assistants to one (licensed physician or) licensed physical therapist *or licensed physician* as shall be determined by the commissioner's regulations insuring that there by adequate supervision in the best interest of public health and safety. Nothing in this section shall prohibit a hospital from employing physical therapist assistants, provided they work under the supervision of (licensed physicians or) licensed physical therapists *or licensed physicians* designated by the hospital and not beyond the scope of practice of a physical therapist assistant. The numerical limitation of this section shall not apply to work performed in a hospital, provided that there be adequate supervision in the best interest of public health and safety.

Effective Date. Section effective April 1, 1981, pursuant to L. 1980, c. 618, Section 5.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Physical Medicine and Rehabilitation be filed for information.

⟹ . . . *The report of the Committee on Physical Medicine and Rehabilitation was* **FILED FOR INFORMATION** . . .

PHYSICIANS' COMMITTEE

To the House of Delegates, Ladies and Gentlemen:

The officers of the Physicians' Committee are as follows:

Brian R. Nagy, M.D., *Chairman*	Chemung
Allison B. Landolt, M.D., *Vice-Chairman*	Westchester
Colter Rule, M.D., *Vice-Chairman*	New York

THE PROBLEM

Alcoholism, mental illness, and substance abuse are leading causes of impairment, death, and disability in our society, ranking with heart disease or cancer. Physicians are not immune to these illnesses. Some even believe physicians to be at higher risk than the general population for substance abuse because of easy accessibility. Physician suicide, usually related to one of the above three illnesses, is definitely higher than in the general population.

Unfortunately, one of the cardinal features of alcoholism and substance abuse is denial that there is a problem. Contrary to most medical conditions, where pain and discomfort lead one to seek treatment and alleviation of suffering, in these instances generally the more serious the problem becomes, the more the patient tries to deny and hide it.

We as physicians have concern for our troubled or impaired colleagues, and also concern for their patients who may be receiving inadequate or improper care.

THESE CONDITIONS ARE TREATABLE!

In recent years the treatment of these conditions has become much more open and acceptable. Treatment of national figures' alcoholism such as Wilbur Mills and Betty Ford is openly discussed and the success recognized. Industrial alcoholism programs continue to show success ratios of about 70 percent, and drinking driver programs show evidence of significant behavioral change. For alcoholism, treatment frequently consists of a 28 day intermediate care facility with continued "life maintenance" through A.A., while many others are treated through outpatient facilities. Similar resources exist for drug treatment.

First, however, one must accept the need for treatment. Frequently, strong confrontation is needed to break through the denial so that the individual may recognize the need for treatment. Often coupled with successful confrontations are contingent behavioral consequences, such as loss of job, spouse, or driving privileges, if one does not get treatment.

But most of us have a reluctance to confront others about such issues, particularly when the confrontation is perceived as attack rather than concern. It is usually easier to do nothing than to receive a colleague's disapproval, or perhaps even the disapproval of others who may be less aware of the illness and less informed about treatment. However, without such confrontation, any treatment or change is unlikely to occur. The longer the illness progresses, the greater the likelihood of irreparable loss to health, personal relationships, skills, and judgments.

EXPERIENCE ELSEWHERE

In the last fifteen years there has been a marked increase in interest among physicians and organized medical societies in a more vigorous attack on this problem. At last count, more than forty state medical societies had developed some kind of impaired physician program, and over thirty-five states had enacted legislation providing for nonpunitive therapeutic alternatives for disabled doctors. To further highlight the interest in the impaired physician problem, in the last several years there have been several national conferences on the impaired physician, the AMA publishes a newsletter to disseminate information among those involved, and there is even a research council on physician impairment to offer aid to those wishing to further study this problem systematically. For example, in the State of Maryland, a leader in the field for some time, there are now about 200 referrals per year from a base of approximately 7,000 physicians. Considering New York's 55,000 licensed physicians, one can see the potential magnitude of the problem.

EXPERIENCE IN NEW YORK STATE

In 1974 the Council of MSSNY approved a plan for dealing with the problem of the sick physician in New York State. The plan had been devised after much study by a joint ad hoc committee of the MSSNY Committees on Alcoholism, Drug Abuse, and Mental Health. This was done with the full approval of the State Board for Medicine and the Division of Professional Conduct of the State of New York Department of Education.

The approach developed was one which advertised a hotline number at the Medical Society through which anyone could report a troubled or impaired physician. The caller would then be contacted by a member of the Physicians' Committee to discuss the case, and two physician members of the Committee would call on the reported doctor to discuss the problem. The Committee greatly stressed its noncoercive approach — there were no consequences or follow-up if the reported physician refused to respond to the members of the Committee. Confidentiality was stressed, and no records were kept. Anonymity for the Committee members was maintained so they could not be contacted outside of the official channels.

From the fall of 1974, when the Committee began its operation, through May, 1977, there was a total of eighty-one calls which were followed up with visits. These were fairly well divided among alcoholism, drug abuse, and mental illness.

There was no intention that this be a "foolproof" system or vigilante committee. It was anticipated that the Committee would not be able to help everyone, but above all, it could guarantee the informant that intervention would not harm the physician in any way.

There were many individuals who refused help, but personal communications with many members of the Physicians' Committee indicated there were also many physicians visited who had welcomed the opportunity to talk about the problem with knowledgeable individuals in a safe manner and accepted recommendations for treatment.

Unfortunately in June, 1977, the New York State Legislature passed the law colloquially referred to as the "snitch law." This requires that any physician who is aware of any misconduct on the part of another physician shall disclose such misconduct to the Board of Professional Conduct. A physician with such knowledge who does not make such a disclosure is by this law himself guilty of misconduct. While the law is well-meaning in intent to protect the public, it is obviously unenforceable and serves as a disincentive for reporting because of the feared loss of license (and therefore, income) for the person reported. It also, unfortunately, made impossible the work of the Physicians' Committee.

Through the combined efforts of MSSNY; Dr. Stanley Gitlow, former chairman of the Physicians' Committee; Dr. Sheila Blume, Director of the NYS Division of Alcoholism; Dr. David Axelrod, NYS Commissioner of Health; and Dr. Thaddeus Murawski, Director of the Office of Professional Medical Conduct, in April, 1980, a new law emerged which would exempt the Physicians' Committee from having to report an impaired physician to the Board of Professional Conduct. Thus once again one could encourage people to report troubled physicians to the Committee with assurance that they would not be harming him in any way. The Committee was given a three-year period of operation, and all procedures must be approved by the Commissioner of Health and the Director of the Division of Alcoholism. At the end of the three-year demonstration period, the statistical results must be reported.

A compromise protocol was agreed upon between MSSNY and the Commissioner of Health in June, 1981, which is printed in Appendix "A." It remains noncoercive, in that there are no direct consequences if the reported physician continues to deny the problem or refuses to cooperate or even see the Committee members. The Physicians' Committee will never directly report any physician to the Board of Professional Conduct. Strict confidentiality is maintained, with no records being kept of individual names except by the Committee Chairman or Vice-Chairmen for purposes of collection of follow-up data. Confidentiality is protected by law. Anonymity of Committee members, felt to be so important in the past, will be maintained. It is the Committee's wish to be seen as a "helping group" so that anyone calling MSSNY to report a troubled or possibly impaired physician can be assured that the physician cannot be harmed through this intervention — it can only help. An added feature of the new protocol is that the caller will have access to expert advice and suggestions, if requested, on how to deal with the issue on a local level.

PROCEDURE

The entire protocol is printed at the end of this report, but in brief summary, the procedure is that a concerned caller contacts MSSNY (516-488-7777) to indicate that he would like to activate the Physicians' Committee. His name and telephone number are taken, and he then will be called by the Chairman or Vice-Chairmen of the Physicians' Committee to discuss the details of the case. The Chairman speaks with the caller to get pertinent clinical data to insure that intervention is justified. If further verification is needed, the Chairman may request that a second caller contact him. Then two physicians who do not know the troubled or impaired physician will visit him to try to help him recognize his problem, let him know that treatment is available, and if applicable, recommend specific treatment sources. Each situation will be different and will be handled according to the sensitivity, expertise, and experience of the two physicians making the intervention visit. The Chairman will be available to the caller at any time to discuss what may be happening and/or offer further suggestions for caller action. The Chairman is prohibited by law from giving information back to the caller about the reported physician. The Chairman, after a month, will contact the caller to assess progress and obtain follow-up data from him on the results of the intervention. Other follow-up calls will be made at three months, six months, twelve months, and twenty-four months. At six months, twelve months, and twenty-four months, the Chairman will also contact the reported physician to ask his impression of the intervention. From this follow-up data a statistical report will be made to the Commissioner of Health and the Director of the Division of Alcoholism at the end of the three-year demonstration period so that they can hopefully recommend to the Legislature continuation of the Physicians' Committee's exemption from reporting to the Board of Professional Conduct. It should be noted, however, that the caller is free to escalate the intervention and report the physician directly to the Board of Professional Conduct at any time.

If the individual who calls MSSNY to report a troubled or impaired physician is a physician, such reporting does not exempt him from the law if he knows the physician to be "impaired." However, if he is not certain whether the physician is impaired or simply "troubled," then it is reasonable to make the report and activate the intervention interview by two experienced members of the Physicians' Committee. No names are ever kept at MSSNY headquarters; the caller's name is destroyed as soon as his name and number are given to the Chairman or Vice-Chairmen of the Physicians' Committee. No state agencies can ever know the call was made.

The MSSNY looks forward to bringing this offer of help to New York State physicians who may be afflicted with these life-threatening but very treatable illnesses.

Respectfully submitted,

Brian R. Nagy, M.D., *Chairman*

APPENDIX "A"

PROTOCOL FOR PHYSICIANS' COMMITTEE OF MSSNY

I. **Initial Call to Physicians' Committee**

A caller telephones the Physicians' Committee through a private number. The staff of the Physicians' Committee obtains the name, address, and telephone number of the caller and informs the caller that the Chairman or Vice-Chairman of the Physicians' Committee will call him or her.

II. **Action Taken by the Staff**

After the staff of the Physicians' Committee receives the initial information from the caller, the staff takes the following action:

A. Calls the Chairman or Vice-Chairman of the Physicians' Committee and gives him or her the caller's name, address, and telephone number;

B. Sends the caller, at the direction of the Chairman, information concerning the Physician's Committee and information concerning the reporting requirements of the State Board for Professional Medical Conduct, including the mandatory reporting requirements;

C. Records the date and name of the Chairman or Vice-Chairman whom the staff informed regarding the call; and

D. Assigns a case number.

III. **Action Taken by the Chairman or Vice-Chairman**

A. After the staff of the Physicians' Committee has informed the Chairman or Vice-Chairman of a call, the Chairman or Vice-Chairman contacts the caller and obtains the following information:

1) Position, job, professional status of caller, and relationship of caller to reported physician;
2) Name, address and phone number, age, sex of the physician being reported; also year of M.D. degree and type of practice.
3) Specific behavioral information, hopefully citing incidents and examples, which indicates why the physician may be troubled and/or impaired; and
4) Consent to use the caller's name in the confrontation session with the reported physician. This consent is desirable, but not a precondition for intervention.

B. The Chairman or Vice-Chairman evaluate the information obtained from the caller to determine whether or not the information is sufficient and appropriate to justify intervention by the Physicians' Committee. If the information is deemed sufficient, the course of action outlined in Paragraph III. C. below will follow. If the information is deemed insufficient or inappropriate, the Chairman or Vice-Chairman will take the following action:

1) If the information received from the caller indicates that the problem of the reported physician constitutes a threat to public health and safety in that there is an immediate and serious danger to patients, the caller will be told that the Physicians' Committee is not prepared to handle this complaint and will be advised to contact the State Board for Professional Medical Conduct immediately. The caller will be given the telephone number of the Board. (If the caller is a physician, nurse, pharmacist, etc., he or she will be reminded of the mandatory reporting requirements of Section 230 of the Public Health Law.)
2) If the information received from the caller leads the Chairman or Vice-Chairman to believe that the information is not sufficient to warrant a preliminary determination that the reported physician is troubled and/or impaired, then the following will occur:
   (a) The caller will be asked to have a second person call, preferably a physician colleague or hospital administrator, to give additional information concerning the reported physician.
   (b) After the conversation with the second caller or if no call is received, the Chairman or Vice-Chairman may make the determination that the information received is insufficient. The case is then closed.

C. If the information obtained from the caller is sufficient to justify intervention by the Physicians' Committee, the Chairman or Vice-Chairman will take the following action:

1) Inform the caller that two members of the Physicians' Committee will contact the reported physician shortly to arrange a meeting with him or her.
2) Encourage the caller to report back to the Chairman or Vice-Chairman at any time concerning significant developments, negative or positive, on the progress of the reported physician. The caller will be informed that the Chairman or Vice-Chairman will be happy to act as a resource for evaluating and/or recommending any course of action that the caller and any local, interested persons (colleagues, local medical society, hospital administrators, etc.) may wish to take, although federal confidentiality regulations will prohibit him from reporting back to the caller any specific information about contacts with the reported physician.
3) Inform the caller that he or she will be contacted within one month.
4) Contact the two Committee members and give them the reported physicians's name, address and telephone number and pertinent clinical data.

IV. **Action Taken by Two Committee Members**

A. Two members of the Physicians' Committee will call the reported physician to arrange a mutually convenient meeting.

B. If the reported physician refuses to meet with the two members,

1) The two members will report back to the Chairman. The Chairman will contact the caller within one month to ask if any further action has been taken by the reported physician or the caller.

C. If the two members meet with the reported physician, but he or she refuses to cooperate or denies that there is a problem, the two members will report back to the Chairman. The Chairman will take action as set forth in Paragraph IV. B. above.

D. If the two members meet with the reported physician and determine that there is no problem, they will report this determination to the Chairman. Within one month after the meeting, the Chairman will contact the caller and if there is new information which justifies further intervention, the case will be reactivated. If there is no new information, the case will be closed.

E. If the two members meet with the reported physician and convince him or her to accept treatment, they will provide information about available treatment if that is necessary. After the meeting, the two members will report back to the Chairman. The Chairman or his representative will take the following action:

1) Contact the caller within one month of the meeting;
2) Contact the caller within three months of the meeting to collect and follow update referred to in Paragraph VI below; and
3) Contact the caller and reported physician within six months, twelve months, and twenty-four months of the meeting with the Committee members.

F. If the two members have met with the reported physician and have not convinced him or her to accept treatment but they have established a rapport with the reported physician, the members may return for additional visits with the reported physician. Within one month of their first visit the members will report back to the Chairman, who will take action as set forth in Paragraph IV. C. or E. above, whichever is applicable.

V. **Information obtained by Physicians' Committee**

A. All information obtained by the Physicians' Committee shall remain confidential and data compiled by the Physicians' Committee will not reveal personally identifiable information about the reported physicians.

B. All information obtained by the Physicians' Committee Chairman will be retained for the life of the demonstration period, which, under current law, ends March 31, 1983.

C. After March 31, 1983, information obtained by the Physicians' Committee on named reported physicians will be destroyed unless the project is extended by legislation.

VI. **Data for Report to Commissioner of Health and Director of Division of Alcoholism and Alcohol Abuse**

A. Data for the report to the Commissioner of Health and the Director of the Division of Alcoholism and Alcohol Abuse shall be compiled by the Physicians' Committee and shall answer the following questions concerning reported physicians:

1) Personal data including age, sex, year of graduation from medical school, and type of practice;

2) Outcome of the intervention by the Physicians' Committee including improved or recovered, currently in treatment, refused assistance, retired or left the State, died, suicide, returned to abuse, unconfirmed impairment.

3) Type of impairment including alcohol abuse, drug abuse, alcohol and drug abuse, psychiatric, senility, physical.

B. Data that is compiled for said report will not reveal any personally identifiable information about the reported physician. Said report shall be submitted to the Commissioner of Health and the Director of the Division of Alcoholism and Alcohol Abuse on or before January 1, 1983.

February 23, 1981

◆

⇒ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⇒ Your reference committee recommends that the report of the Physicians' Committee be filed for information.

⇒ . . . *The report of the Physicians' Committee was* **FILED FOR INFORMATION** . . .

PREVENTIVE MEDICINE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Preventive Medicine are as follows:

Russell C. Johnson, M.D., *Chairman*	Orange
John P. Albanese, M.D.	Bronx
Thomas S. Bumbalo, M.D.	Erie
Duncan W. Clark, M.D.	Kings
Yehudi M. Felman, M.D.	Kings
Harry S. Lichtman, M.D.	Nassau
* Sharon Strong	New York
Richard Rothenberg, M.D., *Advisor*	Albany

In previous years, this Committee discussed sexually transmitted diseases, immunizations, and anti-rabies vaccines. Last year this Committee studied the 1979 Surgeon General's Report and endorsed in principles the goals and objectives of the report. This year no resolutions, new issues or position requests were referred to this Committee; therefore, no meetings were held.

However, it is evident that the concerns of this Committee overlap those of many other committees in the Commission on Public Health. Alcohol abuse in drivers on the highways, alcohol abuse during pregnancy and during child rearing, teenage alcoholism, and alcohol and drug abuse related crimes are areas of high priority for the Society to become more aware of and involved in.

Your Chairman is of the opinion that committees should be restructured with an appropriate reduction in the number of committees. It is suggested that there be more focus on "changing behavior" as a means of promoting health. This activity begins in school health programs and includes greater emphasis on preventive medicine in medical school curriculum.

As an example of emphasis on community medicine, the Orange County Medical Society celebrates its 175th Year Anniversary by participating in health forums, health fairs, health screening, and "runs for fun."

Your Chairman also feels that county medical societies should be encouraged to develop scheduled programs for health screening and education. Health promotion and illness prevention are the best choice for cost containment.

Respectfully submitted,

Russell C. Johnson, M.D., *Chairman*

◆

⇒ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⇒ Your reference committee recommends that the report of the Committee on Preventive Medicine be filed for information.

⇒ . . . *The report of the Committee on Preventive Medicine was* **FILED FOR INFORMATION** . . .

SCHOOL HEALTH (ANNUAL)

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on School Health are as follows:

Norman B. Schell, M.D., *Chairman*	Nassau
Viola F. Anderson, M.D.	Westchester
David N. Broadbent, M.D.	Monroe
Stanley Forray, M.D.	Queens
Robert B. Hayes, M.D.	Livingston
Bentley D. Merrim, M.D.	Kings
John S. Tanner, M.D.	Clinton
Martin C. Ushkow, M.D.	Onondaga
Jacob J. Wiener, M.D.	Nassau
* Frank P. Cammisa, Jr.	New York
Andrew C. Fleck, Jr., M.D., *Advisor*	Albany

The Committee spent much time again this year on the issues of sports and athletic participation of school children. After lengthy literature research and open deliberation, it completed the Sports Candidates' Questionnaire.

The issue of medical-legal disqualification of students in school athletic programs occupied much Committee thinking and discussion. The consensus of the members has always been that the school physician should have the medical and legal prerogative to allow certain physically impaired or chronically ill students to participate in appropriate sports or athletic programs if this was in their best interest and if special protective precautions were used. However, the school authorities, legal counsellors, and insurance carriers would not tolerate this action by their school physician.

Even under an elaborate parental informed-consent procedure, the liability factor assumed by the school and the physician could not be bypassed or eliminated.

The only safe and practical solution at this time is for the school physician to resort to Section 4409 of the State Education Law which has been in effect since July, 1977. Under this statute, the school (physician) disqualifies an impaired student who then can petition the Supreme Court to enjoin the school district from prohibiting his participation. This petition must have affidavits from at least two physicians indicating that, in their opinion, the student can participate in a particular athletic program safely — using specific preventive measures where needed. With this legal footwork, the school district is not held liable for any injury sustained during program participation.

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* Medical Student

Because of the scarcity of case decisions to date in the State, there are many questions and issues remaining unresolved. One obvious problem is that the 4409 statute discourages handicapped children from athletic activities since the burden falls on their parents to petition the Supreme Court and assume all the costs of the legal proceedings. This may involve a few hundred dollars for each individual athletic program petitioned.

At its April meeting, the Committee again discussed the School Nurse Practitioners in the Robert Wood Johnson Grant Project. The Committee had received a memorandum from the MSSNY Council informing the members that in November, 1978, the Council had requested that the Orange County Medical Society monitor the school health program in the Newburgh School District. Periodic reports from Orange County have indicated that the program has not been properly administered in accordance with the original guidelines. During one of its winter meetings this year, the Council recommended that the matter be investigated and referred it to this Committee for discussion and evaluation.

After long debate, the Committee decided to report to the Council that it does not have in hand enough hard facts and details of the day-to-day operation of the Newburgh project to make an objective evaluation. It, therefore, recommended that the MSSNY support the following position taken by the Committee on School Health of the American Academy of Pediatrics and officially approved by the Academy:

> "Because of the increased scope of health care and evaluation practiced by the School Nurse Practitioners, which includes some areas of primary health care, the Committee presently endorses School Nurse Practitioner participation in school health programs only when they function under the direct supervision of a physician."
>
> PEDIATRICS VOL. 65 NO. 3 March 1980
> American Academy of Pediatrics

At the June, 1981, meeting the Council referred this back to the Committee for further clarification of what is meant by 'direct supervision.'

On behalf of the entire Committee, the Chairman wishes to thank George J. Lawrence, Jr., M.D., and his staff for their very able guidance and assistance throughout the year.

Respectfully submitted,

Norman B. Schell, M.D., *Chairman*

SCHOOL HEALTH (SUPPLEMENTARY)

To the House of Delegates, Ladies and Gentlemen:

This report is to supplement the material presented in our annual report of 1981.

As reported in the annual report, the Committee on School Health had deliberated during several meetings over the preparation of a "Sports Candidate Questionnaire." The final version of the questionnaire was approved by the Committee (Appendix "A").

It consists of ten (10) key questions pertaining to the interval medicine and surgical history of prospective student athletes. These would be completed by the student at the beginning of each new sports season in which he/she planned to participate. Positive findings noted in the history would necessitate further evaluation by the school physician before final approval for tryout or play on the team.

It is hoped that with MSSNY's approval this questionnaire will be adopted by all school systems in the State.

The Committee recommended that the Council approve the questionnaire.

At its meeting on September 10, 1981, the Council approved the above recommendation.

Respectfully submitted,

Norman B. Schell, M.D., *Chairman*

APPENDIX "A"

SPORTS CANDIDATES QUESTIONNAIRE

Name	Date of Birth	Grade	Athletic Activity

History Since Last Medical Exam

Item	Yes	No	Item	Yes	No
1. Any injuries requiring medical attention?			6. A surgical operation or fracture?		
2. Any illness lasting more than five (5) days?			7. Treated in a hospital or Emergency Room?		
3. Taking any medicine or under physician's care at this time?			8. Any reason why this person cannot participate in any sport?		
4. Any feeling of faintness, dizziness or fatigue after heavy exertion?			9. Any known allergies?		
5. Wears glasses or contact lenses?			10. Any chronic disease?		

If yes to any of the above, describe:

PERMISSION

We understand clearly that the questions are asked in order to decide if this student is in a proper condition to participate in the athletic activity named at top of this form. The answers are correct as of the date this form is signed. All answers will be kept confidentially in his/her health record in the school health office.

Signature of Parent/Guardian	Date	Signature of Student	Date

***NOTE:** "YES" ANSWERS TO **ANY** OF THESE QUESTIONS DO **NOT** MEAN AUTOMATIC DISQUALIFICATION, FROM THE ATHLETIC ACTIVITY INDICATED. THEY WILL REQUIRE REVIEW AND EVALUATION BY THE SCHOOL PHYSICIAN.

FOR OFFICE USE

DATE OF LAST TETANUS BOOSTER (within 10 years):

DATE OF LAST MEDICAL EXAM: PHYSICIAN:

Were any defects noted in last exam or past school health record? ☐ YES ☐ NO If yes, describe:

Were any chronic diseases noted in last exam or past school health record? ☐ YES ☐ NO If yes, describe:

DISPOSITION

Approved	Referred	Date		R.N.
Approved	Not Approved	Date		M.D.

Remarks:

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that the annual and supplementary reports of the Committee on School Health be filed for information.

⟹ . . . *The annual and supplementary reports of the Committee on School Health were* **FILED FOR INFORMATION** . . .

SCIENTIFIC PROGRAM COMMITTEE

To the House of Delegates, Ladies and Gentlemen:

The members of the Scientific Program Committee are as follows:

Stephen Nordlicht, M.D., *Chairman*	New York
Thomas S. Bumbalo, M.D., *Assoc. Chairman*	Erie
John S. Davis, M.D., *Assoc. Chairman*	Otsego
Joseph J. Kaufman, M.D., *Assoc. Chairman*	Ontario
Martin Lipkin, M.D., *Assoc. Chairman*	New York
A. W. Martin Marino, Jr., M.D., *Assoc. Chairman*	Kings
John F. Spring, M.D., *Assoc. Chairman*	Broome
Maxwell Spring, M.D., *Assoc. Chairman*	Bronx

During the academic year of 1980–1981, the Scientific Program Committee was unusually active. After a very successful CME Assembly at the Rye Town Hilton Hotel in Port Chester, New York, it was decided to heed the requests of many of our members from Upstate New York. Therefore, the Assembly was planned for Niagara Falls, New York in 1981. This entailed an increased work load for the Chairmen of the Scientific Sections and staff, for which the Chairman of this Committee is sincerely grateful. The Assembly was held at the Niagara Hilton Hotel and the Niagara Falls International Convention Center on June 26, 27, and 28, 1981. The overall program was of high quality and was very well received by all those who attended. However, the total attendance of physicians was disappointing as can be seen in the following comparison with attendance in 1980.

Comparative Figures

	1980	1981
Physicians	1,334	708
* Allied professions	102	94
Guests	91	143
	1,527	946

* Includes: Dentists, Ph.D.s, medical students, nurses, medical technicians, physicians' assistants, etc.

The Scientific Program Committee is concerned as to whether the expenditure of time, effort and funds is prudent when such a small percentage of our MSSNY membership avails itself of this high quality and low cost CME opportunity. It is becoming evident that New York City is a more attractive locale to most of our members.

On October 19, 1980, the Committee presented a program on "Medicine and Religion" at Rockefeller University in New York City. This full-day meeting attracted an audience of over two hundred people to hear talks given by physicians, clergymen, educators, and scientists on this very timely and interesting subject. The program is now being edited for publication in the *New York State Journal of Medicine.*

The fall of 1980 saw a resumption of the CME Video Clinics, which had been presented originally in the fall of 1979. These clinics were located in Bath, Amsterdam, Saranac Lake, Watertown, Potsdam, and Olean. A total of eighteen clients were provided to more than two hundred physician registrants. This was part of our program to provide high quality CME opportunities to physicians all over the State at reasonable cost. The Scientific Program Committee is grateful to Mr. Guy Beaumont and his Division of Communications for their cooperation and assistance in organizing these clinics. We are presently working together on ideas for their resumption this fall.

The Scientific Program Committee met on July 23, 1981, to begin planning for the 1982 Annual CME Assembly which will be held at the Rye Town Hilton Hotel, Port Chester, New York, on June 25–27, 1982. The Committee again met with all the Chairmen of the Scientific Sections on August 13, 1981, so that plans are well on the way for the 1982 Assembly by the time of the writing of this report. The overall theme of the 1982 meeting will be "Controversies in Medicine in the 1980's." The Committee again urges MSSNY members to attend these meetings which are planned to attract all members regardless of special fields of practice interest.

The Chairman is grateful to the Associate Chairmen of the Committee and all the Chairmen of the Scientific Sections who worked so diligently and contributed so selflessly to the success of the 1982 CME Assembly at Niagara Falls.

Respectfully submitted,

Stephen Nordlicht, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommended that the report of the Scientific Program Committee be filed for information.

⟹ . . . *The report of the Scientific Program Committee was* **FILED FOR INFORMATION** . . .

ACCIDENT AND INJURY PREVENTION

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Accident and Injury Prevention are as follows:

John D. States, M.D., *Chairman*	Monroe
John O. Vieta, M.D.	New York
Harold Brandaleone, M.D.	New York
David R. Heller, M.D.	Putnam
Marshall Lepidus, M.D.	Suffolk
Bernard M. Zazula, M.D.	Queens
* Robert Posnick	New York
Robert J. Huszar, M.D., *Advisor*	Albany

* Medical Student

The Committee met on December 9, 1980 and May 28, 1981. It noted with regret the complete withdrawal of support of the American Medical Association for auto safety activities in October, 1980. Past AMA support of traffic safety activities had been a significant public service.

ALCOHOL ABUSE ON NEW YORK STATE HIGHWAYS

Early in 1980 Governor Hugh Carey appointed the Task Force on Alcohol and Highway Safety. New York State highway deaths increased nearly 14% in 1980 compared to 1979. Dr. John States, Committee Chairman, was appointed to the Research and Rehabilitation Committee and to the Resources and Community Development Committees of the Task Force. He presented testimony at a public hearing on December 2, 1980 in Albany. Task Force deliberations have continued, but recommendations have not been released.

The need for a policy statement by MSSNY concerning alcohol abuse on New York State highways was recognized by the Committee. The Committee, with the assistance of Dr. Stanley Gitlow, Chairman of the MSSNY Committee on Alcoholism, developed outlines of a policy at its May 28, 1981, meeting.

The following facts and observations were noted:

A. Driving violations and automobile accidents due to alcohol abuse are one of the earliest manifestations of alcoholism.

B. Public sentiment is developing for more severe penalties for alcohol abusing drivers. More severe penalties deter patients from seeking medical treatment for alcoholism and alcohol abuse. Apprehension of alcohol abusing drivers by concerned enforcement officials and the judiciary decreases because of harsh penalties.

RECOMMENDATIONS:

A. Early identification of alcohol abusing drivers should be facilitated by more widespread use in the field of chemical testing devices. Portable breathalizers, which are now available, should be provided for use by officers at the time of initial investigation of accidents or violations because of impaired driving behavior.

B. An education program developed by the MSSNY and supported by the New York State Department of Motor Vehicles for enforcement and judiciary personnel on alcohol abuse and driving is recommended. The importance of early identification of alcohol abusing drivers to achieve earlier treatment and rehabilitation should be explained. The acute and chronic effects of alcohol plus a definition and description of alcoholism and methods of intervention and treatment should be described as part of the program. MSSNY should devise the medical and professional elements of the program, but support from the NYS Department of Motor Vehicles and the State would be necessary for implementation.

C. Local alcohol control programs in New York State which have successfully increased apprehension, conviction, and rehabilitation rates of alcohol abusing drivers should be supported. A three-year program in Monroe County nearly tripled apprehension rates, increased conviction rates from 40% to 96%, and resulted in the establishment of five rehabilitation units in the County. The number of alcohol traffic accident related deaths decreased from 37 to 25 between 1977 and 1979.

D. Harsher penalties for alcohol abusing drivers should be opposed because patients will be deterred from seeking medical treatment and rehabilitation. Present penalties are sufficiently harsh to be reasonable deterrents. Apprehension rates decrease with harsher penalties.

E. An advertising campaign to educate the public, particularly drivers ages 18–21, on the effects of alcohol should be undertaken. The public should also be made aware of the fact that violations and accidents due to alcohol abuse are early warning signs of alcoholism. The use of warning signs in public drinking places, retail liquor stores, and on the containers of alcoholic beverages should also be supported.

The Committee suggested that the Council approve the above recommendations and cooperate with the New York State Department of Motor Vehicles in efforts to implement them.

At its meeting on September 10, 1981, the Council reviewed the Committee's recommendations and decided to delete Paragraph "D." The recommendations were approved as amended by the deletion of Paragraph "D."

LEGISLATIVE CONCERNS:

A. Continued pressure is being exerted on the New York State Legislature to amend the NYS Motorcycle Helmet Law to permit non-use by drivers over age 18. This is opposed by the Medical Society of the State of New York. The Committee recommends that MSSNY continue to vigorously oppose repeal of the present NYS Motorcycle Helmet Law.

The Council, at its meeting on September 10, 1981, approved the recommendation of the Committee to oppose repeal of the present New York State Motorcycle Helmet Law, and approved a motion that legislation be introduced for mandatory safety bars to protect the legs. The Council referred this matter to the Committee on State Legislation.

B. The Child Restraint Bill is nearing a vote and, hopefully, will pass in 1981. Six other states have enacted similar legislation. Such legislation should be supported by MSSNY and the Committee so recommends.

At its meeting of September 10, 1981, the Council noted in the Report of the Committee on State Legislation that the Child Restraint Bill had been signed into law — Chapter 407.

C. Medical Advisory Board bill of the NYS Department of Motor Vehicles has not been introduced to date. This bill has the support of the MSSNY and would re-establish a Medical Advisory Board for the NYS DMV.

D. A bill to establish a network of Poison Control Centers throughout New York State was discussed and is opposed by the Committee. The present coverage, principally by telephone linkage, has proved to be very effective. Further expansion of the system does not appear necessary and would impose further costs to be borne by the State Government and medical centers in the state. Further reporting requirements would be imposed on the medical centers.

The Committee recommends opposition to Bill S5413/A7434, an act to amend the public health law, in relation to establishing the New York State poison control network, providing for its functions, powers, and duties and making an appropriation therefor.

At its meeting of September 10, 1981, the Council approved this recommendation.

E. Decontrol of illicit drugs was discussed. Decontrol might reduce crime rates related to illicit drugs, but there would be a significant increase in deaths and disability due to intoxification and overdoses. The Committee recommends that MSSNY not support this concept.

At its meeting of September 10, 1981, the Council referred this matter to the Committee on Drug Abuse.

Respectfully submitted,

John D. States, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

The annual report of the Committee on Accident and Injury Prevention was reviewed. John D. States, M.D., Chairman of the Committee on Accident and Injury Prevention, presented a brief description of the lengthy and comprehensive activities of his committee during the past year.

⟹ Your reference committee recommends that the report of the Committee on Accident and Injury Prevention be filed for Information.

⟹ . . . *The report of the Committee on Accident and Injury Prevention was* **FILED FOR INFORMATION** . . .

During the hearing, your reference committee heard testimony that a law had been passed earlier this year increasing the fines for driving while intoxicated and establishing a mechanism whereby counties could set up programs for the identification, rehabilitation, and treatment of the drinking driver. Since this law is due to be implemented on November 1, 1981, your reference committee feels that urgent action is indicated on the part of the Medical Society of the State of New York. Your reference committee therefore recommends that the Medical Society of the State of New York inform its component county medical societies on an urgent basis of the details of this law and how local physicians may become involved in its implementation. We further recommend that the MSSNY urge the county medical societies to involve themselves and their members in this worthy endeavor.

⟹ . . . *The House voted to* **ADOPT** *this portion of the reference committee report* . . .

Resolution 81-37, Laws Governing Driving While Intoxicated

Introduced by Broome County Medical Society, Inc.

Whereas, The profession of medicine has as its objective the maintenance and preservation of health and well-being; and

Whereas, The United States, as well as the State of New York has the least effective laws governing driving while intoxicated infractions of any civilized country in the world; and

Whereas, The financial losses involving drunken driving are incalculable and the number of tragedies involving drunken drivers are reaching epidemic proportions; and

Whereas, The legislature and the Governor of the State of New York have it within their power to seek strict enforcement of the laws currently in effect and create new laws to further discourage drunken driving; therefore be it

Resolved, That the Medical Society of the State of New York actively participate, through their legislative consultants and other appropriate channels, in supporting antidrunk driving measures in the legislature; and be it further

Resolved, That the MSSNY, through its legislative consultants, propose legislation which would effectively remove intoxicated drivers from the road by either an immediate temporary suspension of a drivers license or an immediate revocation of a drivers license based upon the blood alcohol content of the driver sufficient to convict of "Driving While Intoxicated" rather than "Driving While Impaired."

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-37 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-37* . . .

Resolution 81-45, Continued Proficiency in Cardiopulmonary Resuscitation

Introduced by Medical Society of the County of Monroe, Inc.

Whereas, The importance of Cardiopulmonary Resuscitation has been well documented; and

Whereas, The importance of Cardiopulmonary Resuscitation is well recognized as a necessary part of quality medical care; therefore be it

Resolved, That the Medical Society of the State of New York encourage physicians to remain proficient in Cardiopulmonary Resuscitation.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-45 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-45* . . .

Resolution 81-49, "Physicians' Desk Reference" As Authoritative Reference in Medical Malpractice Suits

Introduced by Section on Internal Medicine

Whereas, The 1981 edition of the "Physicians' Desk Reference" (PDR) was marketed to attorneys in New York State with the claim that the PDRs are . . . "regarded by medical professionals as the Bibles of drugs and medicines . . ."; and

Whereas, This direct mail marketing attempt to attorneys further claimed, "Product information in the PDR is official FDA approved copy that constitutes a legal document under which a drug is marketed, sold and should be prescribed and dispensed."; therefore be it

Resolved, That the Medical Society of the State of New York examine the direct mail "package" marketing of the Physicians' Desk Reference to attorneys, and consider an appropriate response dissociating the Medical Society of the State of New York from the claim of the Medical Economics Company that, "For over 35 years, the Physicians' Desk Reference has been recognized by the medical profession as the most authoritative, most definitive reference source for information on drugs."; and be it further

Resolved, That the MSSNY examine the direct mail "package" marketing of the Physicians' Desk Reference to attorneys and consider if MSSNY wishes to disagree with the published claim of Medical Economics Company that, "Product information in the PDR . . . constitutes a legal document under which a drug . . . should be prescribed."

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-49 be adopted.

After discussion, the House amended Resolution 81-49 by the insertion of an additional resolved to read as follows:

Resolved, That this resolution be submitted to the American Medical Association.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-49 as* **AMENDED . . .**

Resolution 81-50, Opposition to Mandated CME for Reregistration of State License to Practice Medicine

Introduced by Section on Internal Medicine

Whereas, The purpose of reregistration of a license to practice medicine is to assure the public that a physician is performing satisfactorily in practice; and

Whereas, Mandatory requirements for a physician to fulfill particular CME activities do not assure quality of medical practice; and

Whereas, These observations are also reflective of the recommendations of the report, "Future Directions for Medical Education," of the Council on Medical Education of the AMA; therefore be it

Resolved, That the Medical Society of the State of New York oppose any state or federal legislation and/or regulation which mandate proof of CME for reregistration of a license to practice medicine.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-50 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-50 . . .*

Resolution 81-16, Service Agencies Available to the Impaired

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, Persons who are impaired physically, mentally, and/or emotionally have been identified as constituting a significant portion of our society; and

Whereas, Service agencies have evolved from the governmental and private sectors to provide various supports to the impaired individual; and

Whereas, It is incumbent upon the physician to identify such impairment early and act as liaison between the impaired individual and the appropriate service agency; and

Whereas, The variety and number of service agencies available frequently varies throughout regions of New York State; therefore be it

Resolved, That the Medical Society of the State of New York publish a listing of the various service agencies for the impaired, categorized by locale and type of assistance offered; and be it further

Resolved, That this listing be made available for distribution to Medical Society members and as a public service to interested nonmembers.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-16 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-16 . . .*

Resolution 81-20, Medical Personnel, Such as Nurses, on Staff at Domiciliary Care Facilities

Introduced by Broome County Medical Society, Inc.

Whereas, The current New York State regulations do not support an "on staff" medically trained individual to assist in the provision of medical care within a domiciliary care facility; and

Whereas, A medically trained individual "on staff" at a domiciliary care facility could distinguish a true medical emergency from a non-emergency medical problem; and

Whereas, Such a distinction would help to alleviate the treatment of non-emergency cases in an emergency center and add a cost effective alternative to the medical care system; therefore be it

Resolved, That the Medical Society of the State of New York investigate the rationale for the regulation which prohibits reimbursement for a medically trained individual on staff at a domiciliary care facility; and be it further

Resolved, That the MSSNY actively advocate the revision of any such regulation in such a way that a domiciliary care facility allow reimbursement for an "on staff" medically trained individual.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-20 be not adopted.

⟹ . . . *The House, after discussion, voted to* **REFER** *Resolution 81-20 to the Council for further study* . . .

Resolution 81-4, Alcohol and Drug Abuse Teaching Programs in Medical Schools

Introduced by Medical Society of the County of Livingston, Inc.

Whereas, Alcoholism and drug abuse are major health problems, and the number one cause of serious disease in those under age 65; and

Whereas, Many groups are calling for more education of physicians in the diagnosis and treatment of alcoholism and drug abuse; and

Whereas, At the 1980 Baltimore White House Conference on the Family, the need for physician education in these areas was rated number one, above all others; therefore be it

Resolved, That the Medical Society of the State of New York recommend that all medical schools in New York State develop teaching programs on alcoholism and drug abuse on both the undergraduate and graduate level, where programs do not exist; and be it further

Resolved, That the President of the MSSNY send a letter to the Deans of the respective medical schools recommending the development of such teaching programs.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

Your reference committee considered Resolution 81-4 and feels that the second Resolved is redundant and unnecessarily restrictive. The committee recommends that Resolution 81-4 be amended by the deletion of the second Resolved.

⟹ Your reference committee recommends that Resolution 81-4 be adopted as amended.

⟹ . . . *The House, after discussion, voted to* **ADOPT** *Resolution 81-4 as* **AMENDED** . . .

Resolution 81-23, The Safety of the Public with Respect to Vehicles

Introduced by Medical Society of the County of Queens, Inc.

Whereas, There is an ongoing attempt by the federal government to devise safety measures to reduce vehicular accidents; and

Whereas, Various self-interest groups support or oppose items of legislation directed to safety; and

Whereas, There seems to be no single available source of authoritative information regarding the vast amounts of data that have been accumulated and the dissemination of such data to the medical profession and the public; therefore be it

Resolved, That the Medical Society of the State of New York, through the Council Committee on Accident and Injury Prevention, develop a systematic plan for the accumulation of data to be used as a basis for determining factual information in support of or in opposition to vehicular safety legislation; and be it further

Resolved, That this information, by means of the reports of the specific committee involved, be disseminated to the physicians of the State of New York through the New York State Journal of Medicine as a regular monthly feature.

Fiscal Note: $1,700.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

Your reference committee heard testimony that such data is actually being accumulated by the Council Committee on Accident and Injury Prevention in cooperation with the New York State Department of Motor Vehicles and is periodically presented to the Council for dissemination.

⟹ Your reference committee recommends that Resolution 81-23 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-23* . . .

Resolution 81-25, Continuing Education of Medical Socioeconomic Subjects

Introduced by Medical Society of the County of Queens, Inc.

Whereas, The purpose of the practice of medicine is to treat the sick, prevention of disease and injury, and the medical education of the public as required; and

Whereas, The practice of a physician requires that he/she be reimbursed for his/her expenditure of skill, time and effort in promoting the health and welfare of the public; and

Whereas, It is quite obvious that our medical schools teach little about the socioeconomic aspects of the practice of medicine; therefore be it

Resolved, That the Medical Society of the State of New York develop a methodology for teaching socioeconomic subjects to the physicians of the State of New York through the component county medical societies as a part of a CME program.

Fiscal Note: $2,500

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

Your reference committee heard testimony to the effect that the teaching of socioeconomic subjects as part of CME does not meet the criteria for Category 1 credit.

⟹ Your reference committee recommends that Resolution 81-25 be not adopted.

⟹ . . . *The House voted to* **NOT ADOPT** *Resolution 81-25* . . .

Resolution 81-29, Entrance of Foreign Medical School Trainees to Clinical Clerkships in the Hospitals of New York State

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The New York State Board of Regents approved regulations on March 26, 1981, which will make possible state-accreditation of foreign medical schools so as to facilitate participation by their medical school trainees in clinical clerkships in the hospitals of New York State; and

Whereas, This action comes at a time when both the executive and legislative branches of federal government have expressed their concern over the projected excess of physicians; and

Whereas, This action conflicts with recommendations by the Graduate Medical Education National Advisory Committee (GMENAC) to discontinue the Fifth Pathway Program, and to eliminate federal education assistance to students attending foreign medical schools; and

Whereas, The percentage of successful applicants to first-year classes of United States medical schools has risen from 35% in 1974 to 47% in 1980 such that the number of qualified students unable to gain such acceptance has diminished considerably; and

Whereas, Indicators such as comparison testing between United States-born medical students in domestic versus foreign medical schools suggest that the educational background of the latter students is frequently not equivalent to that available in United States schools; and

Whereas, It is unfeasible for United States medical schools, in the face of recent cut backs in federal and state funding, to make the needed increases in faculty and clinical teaching patients to accommodate enrollments of large numbers of poorly-prepared foreign-trained medical students; thus portending a dilution in the quality of medical education available in New York State for all students; and

Whereas, Increases in the number of ill-prepared physicians in New York State will neither reduce the cost nor improve the quality of medical care; therefore be it

Resolved, That the Medical Society of the State of New York oppose the implementation of the New York State Board of Regents plan to accredit foreign medical schools; and be it further

Resolved, That the Medical Society of the State of New York endeavor to seek amendments either by regulation or by legislation, so as to annul these regulations.

■

⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

After hearing discussion, your reference committee decided to change the first Resolved to read:

Resolved, That the Medical Society of the State of New York oppose the implementation of the New York State Board of Regents plan to approve foreign medical schools for the purpose of allowing their students to apply for clinical clerkships in New York State.

⟹ Your reference committee recommends that Resolution 81-29 be adopted as amended.

⟹ . . . *The House, after considerable discussion, voted to* **ADOPT** *the annual report of the Committee on Medical School Relationships in lieu of Resolution 81-29* . . .

Resolution 81-31, Workshop for Management of Nuclear-Related Injury

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, In New York State there are a large number of high-density populated areas in close proximity to a nuclear reactor; and

Whereas, The holocaust implicit in the event of a nuclear accident or nuclear war is of concern to all physicians; and

Whereas, In the case of a large-scale nuclear-related injury the physicians of New York State will be called upon to deal with disaster on a scale and of a character never before seen nor planned for; and

Whereas, In an attempt to avert such disaster, the organization of International Physicians for Prevention of Nuclear War has publically opposed the use of nuclear weapons; therefore be it

Resolved, That the Medical Society of the State of New York endorse the position of the International Physicians for Prevention of Nuclear War relative to avoiding nuclear war; and be it further

Resolved, That the Medical Society of the State of New York organize and provide to the physicians of New York State a series of educational workshops concerning the medical/surgical management of nuclear-related injury.

Fiscal Note: $5,000 per workshop.

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

The makers of the resolution informed the reference committee of their desire to withdraw the first resolved, and it was the opinion of the reference committee that the first resolved be deleted. Your reference committee decided to amend Resolution 81-31 by the deletion of the first resolved and amend the second resolved to read as follows:

Resolved, That the Medical Society of the State of New York recognize the need for the education and reeducation of physicians in New York State in the medical and surgical management of nuclear- and isotope-related injuries and contamination.

⟹ Your reference committee recommends that Resolution 81-31 as amended be referred to the Council for assignment to the appropriate committee.

⟹ . . . *The House, after discussion, voted to* **REFER** *Resolution 81-31 as* **AMENDED** *to the Council . . .*

Resolution 81-38, Driving While Intoxicated

Introduced by Broome County Medical Society, Inc.

Whereas, The profession of medicine has as its objective the maintenance and preservation of health and well-being; and

Whereas, Automobile collisions which are alcohol related number over 800,000 a year in the nation; and

Whereas, In the United States, about 28,000 deaths per year result from alcohol related auto accidents; and

Whereas, Drinking drivers are responsible for automobile collisions four times more often than they are the victims of collisions; and

Whereas, There are lobbying groups in existence, chief among these "Remove Intoxicated Drivers" (New York State Chapter), which are working to influence legislation to remove alcohol impaired drivers from the road; therefore be it

Resolved, That the Medical Society of the State of New York support citizens' groups working to reduce the death and injury toll caused by drunken driving; and be it further

Resolved, That the MSSNY create a special ad hoc committee to address the problem of drunken driving, to sponsor legislation relating to drunken driving, and to serve as a liaison between the medical profession and citizens' groups so as to coordinate efforts to attack this major problem in public health.

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

Your reference committee decided to amend the second Resolved to read:

Resolved, That the MSSNY instruct its appropriate committees to sponsor legislation relating to the drinking driver and to serve as a liaison between the medical profession and citizens' groups to help coordinate a comprehensive program against alcoholism.

⟹ Your reference committee recommends that Resolution 81-38 be adopted as amended.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-38 as* **AMENDED** . . .

Resolution 81-47, Supporting the Law Regarding Car Seats for Children Under the Age of Five

Introduced by Medical Society of the County of Monroe, Inc.

Whereas, Automobile accidents continue to be a major cause of death; and

Whereas, Children as passengers in an automobile are easily subject to injury and death; therefore be it

Resolved, That the Medical Society of the State of New York promote the use of protective car seats for children under 5 years of age in compliance with the law (Chapter 407 of the Laws of 1981) which will take effect April 1, 1982. This can be accomplished by: 1) proclaiming the effective date of the new law as children's protective car seat safety day; and 2) urging the Governor to proclaim the same children's protective car seat safety day.

PAST HOUSE ACTION: Resolution 78-61

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

Your reference committee heard evidence that the law (Chapter 407 of the Laws of 1981), effective April 1, 1982, was restrictive in that it mandated car seats only for children under 5 years of age. The Chairman of the Committee on Accident and Injury Prevention informed us that negotiations are in progress to change the requirement to include suitable passive restraint systems. Feeling in sympathy with the resolution, your reference committee recommends the following amended resolution:

Resolved, That the Medical Society of the State of New York promote the use of protective passive restraint systems for children under 5 years of age.

⟹ Your reference committee recommends that Resolution 81-47 be adopted as amended.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-47 as* **AMENDED** . . .

Resolution 81-58, Education and Research of Geriatric Medicine

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, People over 65 years of age currently comprise 10% of the population, and utilize 33% of health care dollars; and

Whereas, In the next decade this age group will represent at least 15% of the population; and

Whereas, The aging process may resemble disease processes in younger patients; and

Whereas, To understand the physiology and pharmacology of the older patient requires special education; therefore be it

Resolved, That the Medical Society of the State of New York support the concept of currently established geriatric centers and encourage further development of these centers and establishment of new centers for geriatric research; and be it further

Resolved, That the MSSNY encourage New York State medical schools to develop or establish curricula in geriatric medical education.

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

After deliberating, the reference committee decided to amend the first Resolved to read:

Resolved, That the Medical Society of the State of New York support the need for bona fide medically-oriented research in the field of geriatric care.

⟹ Your reference committee recommends that Resolution 81-58 be adopted as amended.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-58 as* **AMENDED** . . .

Resolution 81-59, Early Courses for Freshmen Medical Students

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, Many medical schools offer special summer preparatory classes for a limited number of incoming freshmen medical students; and

Whereas, All students may benefit by a more even distribution of required coursework; and

Whereas, All students may benefit from special courses aimed toward study skills, note taking, and problem solving; therefore be it

Resolved, That the Medical Society of the State of New York recommend to medical schools in the State of New York that any summer preparatory courses they offer be made available to all freshmen medical students, and that each school notify all incoming freshmen medical students of the availability of any such courses at the school; and be it further

Resolved, That this recommendation be transmitted to the deans of all medical schools in New York State as an official Position Paper of the MSSNY.

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⟹ *Report of the Reference Committee on Public Health and Education:* The following report was presented by Ralph E. Schlossman, M.D., *Chairman.*

The reference committee believes that the intent of this resolution is good but decided to amend both Resolveds to read:

Resolved, That the Medical Society of the State of New York recommend to medical schools in New York State that each school notify all incoming freshmen medical students of the availability of any summer preparatory courses at the school and that the selections be made on the basis of educational disadvantage; and be it further

Resolved, That this recommendation be transmitted to the deans of all medical schools in New York State.

⟹ Your reference committee recommends that Resolution 81-59 be adopted as amended.

⟹ . . . *The House, after discussion, voted to* **ADOPT** *Resolution 81-59 as* **AMENDED** . . .

⟹ . . . *The House voted to* **ACCEPT** *the reference committee report as acted upon by the House* . . .

MEDICAL SERVICES

COST CONTAINMENT

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Cost Containment are as follows:

Leonard S. Weiss, M.D., *Chairman*	Orange
Samuel M. Gelfand, M.D., *Vice-Chairman*	Nassau
Robert H. Carrier, M.D.	Monroe
Lidislav P. Hinterbuchner, M.D.	Kings
Jason K. Moyer, M.D.	Broome
John A. Ramsdell, M.D.	Westchester
Henry W. Schoeneck, Jr., M.D.	Onondaga
* Mitchell Levin	Suffolk

The Committee held one formal meeting since the last annual report and the following matters were considered:

Suggestions for Hospital Cost Awareness Programs

In keeping with the ongoing charge to the Committee, the "Suggestions for Hospital Cost Awareness Programs," which had been developed by the Committee and approved by the Council, were disseminated to every hospital in New York State, to the county medical societies, and to selected legislators who are responsible for health matters, as well as to Blue Cross/Blue Shield of Greater New York, Health Insurance Association of America, and Hospital Association of New York State.

An Approach to Cost Awareness

A program, "An Approach to Cost Awareness," was developed and held during the Annual Scientific Meeting of the Medical Society of the State of New York in June, 1981, at Niagara Falls, New York. The Chairman of this Committee was the Moderator of the program and the Society was represented by the Vice-Chairman of this Committee. Other interested parties concerned with cost effectiveness were also invited to speak. These included representatives of Blue Cross/Blue Shield of Greater New York, Health Insurance Association of America, Greater New York Hospital Association, New York State Department of Health, and International Business Machines Corporation.

While the attendance by physicians was not good, the program did provide an in-depth exchange of opinions among the representatives of government, the insurance industry, business management, hospital administrators, and MSSNY. This exchange of ideas resulted in a good base for ongoing and continuing cooperative efforts in this area. It is hoped that, with continuing activities in the coming year, and with more time available for planning, greater physician participation will be encouraged and the medical community will be more aware than cost effectiveness and quality care are mutually interdependent, and that quality care must not be sacrificed simply to save the dollar.

The Chairman would like to express his thanks to the members of the Committee who have given of their time and efforts as well as to Robert J. O'Connor, M.D., Director of the Division of Medical Services, to Mr. William D. Brainin, Associate Director of the Division, and to Mrs. Gladys B. Wunsch, Secretary, for their efforts and diligence.

Respectfully submitted,

Leonard S. Weiss, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Cost Containment be filed for information.

⟹ . . . *The report of the Committee on Cost Containment was* **FILED FOR INFORMATION** . . .

HEALTH MANPOWER AND RURAL MEDICAL SERVICE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Health Manpower and Rural Medical Service are as follows:

Donald W. Bidwell, M.D., *Chairman*	Seneca
Stephen W. Blatchly, M.D., *Vice-Chairman*	Tompkins
Edward A. Barrett, M.D.	Orleans
William H. Dermody, M.D.	Monroe
Dattatraya Lanjewar, M.D.	Bronx
Norman R. Loomis, M.D.	Wayne
Sidney Mishkin, M.D.	Nassau
Leo J. Swirsky, M.D.	Kings
* Jorge Puentes	Suffolk

Since its last report to the House of Delegates, the Committee on Health Manpower and Rural Medicine Service held two meetings. The following matters were discussed.

Resolution 79-16, Demographic Survey of Physicians in New York State

The cardinal item of interest continues to be implementation of a demographic survey of physicians in New York State (Resolution 79-16) that will minimally include physicians names, at least one accurate mailing address, geographic distribution, and specialty breakdown.

The importance of establishing the society's own data base has been keenly felt by all members of this committee for the past several years. Up to this time, whenever decisions concerning these matters and the members of the society in general have come up, we have had to rely on facts and figures from various governmental and private agencies who may wish to draw conclusions quite different from those of our membership. Statistical conclusions are persuasive in today's medical marketplace, and the committee feels it is imperative that the society have its own data in the general area of physician health manpower.

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* Medical Student

The Committee urged the Council to investigate the delay in completion of this survey. A report by the Division of Computer Systems and Services and the Department of Research and Development to the Council on June 18, 1981 indicated that completion of the entire master list is expected for September 1981. (See Annual Report of the Committee on Research and Development, Page 537).

Nurse Practitioner

The committee is gravely concerned about the proposed inroads in primary health care by nurse practitioners, as proposed in the Governor's Program Bill #52, An Act to Amend the Education Law, in Relation to the Provision of Primary Health Care Services by Registered Professional Nurses. While there is currently no de jure classification of "nurse practitioner" in the New York State Education Department's rules and regulations, there is de facto existence of a nurse practitioner organization in this state, with practicing nurses in various locations. It is felt that the Governor, through the introduction of this bill, is attempting to introduce yet another level of health practitioner into the primary care area that would not include or involve a physician. If this new amendment to the educational law permitting registered professional nurses to provide primary health care service is adopted, this bill will enable licensed professional nurses to practice medicine without supervision or controls and in effect enable their license to read identical to that of a physician's license with the exception of use of controlled drugs. The committee unanimously passed a resolution that the MSSNY oppose the concept of any legislation which would legally permit nurse practitioners to set up an individual practice which does not include the direct supervision of a physician. This was approved by the Council on June 18, 1981.

Physicians' Assistants

In monitoring some of the physicians' assistants activities around the state, the committee felt that the original intent of this program to place physicians' assistants in underserved areas or those situations where, under direct supervision, they could help busy physicians care for their patients has not been met. Rather, physicians' assistants gravitate toward big institutions and areas of relative affluence, sometimes practicing autonomously, and often taking the place of primary care physicians who according to Governor Carey's Health Advisory Council are in excess supply.

The chairman of the committee expresses his appreciation to the members of the committee for the time and effort they have devoted to the problems dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Jeanette Palucci, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,
Donald W. Bidwell, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Health Manpower and Rural Medicine Service be filed for information.

⟹ . . . *The report of the Committee on Health Manpower and Rural Medical Service was* **FILED FOR INFORMATION** . . .

HEALTH SYSTEMS AGENCY COORDINATING COMMITTEE

To the House of Delegates, Ladies and Gentlemen:

The members of the Health Systems Agency Coordinating Committee are as follows:

Charles Weller, M.D., *Chairman*	Westchester
William J. Breen, M.D.	Erie
Duncan W. Clark, M.D.	Kings
Harvey J. Cohen, M.D	Westchester
John C. Herrman, M.D.	Lewis
Morton Kurtz, M.D.	Queens
Thomas D. Pemrick, M.D.	Rensselaer
Jerome Zwanger, M.D.	Nassau

During the past year the committee met on one occasion and the following matters were discussed:

Presentation by Members of the Executive Staff of the Health Systems Agency of New York City. The main thrust of this meeting were presentations by the Deputy Executive Director and the Deputy Director of the Health Systems Agency of New York City (HSA), on the topic of the possible impact on HSAs by proposals being made by President Reagan's administration. At this time all discussions are merely conjecture until actual proposals are passed by Congress. They expressed their confidence that the HSA program in New York State is strong and effective and will continue to be so in the future. Of particular interest is the solid working relationship that exists among the HSAs of New York State. This relationship known as the "consortium" is felt to be one of the most effective groups in the entire country. This relationship has enabled the HSAs to pool their resources and expertise in order to more effectively improve the quality of health care. The consortium has built up a reputation of both credibility and integrity along with quality of the product they deliver and has established a good professional relationship between themselves and governmental agencies. There is great uncertainty relative to levels of funding but New York State had made a commitment to continue the following general program:

1. Certificate of Need
2. Article 28 Methodology
3. Local health planning

In addition, there are four major areas that will be continued in the future. They include the development of health plans, the implementation of these plans in nonregulatory ways, the certificate of need program, and the appropriateness review program.

An important factor is whether or not Federal funding cuts will be picked up by New York State and also whether or not certain services will be eliminated. One suggestion would be that resources and skills be pooled through the mechanisms of the consortium, so that the variable areas of expertise will be shared equally and more effectively by concentrating on a smaller area of interest and then sharing all such information with the other HSAs in New York State. New sources of funding from local interests will be explored to help pick up any slack of funding caused by Federal funding cuts.

Report of the Health Planning Coordinator of the First District Branch. The Health Planning Coordinator of the First District Branch brought the committee up to date on her activities and reported that she no longer works only for the County of New York. She has been monitoring the activities of the HSAs and other health trends in New York State.

All speakers agreed that the timetables and discussions for future improvement of the HSAs are only at a preliminary stage at this time, but they are all optimistic about the future of the program, at least in some form, in New York State.

The chairman of the committee expresses his appreciation to the members of the committee for the time and effort they have devoted to the problems dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Jeanette Palucci, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,

Charles Weller, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Health Systems Agency Coordinating Committee be filed for information.

⟹ . . . *The report of the Health Systems Agency Coordinating Committee was* **FILED FOR INFORMATION** . . .

HOSPITAL AND PROFESSIONAL RELATIONS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Hospital and Professional Relations are as follows:

Herbert E. Joyce, M.D., *Chairman*	Erie
Charles F. Banas, M.D.	Erie
John K. Coyle, M.D.	Steuben
Richard L. Fenton, M.D.	Westchester
Antonio F. LaSorte, M.D.	Broome
Jason K. Moyer, M.D.	Broome
Richard B. Nolan, M.D.	New York
Lawrence Ravich, M.D.	Nassau
John W. Stoll, M.D.	Livingston
* Steve Kaplan	New York

Since its last report to the House of Delegates, the Committee on Hospital and Professional Relations held one meeting. The following matters were discussed.

Resolution 80-3, Hospital Medical Liability Insurance Coverage

Resolved, That the Medical Society of the State of New York take the position that hospitals that wish to protect their fiscal integrity against the possibility of the risk of loss as medical liability joint tort feasors with members of their medical staff, should themselves provide and pay for medical liability insurance coverage in their own hospital liability programs; and be it further

Resolved, That the New York Delegation to the American Medical Association be requested to introduce a resolution to that effect at the interim session of the AMA House of Delegates in December, 1980.

The matter addressed in this resolution was considered in the House of Delegates in 1978 — Resolution 78-60, which was adopted as amended and which reads as follows:

> **Resolved,** That the Medical Society of the State of New York urge that medical malpractice insurance coverage shall not be a mandatory requirement for hospital medical staff appointments; and be it further
>
> **Resolved,** That all hospitals that require medical malpractice insurance of its voluntary professional staffs shall themselves be expected to carry liability insurance for each of its employees, and professional medical liability insurance for its professional employees including hospital salaried physicians in amounts equal to the limits of those of the majority of its voluntary medical staff members; and be it further
>
> **Resolved,** That this resolution be presented at the next meeting of the House of Delegates of the American Medical Association for appropriate action.

Subsequently, it was presented by the New York Delegation to the AMA — Resolution 78 (I-78) and the AMA Board of Trustees in reviewing the resolution submitted a report which was adopted in lieu of Resolution 78 (I-78), which states in part:

> "The Board of Trustees also believes that if equity demands the voluntary staff members should have insurance coverage so that the burden of financial loss would not fall entirely upon the hospital, then salaried hospital physicians should likewise be covered by adequate insurance or protected financially through self-insurance mechanisms established by the hospital so that the burden would not fall unfairly upon the members of the voluntary medical staff."

The MSSNY 1980 reference committee recommended affirmation of this position and that Resolution 80-3 be referred to the Council with a request that a mechanism be established to work for development of guidelines for use of medical boards that would enable them to evaluate the adequacy of hospital liability programs and that these guidelines be disseminated to the medical boards of hospitals throughout the State.

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* Medical Student

The House of Delegates affirmed the AMA position. Resolution 80-3 was adopted and referred to the Council.

The Council requested this committee to establish guidelines based on the above resolution. However, it must be noted that devising strict guidelines would not reflect local conditions and its vast differences in structures and patterns relative to hospital operations.

A review of this resolution resulted in a further recommendation that a new resolution be adopted as follows:

> "That medical staff boards with boards of trustees develop definitive procedures of insurance parameters for both physicians and hospitals that would reflect a partnership relationship between both parties rather than an adversary relationship."

The Council, on February 19, 1981, approved the new resolution submitted by the Committee on Hospital and Professional Relations in lieu of Resolution 80-3. A letter was sent to all chairmen of medical boards of hospitals in New York State and to the county medical societies advising them of the intent of this resolution.

Resolution 80-4, Payment of the Primary Care Physician for Concurrent Care in the Hospital

Resolved, That the Medical Society of the State of New York take the position that the primary care physician shall, by law, be designated to have the legal responsibility and authority to monitor the concurrent care of his patient as "Captain of the Concurrent Medical Care Team," for which he shall continue to render and receive payment for the daily administrative and professional services, based on his on-site determination and professional judgment in the best interest of the patient; and be it further

Resolved, That the Medical Society of the State of New York and the American Medical Association seek an administrative ruling to provide and pay for these roles and services to the hospitalized patients of the primary care physician under Medicare, Medicaid, and other government and third party medical insurance programs, regardless of what other professional care is concurrently needed by the patient; and be it further

Resolved, That the New York Delegation to the American Medical Association be requested to introduce a similar resolution at the 1980 interim session of the AMA House of Delegates.

The Reference Committee on Medical Services noted that there are already provisions for payment for concurrent care when a physician plays an active role in a patient's treatment and diverse physicians' services are required and documented and the House of Delegates referred the resolution to the Council.

The Council referred Resolution 80-4 to this Committee for further clarification and study. A review of this resolution notes that a request for "a Captain of the Concurrent Medical Care Team" whose only function would be to supervise and coordinate the activities of the active participating physicians would not be in the best interest of the profession.

The Committee recommended that they go on record in affirming the comment of the Reference Committee on Medical Services and also recommended that this resolution be disapproved.

The Council on February 19, 1981, following the recommendation of the Committee, disapproved Resolution 80-4.

Resolution 80-21, Use of Ambulatory Care Facilities for Diagnostic Studies, Evaluations, and Treatment

Resolved, That the House of Delegates of the Medical Society of the State of New York affirm the position that diagnostic studies for evaluation of some illnesses can be performed effectively and at a lesser cost on an ambulatory basis; and be it further

Resolved, That the Medical Society of the State of New York encourage use of out-patient facilities, and use of these facilities for diagnostic testing instead of hospitalization whenever medically feasible, whether in a private office, clinic, HMO or other ambulatory setting; and be it further

Resolved, That an insured's health insurance plan should provide for equal payment and equal deductibles whenever the necessary services are performed in or out of the hospital; and be it further

Resolved, That a copy of this resolution be forwarded with recommendations to the Commissioner of Insurance of the State of New York.

This resolution was amended to read as above and adopted as amended. The Council referred the resolution to this Committee to develop recommendations to be sent to the Commissioner of Insurance of the State of New York. This Committee recommended that this resolution be brought to the attention of the MSSNY Committee on State Legislation for the preparation of the necessary bills for introduction to the Legislature at the current session. Under present insurance law, this is available as an optional rider, but in order to reflect the intent of this resolution it was felt that we go on record in encouraging the State of New York to promulgate regulations that mandate all third party carriers to insure and reimburse for diagnostic studies, whether they are performed in a physicians office, clinic, hospital or outpatient department of a hospital.

This was approved by Council on February 19, 1981. (See Annual Report of the Committee on State Legislation, Page 544).

Resolution 80-22, Third Party Reimbursement for Preoperative Consultations and Supportive Studies

Resolved, That the Medical Society of the State of New York shall work with appropriate organizations and government authorities to seek changes in legislation and/or regulations to promote third-party reimbursement for preoperative consultations and supportive studies to a qualified and credentialed physician, whether performed in or out of the hospital, with the consulting physician expected to provide the hospital with all necessary documentation.

This resolution was amended to read as above and adopted as amended. It was then referred to the Committee on Hospital Professional Relations for implementation.

The Committee considered the resolution and felt that an additional clarifying statement was necessary. Therefore, it recommended that in lieu of the resolved of 80-22 the following resolved be adopted.

> **Resolved,** That pre-admission testing be allowed both in a physicians office and in a hospital setting according to criteria established by the physician and the hospital medical staff relative to such testing. The admissibility of such tests, it was felt, is a local matter and reimbursement by third party carriers should be mandated when there is basic agreement between the hospital medical staff and the individual physician consultant.

The Council, on February 19, 1981, approved the substitute resolved submitted by the Committee on Hospital and Professional Relations in lieu of Resolution 80-22 with one abstention and one negative vote.

Resolution 80-25, Relevant Qualifications for Hospital Medical Staff Admission

> **Resolved,** That it is the policy of the Medical Society of the State of New York that admission to a hospital medical staff should be by an impartial review by a medical staff credentialing procedure of an applicant's relevant qualifications, and that membership in any group shall not be a substitute for review of the individual's qualifications.

This resolution was amended to read as above and adopted as amended.

The resolution was considered jointly by this Committee and the Hospital Association of New York State who recommended that it be expanded to include the following:

> "Such impartial review should serve as the basis for the hospital board of trustees' final determination on the request for appointment to the medical staff."

On January 22, 1981, the Council of the Medical Society of the State of New York approved this addendum of the Hospital Association of New York State.

A letter was sent to all county medical societies advising them of this resolution by the Medical Society of the State of New York.

The Hospital Association of New York State, as well as the Medical Society of the State of New York, endorses this important statement of policy and will actively seek its acceptance and implementation throughout the State.

The Chairman of the Committee expresses his appreciation to the members of the Committee for the time and effort they have devoted to the problems dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Jeanette Palucci, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,
Herbert E. Joyce, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Hospital and Professional Relations be filed for information.

⟹ . . . *The report of the Committee on Hospital and Professional Relations was* **FILED FOR INFORMATION** . . .

IPA/ HMO

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on IPA/HMO are as follows:

Charles Weller, M.D., *Chairman*	Westchester
John Abbuhl, M.D.	Albany
Leonard Barron, M.D.	Broome
Gerald Blumenthal, M.D.	Suffolk
Thomas E. Cardillo, M.D.	Monroe
Samuel M. Gelfand, M.D.	Nassau
Franklyn C. Hayford, M.D.	Schenectady
Robert M. Kohn, M.D.	Erie
Kendrick A. Sears, M.D.	Onondaga
* Charles Cattano	Onondaga

Since its last report to the House of Delegates, the Committee on IPA/HMO held one meeting and the following matters were discussed.

Council Action of April 17, 1980. The action of the Council at its meeting of April 17, 1980, was noted with particular reference to the indefinite tabling of the recommendation of this committee relative to primary care physicians. The tabled recommendation reads as follows:

> "That a patient at the time of enrollment should have a primary care physician who would be responsible for the total health care of that individual, and all referrals to specialists must be done by the primary care physician."

Members of this committee noted that to date all the IPAs that have failed have not made provision for the entry of patients into the program through the primary care physician with subsequent referrals to the specialist if necessary. Programs neglecting to include this administrative provision were forced to discontinue because of inordinate increases in overhead expenses relative to the operation of the program. These increases in expenses were a result of the shifting of high costs to the operation of the plan, namely, from primary care to specialist care.

State Regulatory Actions. The committee reviewed and discussed communication received from the President of the Board of Directors of the Individual Practice Association of Western New York, Inc. Its specific criticisms relative to the new regulatory proposals for HMOs certified under Article 44 of the New York State Public Health Law were discussed. From these discussions the following statement evolved:

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* Medical Student

> "That the Medical Society of the State of New York maintain a continuing active role in monitoring all regulations which impact on the IPA-HMO concept and reiterate the supportive stance of the MSSNY towards physician organizations involved in establishing and maintaining such programs."

The MSSNY Council at its meeting on June 18, 1981, tabled this recommendation indefinitely.

Update of HMO Activities in the State of New York. The Chairman requested an update on HMO activities as reflected by members of this committee. Generally, feasibility studies have indicated an active interest in the HMO concept in certain areas of the state, but at the same time, the same studies have reflected a lesser degree of interest in actual participation in these programs. The reasons for this latter attitude were discussed and were found to be diverse and multiple in origin, but for the most part, it was felt that physicians do not understand the underlying basic concepts of the programs. It was noted that a great deal of time must be spent in educating physicians about the "gate keeper" system or that of the internal control of the same through primary care physicians.

The basic idea of the primary care physician being the physician of choice is accepted by most patients and is actually a resurgence of an old idea. Generally patients feel more comfortable with a primary care physician who has the responsibility of making referrals to specialists and is in keeping with the old "family doctor" concept.

Valid observations were made that certain closed panel HMOs seem to be successful up to a point. Their drawbacks generally are restrictive in the sense of patient choice of physicians and actual effective growth rate. It was noted that the number of patients entering and leaving the program seems to reflect no increase in membership.

A new development is evolving relative to a functional IPA/HMO model which is of a mixed nature combining both the closed panel and IPA concepts. This new approach now has the support of the federal government.

The committee stated its belief that the IPA/HMO programs will flourish in the future. However, a main source of concern is the need to educate physicians planning on entering into these programs about the advantages and possible pitfalls in participation. This educational process should begin with medical students and continue as the educational experience advances.

Changes in the Office of Health Systems Management of the New York State Department of Health. It was brought to the attention of this committee that the new Director of the Office of Health Systems Management of the New York State Department of Health is Mr. Howard Veit, who replaced Mr. Richard A. Berman in that capacity. Mr. Veit brings to this job a vast knowledge and understanding of HMOs based on his previous position as Director of the Office of HMOs at the federal level. Questions were raised whether Mr. Veit's appointment reflects an additional thrust by State Government for promotion of the HMO concept in New York State, particularly in view of the Reagan administration's plan to use the HMO concept as a vital link in the medical competitive philosophy being proposed.

The Chairman of the committee expresses his appreciation to the members of the committee for the time and effort they have devoted to the problems dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Jeanette Palucci, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,

Charles Weller, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on IPA/HMO be filed for information.

⟹ . . . *The report of the Committee on IPA/HMO was* **FILED FOR INFORMATION** . . .

INTERSPECIALTY

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Interspecialty are as follows:

Donald W. Hall, M.D., *Chairman*	Erie
Herbert Lansky, M.D., *Vice-Chairman* (*Pathology*)	Erie
Alfred B. Amler, M.D. (*Pediatrics*)	Westchester
Harold E. Berson, M.D. (*Psychiatry*)	Kings
Philip C. Bonanno, M.D. (*Plastic and Reconstructive Surgery*)	Westchester
Stephen I. Braitman, M.D. (*Urology*)	Suffolk
Lois E. Brennan, M.D. (*Family Physicians*)	Ontario
Stephen D. Burnstein, M.D. (*Neurosurgery*)	Nassau
Bruce Campbell, M.D. (*Otolaryngology*)	Nassau
Stephen A. Gettinger, M.D. (*Obstetrics & Gynecology*)	Suffolk
Franklin S. Glickman, M.D. (*Dermatology*)	Kings
Bernard Jacobs, M.D. (*Orthopedic Surgery*)	New York
Robert M. Kohn, M.D. (*Internal Medicine*)	Erie
Theodore C. Max, M.D. (*General Surgery*)	Oneida
John D. O'Brien, M.D. (*Opthalmology*)	Suffolk
Victor A. Panaro, M.D. (*Radiology*)	Erie
Asa Ruskin, M.D. (*Physical Medicine & Rehabilitation*)	Kings
Edward C. Sinnott, M.D. (*Anesthesiology*)	Nassau

The Committee on Interspecialty has held five formal meetings since the last annual report and the major thrust of the Committee's activities has continued to be the request from the Chairman of the Workers' Compensation Board for data to update the Workers' Compensation Medical Fee Schedule.

The Committtee had been requested to update the 1975 Relative Value Scale in its professional and technical components, as well as adding new procedures, so that it could be presented for consideration and evaluation to the Workers' Compensation Board Advisory Committee on the Medical Fee Schedule and Allied Problems. The procedures were to be evaluated in terms of complexity and time, and the proposed new relativity was to be based solely on these considerations.

It was re-emphasized at many meetings that we must not abrogate our responsibility and right under the law to submit recommendations for the Workers' Compensation Medical Fee Schedule or some other organization will be given the charge to do it for us.

Updates of the Workers' Compensation Medical Fee Schedule are generally promulgated in July of each year. Therefore, the material submitted to the Committee was to be further interrelated by the individual specialties and be available and ready for presentation to the Workers' Compensation Board Advisory Committee no later than April 1, 1981. In order to do this, the final report of the Committee would have to be approved by the MSSNY Council at its March 1981 meeting.

When this deadline could not be met, the Division Director asked the Chairman of the Workers' Compensation Board for an extension and he agreed to extend the deadline to September 1, 1981. However, he indicated that if our data was not submitted by that time he would appoint a commission to study the situation and to make the necessary recommendations without awaiting the action by MSSNY.

The revisions proposed by the NYS Society of Surgeons were found to be markedly different from the 1975 relative values. The value of the benchmark procedure was elevated and this threw out the relativity among the other specialties to a great extent. Much discussion took place as to how to proceed from this point in order to meet the new September 1, 1981 deadline.

Since no easy solution or compromise was forthcoming, a recommendation was made that the discussion of the revisions be tabled pending the securing of Medicare Part B Prevailing Screens from the Medicare Intermediaries throughout the State for the purpose of comparing the benchmark procedures in an effort to equate the specialties and possibly renegotiate the benchmark procedures.

The detailed comparative relative value figures were secured, compiled, and mailed to each Committee member several weeks prior to the next meeting for their consideration and for the consideration of the respective Boards of the Specialty Societies.

At the meeting it became apparent that a basic discontent existed with participation in the revision process and the implementation of *any* relative value guide system or with *any* type of "fee schedule" format.

Based upon the general and socioeconomic realities of the day, as well as the shockingly high recommendations proposed by the Medical Liability Mutual Insurance Company for medical liability insurance premium increases for 1981, and possibly for 1982, continuing participation in the revision and implementation of such guides bears no relationship to reality. In effect such participation by MSSNY dilutes the ability of MSSNY to effectively stress its position that the only equitable system is one that is based upon an individual profile, i.e., usual, customary, and reasonable concept.

The opinion of this Committee was that its members could no longer participate in updating the Relative Value Scale as it applies to the Workers' Compensation Medical Fee Schedule.

A recommendation was made to the Council (passed by a vote of 11 in favor, 3 against, and 1 abstention) that "the MSSNY inform the Chairman of the Workers' Compensation Board that the Workers' Compensation Medical Fee Schedule is an unacceptable and inequitable system for compensation to physicians and that the MSSNY reaffirms the principle of reimbursement based on usual, customary, and reasonable fee patterns."

In addition, the Committee of Workers' Compensation & Occupational Health recommended that "MSSNY continue its efforts to see that all fees are based on a usual, customary, and reasonable basis and that the MSSNY continue to cooperate in trying to establish a relativity scale to be used in paying usual and customary fees." They further recommend "that we utilize the 1976 California Workers' Compensation Relativity Guide as a basis for establishing an updated RVS for use in New York State."

In response to these three recommendations the Council at its meeting on June 18, 1981, after considerable discussion, reaffirmed the substitute resolution for Resolutions 80-19 and 80-45, adopted by the 1980 House of Delegates, which reads as follows:

> "**Resolved,** That the Medical Society of the State of New York disapprove fixed fee schedules and seek the adoption of payments based on usual, customary, and prevailing fees in all negotiations relating to fees where such negotiations are mandated by governmental agencies."

This effectively terminates any participation in Relative Value Scale revisions.

Workers' Compensation Board Modification of December 1, 1980 Re: CT Scans for Neurological Diagnoses

> "Full fees are payable to "SD" rated specialists and to those physicians who are certified by the American Board of Neurological Surgery or the American Board of Neurology who perform and interpret CT scans for neurological diagnoses."

This ruling from the Workers' Compensation Board was brought to the attention of the Committee, as well as a letter to the Chairman of the Workers' Compensation Board from the Division Director expressing the opinion of the Executive Committee of the MSSNY that if such a rule is applied to one specialty then it should apply equally to all specialties fulfilling the required criteria of taking and interpreting X-rays, etc., within their specialty. (See Annual Report of Committee on Workers' Compensation and Occupational Health, Page 615.)

Patterns of Practice and Overhead Business Expense Survey. This survey, approved by the Council in October, 1979, was conducted early this year among 5,000 randomly selected physicians, both members and nonmembers of MSSNY, by Market Opinion Research, Inc., an actuarial firm based in Detroit.

The cooperation of the various specialty societies was requested so that their members who received the questionnaire would respond promptly. Confidentiality was assured. Only the global figures will be used in our dealings with government and other third parties in order to insure complete physician anonymity.

All the mailings and processing have now been completed and the final report from the actuarial firm will be presented to this Committee at its next meeting.

Comprehensive and Intermediate Office Visits. Since some specialty societies had indicated that all first office visits were comprehensive and the Workers' Compensation carriers would not accept this concept, the members of the Committee were asked again to go back to their respective Boards or Executive Committees to secure more explicit examples of what constitutes comprehensive and intermediate first office visits in their respective specialties.

A suggestion was made to use CPT-4 for the guideline as to what is a comprehensive and an intermediate first office visit. Further discussion developed that the CPT-4 lists numerous office visits and would require consolidation in order to be acceptable by the Workers' Compensation Board.

It was noted that the Title XIX (Medicaid) program has submitted a draft definition of a "Comprehensive Health Examination" and this was also considered.

During the discussions several of the specialty societies, i.e., Neurosurgery and Urology, reaffirmed that all their first office visits were comprehensive. In view of this a recommendation was made that the allowance for, or disallowance of, a first visit comprehensive versus a first visit intermediate payment request should be left to the carrier upon reviewing the written narrative report that would usually accompany a request for a comprehensive office visit reimbursement. In the event that a narrative report is not submitted, it must be made available at the request of the carrier. This was approved by the Council at its April meeting.

Guidelines for Workers' Compensation Carrier's Staff to Aid in Determining Authorization Requests. The State Insurance Fund sent a letter to Mr. John Pupo, Medical Registration Section of the Workers' Compensation Board, suggesting that the Medical Society of the State of New York develop guidelines for a carrier's or self-insurer's staff to aid in determining authorization requests for the more frequently used procedures and suggesting that it would be very helpful in reaching earlier authorization decisions and avoiding the need for additional consultations.

This request was forwarded to MSSNY to ascertain the medical viewpoint on the desirability, feasibility, etc., of formulating such guides. The Committee discussed the matter and felt that because of the complexity and multiplicity of reasons for ordering many procedures, as well as medico-legal considerations, that it would be virtually impossible to establish meaningful and workable guidelines that could be utilized by lay individuals in their approving or denying authorization requests. The feeling of the Committee was that requests for authorization that are questioned by the carrier should properly be handled by physicians, even though this involves a delay in processing.

Many procedures and tests that are ordered depend on the judgments of highly trained specialists working with complex diagnostic and therapeutic procedures resulting in a situation that precludes the establishment of simple guidelines for the use of lay individuals in approving or disapproving authorization requests.

It was, therefore, recommended that, since it would not be feasible or practical to draw up guidelines for a carrier's clerk or other lay person to determine if a complex procedure is reasonable or necessary,

1. All requests for authorization by Board Certified Specialists within their area of expertise be honored, and
2. If a request for authorization is questioned, it be judged by a competent medical consultant in the specific discipline.

The Council approved this recommendation, and a letter was sent to Mr. Pupo advising him of the action.

Comprehensive Health Practices Act. Asa Ruskin, M.D., the representative of Physical Medicine and Rehabilitation, brought to the attention of the Committee his concerns relative to a comprehensive health practices act.

This was reviewed and a recommendation was made that Dr. Ruskin receive permission to make this presentation to the Executive Committee of the MSSNY for consideration.

In addition to the attendance at the formal meetings, individual members of the Committee have been asked to review material submitted to them with their respective specialty societies which require prompt attention. Many of the routine activities of the Division are devoted to the problems of an interspecialty character that the MSSNY and its physician members are faced with on an almost daily basis.

The Chairman of the Committee expresses his appreciation to the members of the Committee for the time and effort they have devoted to the work of the Committee. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, Max N. Howard, M.D., Consultant, and Mrs. Gladys B. Wunsch, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,
Donald W. Hall, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Interspecialty Committee be filed for information.

⟹ . . . *The report of the Interspecialty Committee was* **FILED FOR INFORMATION** . . .

MEDICAID

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Medicaid are as follows:

Raul Pohorille, M.D., *Chairman*	Bronx
Donald L. Brooks, Jr., M.D.	Chemung
Ilene Z. Coopersmith, M.D.	Kings
Joseph B. Enders, M.D.	Onondaga
Franklin P. Guneratne, M.D.	Orange
James B. McDaniel, Jr., M.D.	Erie
Nathan Reed, M.D.	Albany
Edward C. Sinnott, M.D.	Nassau
Donald K. Stockdale, M.D.	Monroe
Betty L. Voelker, M.D.	Warren
Sidney S. Weinstein, M.D.	Monroe
Leonard S. Weiss, M.D.	Nassau

The Committee on Medicaid held three formal meetings since it was created by the approval of Resolution 80-13, Creation of a Medicaid Committee of the Medical Society of the State of New York, at the 1980 House of Delegates. (See Annual Report of the Committee on Medical Care Insurance, Page 610).

The following items are considered by the Committee:

Resolution 80-10, Medicaid Reimbursement. Introduced by Westchester County Medical Society.

Resolved, That discussions relative to increasing Medicaid reimbursement continue at an accelerated pace between the government of the State of New York and the Medical Society of the State of New York; and be it further

Resolved, That proposed increases more closely resemble usual and customary fees; and be it further

Resolved, That if the discussions are not productive in a reasonable time period, MSSNY inform the membership in a clear and forthright manner.

The House amended Resolution 80-10 by the addition of the following resolved:

Resolved, That the House of Delegates specifically authorize the Council to instigate legal action if the Council deems it necessary.

Resolution 80-26, Equitable Reimbursement Schedule in Medicaid. Introduced by Robert M. Kohn, M.D., Delegate, Section on Internal Medicine.

Resolved, That the Medical Society of the State of New York, in consort with other appropriate organizations, seek such legislative or regulative changes as indicated to insure a more favorable and equitable reimbursement schedule in the Medicaid system similar to the usual, customary, and reasonable formula.

These two resolutions were adopted by the House of Delegates and referred by the Council to this Committee. After an in depth discussion, including the resolved added by the House of Delegates to Resolution 80-10 to authorize the Council to instigate legal action if necessary, the Committee recommended that a legal opinion be sought as to the compliance of the State of New York with the intent and spirit of the federal mandate under Title XIX that the program "assures Medicaid patients the same access to quality services as non-Medicaid patients" and that such an opinion should include the recommendations for legal action if such seems feasible and warranted.

The General Counsel researched the question and presented the following opinion:

> "According to the court, the states are given wide latitude to set fees for medical service providers at the level which best meets the needs and resources of the state. Federal regulations do not prescribe any particular method for setting fees, but only specify means for determining the upper limit of Medicaid payments. It is the opinion of the General Counsel that the above cases illustrate the point that any suit that would be brought to compel the state to increase Medicaid reimbursement would not be successful. In all likelihood, the court would be receptive to arguments by the State concerning its financial limitations. In accordance with this opinion, General Counsel does not recommend initiation of a legal challenge."

Since this option for relief is apparently ruled out, the Committee believes we must continue to seek realistic reimbursement for rendering services to public assistance patients through other channels. These would include stepped up communications with responsible State officials and legislators as well as the accumulation of verifiable data that will pointedly support our contentions that the goals of quality care and cost effectiveness can best be attained by active participation of physicians in the medical assistance (Medicaid) program.

Charge to the Committee. When this Committee was polled relative to the charge given by the Council to the Committee (see Report of Committee on Medical Care Insurance, Page 610) the following recommendations were made with unanimous consent:

1. Serious problems have existed in the Title XIX program since its inception in 1966. The ultimate aim of this Committee, based on the mandate of the Title XIX program to assure Medicaid patients the same access to quality services as non-Medicaid patients, will be to determine if this mandate is truly being carried out in the State of New York.

2. A primary problem of the Title XIX program in terms of physician provider participation is the inordinately inadequate and totally unrealistic reimbursement schedule which exists in New York State for rendering medical services. This has resulted in physicians basically subsidizing a federally mandated social system which means a below cost reimbursement to the physician providers in New York State. The end result of this reimbursement policy is a major withdrawal of physicians from the program completely, or rendering services to the indigent and not billing for such services.

3. The relative unavailability of treating physicians in the private sector has resulted in a high proportion of indigent patients receiving medical services in emergency rooms and out-patient departments of hospitals at rates five to six times those allowed to the private practicing physician. The Committee goes on record that this problem, since it most directly affects patient care, is

the most pressing and should be addressed jointly with the reimbursement problems stated in item #2 above.

4. Of secondary importance are the following:
    a. The horrendous paper work necessary for Medicaid reimbursement.
    b. The inordinate delay in payment for medical services resulting from, at times, administrative mismanagement.
    c. The backlog of indigent patients in acute care facilities awaiting placement in intermediate care facilities and/or nursing homes because of Medicaid delays in eligibility determinations.

MSSNY Position Paper on Medical Care of the Indigent. The Committee reviewed the MSSNY psoition paper on "Medical Care of the Indigent" with the intent of updating and modifying the statements to reflect conditions at the present time. The revised position paper, "Medical Care of the Public Assistance (Medicaid) Patient," has been approved by the Committee members and will be submitted to the Council for its consideration.

Universal Health Claim Form — HCFA 1500 (Modified AMA Claim Form). The Committee was apprised of the efforts expended by the MSSNY in the development of the Universal Health Claim Form which was mandated for use by the Health Care Financing Administration of the Department of Health and Human Services, based on the agreement reached with the AMA. Basic concurrence has now been reached by all insurers relative to color coding index on a modified claim form and it is hoped that the implementation will take place before the end of the current year. The use of this form should substantially reduce the onerous paper work for Medicaid reimbursement.

Copying Patient Records. In various counties throughout the State, investigations of physicians practices were undertaken by the Division of Medicaid Fraud and Abuse of the New York State Department of Social Services. A number of complaints were received by the MSSNY that the Bureau was attempting to remove physician records from the physician's office to a central location for xeroxing. A letter was sent to Commissioner Barbara Blum objecting to this procedure and the reply received from the Department of Social Services noted that there are several choices for copying records and that the physician has the option to select which method he feels is most convenient, e.g., the investigator can xerox the records in the physician's office, microfilm the records in the physician's office, or remove them for copying if the physician has no xerox.

The Committee felt that this information should be disseminated to our members through the *News of New York*. It was also recommended that physicians not have the charts removed from their offices but utilize the alternative procedures listed above.

Actions of the Bureau of Medicaid Fraud and Abuse of the New York State Department of Social Services. The Committee was apprised of the increased activity of the Bureau of Medicaid Fraud and Abuse and of the methodology being used in alleged fraud and abuse investigations. This was brought to the attention of MSSNY by Broome County Medical Society and, since that time, other reports of similar activities have been received.

In an effort to determine the validity of the statistical methodology being employed by the Bureau of Medicaid Fraud and Abuse, the facts were presented to an actuarial firm, Market Opinion Research, Inc., based in Detroit. The opinion is as follows:

> "After carefully reviewing the documents you have sent me with regard to the method used by New York State Department of Social Services to estimate alleged overpayments, I have arrived at the following conclusions: (1) This technique is not a statistically reliable and valid method; (2) It has not been consistently applied in the two illustrative cases presented; (3) It tends to be inherently biased in the direction of finding alleged overpayments; and (4) The technique would not be very defensible in a court of law."
>
> "After reviewing the documents you have sent me, I must conclude that this procedure is *not* being consistently or properly applied by the Department of Social Services. To my knowledge, this projection technique has *not* been challenged in court, but if it was, I do not think it would be very defensible."

This opinion has been sent to all counties currently involved in these activities.

Subsequently, an invitation was extended to Philip J. Natcharian, Director of the Bureau of Medicaid Fraud and Abuse of the New York State Department of Social Services, and he appeared before our Council to explain the program developed by his Department and to answer pertinent questions relative to this type of investigation. County medical societies and district branches were informed and his presentation was well received. Verbatim copies of his remarks are to be found in the Council Minutes of May 21, 1981.

Subcommittee on Medicaid Reimbursement. The Chairman noted the wide scope of the potential activities of the Committee on Medicaid and suggested that the initial focus might be on the problem of inadequate reimbursement and its cause and effect relationship to patient care vis-a-vis physician participation in the Medicaid program.

Daniel F. O'Keeffe, M.D., Chairman of the Commission on Medical Services, had previously set up ongoing dialogues with State officials concerning the complicated claims forms and the inadequate Medicaid fee schedule, as well as other problems attendant to the Title XIX program in New York State.

The Committee noted that the negotiations concerning the universal health claim form have been satisfactorily resolved. Therefore, the next major focus should be on the inadequate reimbursement for physicians taking care of Medicaid patients. With that in mind, the Chairman appointed the following members to a Subcommittee on Medicaid Reimbursement to meet, under the leadership of Dr. O'Keeffe, with State officials:

Raul Pohorille, M.D.
Donald L. Brooks, Jr., M.D.
Nathan Reed, M.D.
Leonard S. Weiss, M.D.

As its initial thrust, the Subcommittee on Medicaid Reimbursement met with Michael McGarvey, M.D., Chief Medical Officer and Deputy Director for Health Facilities Standards and Control, NYS Department of Health, who was very receptive to our presentation of facts and figures to stress the seriousness of the reimbursement problem. As a result Dr. McGarvey agreed to help us arrange a meeting with Governor Carey for the purpose of presenting facts and figures related to the Medicaid problem as well as the malpractice crisis.

Governor Carey's Proposed Takeover of Medicaid by New York State. The impact of Governor Carey's proposed takeover of Medicaid by the State was discussed. However, until the Federal position is clear, the State cannot make any firm plans. Staff will keep the Committee informed on future developments in this area. This entire proposal is being researched. When all the facts are known and evaluated a summary will be presented.

Washington State Medical Assistance — Medicaid — Program. The Washington State Medical Society has developed a report to substantiate the need and reasons for necessary changes in the Medicaid program within their State. This report to their legislature has apparently been very effective in bringing about the desired adjustments in the program. Copies of this report have been received and are being developed here in New York State. More details will be reported after a feasibility study has been done.

Bill S.3545 and A.4531. The members of the Committee went on record in supporting Senate Bill S.3545, introduced by Senator Johnson, and Assembly Bill A.4531, introduced by Assemblyman Madison, entitled "An Act to amend the social services law, in relation to providing a reimbursement fee schedule for the services of private physicians which shall be comparable to reasonable fees which prevail in the social services districts."

Medicaid Management Information System (MMIS) Brandford Administrative Services. Implementation of MMIS by Bradford Administrative Services was discussed by the Committee. The MMIS was put into effect downstate with fewer problems because the system being used in New York City, at that time, was so unsatisfactory that MMIS had to be an improvement. However, the administrative practices upstate were very good and generally accepted in most areas. The complicated new claim forms introduced for MMIS use were rejected by physicians because their completion proved to be cumbersome, time consuming, and an administrative fiasco in that a high percentage were computer rejected because of the omission of minor items on the form. The MMIS has now evolved into a more efficient system for handling claims and technical problems arising are now relatively easy to resolve. Administrative problems will be considerably lessened when the new universal, color coded claim forms (HCFA 1500) are introduced later in 1981.

The Chairman of the Committee expresses his appreciation to the members of the Committee for the time and effort they have devoted to the work of the Committee. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Gladys B. Wunsch, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,

Raul Pohorille, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Medicaid be filed for information.

⟹ . . . *The report of the Committee on Medicaid was* **FILED FOR INFORMATION** . . .

MEDICAL CARE INSURANCE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Medical Care Insurance are as follows:

H. Gregory Thorsell, M.D., *Chairman*	Chautauqua
Irwin Abraham, M.D.	Monroe
John G. Hamilton, M.D.	Monroe
Richard A. Hughes, M.D.	Warren
Elise H. Korman, M.D.	Suffolk
Monte Malach, M.D.	Kings
Maxwell J. Marder, M.D.	Queens
Raul Pohorille, M.D.	Bronx
Leonard S. Weiss, M.D.	Nassau
* Valerie Ellis	Monroe

The Committee on Medical Care Insurance held one formal meeting since the last annual report and the following matters were discussed:

Resolution 80-13, Creation of a Medicaid Committee of the Medical Society of the State of New York. Introduced by Bronx County Medical Society.

Resolved, That the Medical Society of the State of New York create a Statewide Medicaid Committee to represent the interests of Medicaid recipients and physicians who are enrolled as providers of services in the Medicaid Program of the State of New York; and be it further

Resolved, That such Committee be empowered to enter into negotiations with State authorities relative to the problems of Title XIX.

This resolution was adopted as amended by the 1980 House of Delegates, and the Council on October 30, 1980, approved the following guidelines suggested by the Committee on Medical Care Insurance as charges to the new Committee on Medicaid:

1. Proposed legislative changes relative to Medicaid Program should be reviewed.

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* Medical Student

2. Update MSSNY Position Paper on Medical Care of the Indigent.
3. Discuss "Is New York State Plan in conformity with Federal Mandate on Title XIX?"
4. Monitor Medicaid Management Information System (MMIS) Activities.

The new statewide Committee on Medicaid is comprised of members selected by geographic designation and regional distribution so that all areas of the State have representation. (See Annual Report of Committee on Medicaid, Page 608).

Resolution 80-9, Medicare Coverage for Geriatric Mental Disorders. Introduced by Westchester County Medical Society.

Resolved, That the Medical Society of the State of New York go on record as deploring the discriminatory practice of disallowing Medicare coverage for geriatric mental disorders since such exclusions prevent proper diagnosis, evaluation and recommendations for therapy of organic brain syndrome patients; and be it further

Resolved, That the Medical Society of the State of New York institute actions to halt such reimbursement denials where in the opinion of a physician proper care for organic brain syndrome patients can best be done in psychiatric hospitals; and be it further

Resolved, That the American Medical Association and interested Specialty Societies be informed of our actions and efforts to ameliorate this unfortunate situation and requested to assist us in this endeavor.

This resolution was adopted by the House of Delegates and referred to the Committee on Medical Care Insurance. This Committee, recognizing the frustration of the makers of the resolution, recommended to the Council referral to the Federal Legislation Committee and the AMA for possible legislative changes in the Title XVIII program to reflect the concerns embodied in this resolution. This was approved by the Council on February 19, 1981.

Resolution 80-52, Updating Reimbursement in Blue Shield Plans. Introduced by Suffolk County Medical Society.

Resolved, That the Medical Society of the State of New York formally request that Blue Cross-Blue Shield of Greater New York, through all of its subdivisions in New York State,

1. Inform the public that the Blue Shield portion of the $4,000 to $6,000 and $7,000 to $8,500 and Executive Indemnity Plans they presently offer are inadequate in their reimbursement and not in keeping with today's health care costs; and
2. Eliminate these inadequate plans and replace them with fee schedules which are in keeping with today's costs of practicing medicine, which reflect the physicians' usual and customary charges.

Resolution 80-52 was amended to read as above by the House of Delegates and the original and amended resolution, as well as the discussion in the House pertinent to this matter, were referred to the Council. At its meeting on October 30, 1980, the Council referred the matter to this Committee for deliberation and recommendation.

The Committee realized the complexity and multiplicity of the Blue Cross-Blue Shield plans and noted that these indemnity plans were utilized for group insurance where there is additional coverage under major insurance programs. However, physicians are placed at a disadvantage if they do not accept assignment and receive from the patient fees far in excess of what these plans allow. This leads to misunderstandings between the physician and the patient. It was felt that a change in the wording of the Explanation of Medical Benefits (EMB) sent to the patient by the carrier would inform the subscriber that the policy has purchased only a limited insurance benefit.

In order to address this, the Committee recommended that amended Resolution 80-52 be approved by the Council with the addition of the following resolved:

> **Resolved,** That the Medical Society of the State of New York encourage insurance carriers who write this type of insurance to rephrase the wording in their Explanation of Medical Benefits (EMB) so that the subscriber will know that the "amount received is the maximum that their policy has purchased, but does not reflect current economic conditions, due to the limited insurance benefits of the policy."

The Council on February 19, 1981, approved Resolution 80-52 as amended by the House of Delegates and as amended by the Council. Subsequently, a letter was sent to the President of Blue Cross-Blue Shield of Greater New York advising them of the resolution and requesting them to consider these recommendations.

Medicare and Medicaid Provisions of the Omnibus Reconciliation Act of 1980 P.L. 96-499. That portion of the Act entitled, "Medicare Payment Liability Secondary in Certain Automobile Insurance Cases," concerning the withdrawal of Medicare as the primary payor in no-fault and liability insurance cases was investigated.

The initial interpretation of that provision of the law was that Medicare was withdrawing as the primary carrier where the Medicare patient had additional insurance coverage. This provision affected the physicians of the State of New York by causing them, at least in our interpretation, to seek the additional sources of insurance for reimbursement prior to the physician billing the Medicare fiscal intermediary.

As a secondary factor, by seeking reimbursement from the no-fault insurance carriers, the physicians would by State Law be obligated to bill based on the Workers' Compensation Medical Fee Schedule. The previous method for physicians treating Medicare/no-fault cases was the billing to the Medicare carriers on the usual, customary, and reasonable fee pattern, and the acceptance by the physician of assignment in many instances led to reimbursement based on his physician profile in excess of what was allowable under the Workers' Compensation Medical Fee Schedule.

In February the Medicare Contract Officer for District II of the Department of Health and Human Services informed us that, although Medicare is withdrawing as primary carrier, "conditional Medicare payments can be made provided the appropriate funds will be reimbursed when the amount payable under the insurance plan or policy has been determined." It was further noted that, "the Secretary of HHS may waive recovery of such payments if a determination is made that the probability of recovery or the amount involved does not warrant pursuit of the claim."

This means that the physician can continue to bill the Medicare fiscal intermediary, accept assignment, and be reimbursed by the carrier and that the Medicare Bureau itself assumes the responsibility of the recovery of such funds through the other insurance carriers who have covered the Medicare patient.

Universal Health Insurance Claim Form — HCFA 1500. Agreement has been reached on the format of the HCFA 1500 claim form for New York State. The Committee reviewed the form which reflects those elements necessary for Title XVIII, Title XIX, IX-C Carriers, and commercial carriers and the Council on January 22, 1981, expressed approval of the form which, when implemented, will replace all existing insurance claim forms, except Workers' Compensation. The implementation of this form was mandated by the Health Care Financing Administration of the Department of Health and Human Services for fiscal year 1981. Although approval has been reached by all parties, the universal health insurance claim form still has to be approved by the Superintendent of Insurance of the State of New York before it is made available.

Anesthesia Reimbursement Formula. A question was raised as to whether carriers reimburse for anesthesia based on a major or minor fraction of time segment. Further research developed the fact that IX-C carriers reimburse for anesthesia based on a time segment plus any minor fraction thereof.

Ombudsman Program for Members. From February 1980, when the ombudsman service was established, to the present well over a hundred matters have been brought to the attention of the ombudsman and in most cases resolution of the problems has been effected. The problems involved Medicare, Medicaid, No-Fault, Workers' Compensation, union health insurance programs as well as other commercial carriers, and encompassed problems of delayed or denied payments, errors in reimbursements, and explanations of the law or other government regulations.

Hospital Review and Planning Council Meetings. Since there is no official physician member of our Society on the Hospital Review and Planning Council, the Associate Director of the Division of Medical Services has continued to attend these meetings on a monthly basis to monitor the activities.

The Chairman of the Committee on Medical Care Insurance expresses his appreciation to the members of the Committee for the time and effort they have devoted to the matters dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Gladys Wunsch, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,

H. Gregory Thorsell, M.D., *Chairman*

⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Medical Care Insurance be filed for information.

⟹ *. . . The report of the Committee on Medical Care Insurance was* **FILED FOR INFORMATION . . .**

PROFESSIONAL STANDARDS REVIEW ORGANIZATION

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Professional Standards Review Organization are as follows:

Stanley I. Fishman, M.D., *Chairman*	Kings
Arthur D. Hengerer, M.D., *Vice-Chairman*	Albany
Paul Jenks, M.D.	Seneca
John T. Prior, M.D.	Onondaga
Neville W. Harper, M.D.	Oneida
John E. Glennon, M.D.	Washington
Franklyn C. Hayford, M.D.	Schenectady
Allen D. Levine, M.D.	Orange
Daniel A. Sherber, M.D.	Westchester
Herbert L. Sperling, M.D.	Rockland
Irwin J. Cohen, M.D.	New York
William A. Schwarz, M.D.	Richmond
Paul Finkelstein, M.D.	Kings
Morton Kurtz, M.D.	Queens
Thomas J. Sheehy, Jr., M.D.	Nassau
John P. Albanese, M.D.	Bronx
Vincent A. O'Brien, M.D.	Suffolk

Since its last report to the House of Delegates, the Committee on Professional Standards Review Organizations (PSRO) held one meeting. The following matters were discussed:

Updating Developments Relative to Governmental Changes

The following recommendations were made to the Council:

That the Medical Society of the State of New York support the PSRO program and affirm a policy for "the continuation of the PSRO program as a professionally directed effort to insure that care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost."

That the Medical Society of the State of New York strongly support the Statewide Professional Standards Review Council and utilize its best efforts to insure its effectiveness in coordinating the efforts of the local PSROs.

That the Medical Society of the State of New York bring these actions to the attention of the American Medical Association.

In addition, the Committee recommended that the following resolution be presented by the New York Delegation to the American Medical Association at the 1981 Annual Meeting of the House of Delegates:

> **Resolved,** That the American Medical Association support the PSRO program and affirm a policy for "the continuation of the PSRO program as a professionally directed effort to insure that care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost;" and be it further
>
> **Resolved,** That the American Medical Association strongly support the Statewide Professional Standards Review Councils and utilize its best efforts to insure their effectiveness in coordinating the efforts of the local PSROs; and be it further
>
> **Resolved,** That the American Medical Association inform all State Medical Societies as to the action taken on this resolution.

The Committee recommended that all State Medical Societies be informed of the actions of the Medical Society of the State of New York relative to the PSRO program.

On February 19, 1981, the Council postponed action on the above report of the Committee on PSRO until the March 19, 1981, meeting of the Council. At this meeting John A. Finkbeiner, M.D., a member of the Council, stated that he would be attending a meeting of the AMA Council on Medical Services and would present a resolution to the MSSNY Council based on the discussion at the AMA Council meeting. Subsequently, the following resolution was presented:

> *Whereas*, At the Interim Meeting in 1980 the AMA House of Delegates adopted the policy to "continue professionally directed efforts to insure that care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost and to encourage the elimination of all government directed peer review programs, including PSRO;" and
>
> *Whereas*, The Reagan Administration has indicated that the elimination of the PSRO program is a viable possibility; and
>
> *Whereas*, Physicians have always recognized and advocated peer review by physicians rather than by governmental bodies; therefore be it
>
> **Resolved,** That the American Medical Association develop alternate mechanisms for peer review by physicians in the event that the Federal Government does discontinue the PSRO program.

After lengthy discussion, the following substitute resolved was introduced.

> **Resolved,** That in New York State where PSRO has been determined to be effective, all federal funds for review purposes be used to continue PSRO activity rather than create new State mechanisms.

The amended resolution was approved.

The President, Ralph M. Schwartz, M.D., appointed an Ad Hoc Committee to Develop a Resolution on PSRO to be presented to the AMA House of Delegates. This Committee held a telephone conference which resulted in the following resolution being presented to the MSSNY Council for its approval:

> *Whereas*, At the Interim Meeting in 1980 the AMA House of Delegates adopted the policy to "continue professionally directed efforts to insure that care provided to patients is of high quality, appropriate duration, and is rendered in an appropriate setting at a reasonable cost and to encourage the elimination of all government directed peer review programs including PSRO;" and
>
> *Whereas*, PSRO in many localities is successful due to strong physician support, and is the preferred modality for peer review insuring quality of care and cost containment; therefore be it
>
> **Resolved,** That in states where the physician community has determined PSRO to be effective, federal funds for review purposes be used to continue PSRO activity rather than create new state mechanisms.

The above resolution was introduced at the AMA annual meeting of the House of Delegates on June 10, 1981. The following substitute resolution was introduced and passed. The fifth resolved was referred to the Board of Trustees of the AMA for implementation.

> **Resolved,** That the American Medical Association take a leadership role in collaboration with all units of the Federation in developing and promoting effective means of physician assessment of the quality of medical care regardless of the future fate of PSROs; and be it further
>
> **Resolved,** That physicians maintain control and direction over peer review and that peer review be done only by physician-sponsored organizations regardless of the funding source for such review and that the AMA notify all agencies involved in medical peer review of this resolution; and be it further
>
> **Resolved,** That physicians, acting through their state medical associations, provide for protection of the confidentiality of existing data accumulated for PSRO regardless of the future fate of PSRO; and be it further
>
> **Resolved,** That the Council on Medical Service submit a report of progress on the implementation of this resolution at the 1981 Interim Meeting; and be it further
>
> **Resolved,** That, since the Quality Assurance Program for hospitals as devised by the JCAH and medical care foundations utilized effectively by many states are proven mechanisms for providing physician peer review, the House of Delegates request the Board of Trustees to investigate expanded use of these methods and assist actively the formation of medical care foundations, or similar organizations, in states where they do not now exist, if requested by the state society.

During the course of the year, a presentation by the Deputy Administrator of the Department of Health and Human Services on the topic, "If There is No PSRO, What Is The Alternative" was received by the Committee.

The staff of the Division of Medical Services attended and participated in a number of meetings involving the New York Statewide Professional Standards Review Council, Inc., and the Office of Health Systems Management. Other matters concerning PSRO activities were dealt with on an almost daily basis, with frequent communication with the Committee Chairman.

The Chairman of the Committee expresses his appreciation to the members of the Committee for the time and effort they have devoted to the problems dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Jeanette Palucci, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,

Stanley I. Fishman, M.D., *Chairman*

■

⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Professional Standards Review Organization be filed for information.

⟹ . . . *The report of the Committee on Professional Standards Review Organization was* **FILED FOR INFORMATION** . . .

SOCIOECONOMICS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Socioeconomics are as follows:

John W. Abbuhl, M.D., *Chairman*	Albany
Harold N. Schwinger, M.D., *Vice-Chairman*	Kings
Leonard Burness, M.D.	New York
John G. Hamilton, M.D.	Steuben
Richard A. Hughes, M.D.	Warren
Charles S. LaMonte, M.D.	New York
Gerald J. Lustig, M.D.	Richmond
Nathaniel B. Messinger, M.D.	Suffolk
Charles Palmer, M.D.	Chemung
Pellegrino Joseph Tozzo, M.D.	Westchester
* Wilson Ko	Suffolk

The Committee on Socioeconomics held one formal meeting since the last annual report and the following matters were discussed:

Interspecialty Committee actions Relative to Request of Workers' Compensation Board Chairman for Revision of Workers' Compensation Medical Fee Schedule. The Committee was apprised of the ongoing developments concerning the request of the Workers' Compensation Board Chairman, Mr. Arthur Cooperman, to update the Workers' Compensation Medical Fee Schedule. The Committee was made aware of the difficulties encountered by the Interspecialty Committee in trying to implement Mr. Cooperman's request. The interrelationship between the Interspecialty Committee and the Workers' Compensation and Occupational Health Committee of the MSSNY was noted and mention was made that if no resolution of the problem can be effected by the Interspecialty Committee within the time frame allotted to it then the Workers' Compensation and Occupational Health Committee of the MSSNY would review the situation and make the appropriate recommendations to the Council. (See Annual Reports of Interspecialty Committee, Page 605, and Workers' Compensation and Occupational Health Committee, Page 615, for more information.)

Patterns of Practice and Overhead Business Expense Survey. This Committee discussed the survey, which was prepared and conducted by an outside research firm. It was sent to 5,000 randomly selected physicians, both members of the Society and non-members, in order to secure valid statistical data to refute the extrapolation of patterns of practice of physicians which has resulted in the Workers' Compensation Regionalization Plan formulated by the Chairman of the Workers' Compensation Board. (See Annual Report of Committee on Workers' Compensation and Occupational Health, Page 615.)

Universal Health Claim Form HCFA 1500. This Committee considered the successful completion of the negotiations between the MSSNY and officials of the Department of Health and Human Services, NYS Department of Social Services, and the Blues, which has resulted in the HCFA 1500 universal health claim form, color indexed for Medicare, Medicaid, and the Blues. The commercial carriers would also process the form if submitted to them, although they did not participate in its development. The form was approved by the MSSNY Council on January 22, 1981, and the HCFA mandated that it be implemented in fiscal year 1981. (See Annual Report of Committee on Medical Care Insurance, Page 610.)

Medicare Provisions of Omnibus Reconciliation Act of 1980 — P.L. 96-499. This Committee reviewed the new Medicare Provisions of the Omnibus Reconciliation Act of 1980 and its impact on the private practicing physician in treating victims of no-fault accidents who are covered by Medicare. (See Annual Report of Committee on Medical Care Insurance, Page 610.)

FTC Ruling Clarifying Professional Peer Review. The Associate Director of the Division of Medical Services informed the Committee of the FTC ruling upheld by the U.S. Court of Appeals for the Second Circuit. The Court made one very significant modification when it changed the order concerning restraint by adding the italicized language as follows:

> "Restricting, regulating, impeding, advising on the ethical property of, or interfering with the consideration offered or provided to any physician in any contract with any entity that offers physicians' services to the public, in return for the sale, purchase or distribution of his or her professional services, *except for professional peer review of fee practices of physicians . . .*"

Legal opinion resulting from this action notes that county medical societies will be permitted to once again review complaints relative to physicians' fees.

PSRO Program. This Committee discussed at length the implications of the federal government's recommending the phasing out and elimination of the PSRO program. It was strongly felt by the members of the Committee that the PSRO as it exists in New York State represents a bulwark against State governmental imposition and interference in the practice of medicine.

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* Medical Student

A recommendation was made to the Council that the MSSNY go on record in supporting the New York State PSRO program as it exists today and in supporting the stand taken by the PSRO Committee of the MSSNY at its meeting on January 27, 1981.

The Council at its meeting of March 19, 1981, approved the following resolution:

> "**Resolved,** That in New York State where PSRO has been determined to be effective, all federal funds for review purposes be used to continue PSRO activity rather than create new State mechanisms."

In addition, at its meeting of April 16, 1981, the Council approved the resolution of the Ad Hoc Committee to Develop a Resolution on PSRO to be Presented to the AMA House of Delegates which stated:

> "**Resolved,** That in states where the physician community has determined PSRO to be effective, federal funds for review purposes be used to continue PSRO activity rather than create new State mechanisms." (See Annual Report of Committee on PSRO, Page 612.)

HSA Program. This Committee deliberated on the implications of the phasing out of the HSA program based on President Reagan's determination that the federal government remove itself from health planning areas. It was felt that, since only limited data is currently available, the process should be monitored closely to determine the impact that this would have on the medical care delivery system of New York State. (See Annual Report of the Health Systems Agency Coordinating Committee Page 601.)

The Chairman of the Committee expresses his appreciation to the members of the Committee for the time and effort they have devoted to the matters dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Gladys Wunsch, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,
John W. Abbuhl, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on Socioeconomics be filed for information.

⟹ . . . *The report of the Committee on Socioeconomics was* **FILED FOR INFORMATION** . . .

WORKERS' COMPENSATION AND OCCUPATIONAL HEALTH

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Workers' Compensation and Occupational Health are as follows:

John H. Morton, M.D., *Chairman*	Monroe
Frederic W. Holcomb, Jr., M.D., *Vice-Chairman*	Ulster
George W. Calvosa, M.D.	Kings
Robert A. Caputi, M.D.	Erie
Denis Chagnon, M.D.	Albany
Thomas J. Doyle, M.D.	Kings
Burton P. Hoffman, M.D.	Westchester
Max N. Howard, M.D.	New York
Robert Katz, M.D.	New York
Paul C. Lehmuller, M.D.	Nassau
Joyce M. McChesney, M.D.	Monroe
Alexander E. Messer, M.D.	Otsego
Bernard S. Post, M.D.	Nassau
Nicholas Teresi, M.D.	Albany

Since its last report to the House of Delegates, the Workers' Compensation and Occupational Health Committee met on three occasions and the following matters were discussed.

Resolution 80-41, Reopening of Closed Workers' Compensation Board Cases

> **Resolved,** That the Medical Society of the State of New York attempt to introduce and support action and seek legislative changes which will clearly state that if said case is reopened the physician who has examined the claimant for such reopening shall be paid usual, customary, and prevailing rates by the compensation insurance carrier.

The above resolution, amended and adopted as amended by the House of Delegates was discussed by the members of the committee and reference was made to the use of the C-27 form which is used for the reopening of a closed workers' compensation case. The committee noted that there have been long delays in getting a case reopened. An Ad Hoc Committee to clarify administrative procedures relative to reopening of workers' compensation cases is being considered by the Chairman of the Workers' Compensation Board. A motion was made to approve the amended resolution.

The motion passed with 2 negative votes.

Since it appears unlikely that the Chairman will approve usual and customary fees at this time, the following recommendation was made to the Council as a working alternative:

> **Resolved,** That the physician involved in reopening a workers' compensation case should be paid for an initial visit in keeping with the Workers' Compensation Medical Fee Schedule, pending the attainment of the usual, customary, reasonable fees, for all services rendered under workers' compensation.

This recommendation was approved by the Council at its January 22, 1981, meeting.

AMA Resolution re Cooperate Visitation Programs. It was reported to the committee that the New York State Delegation to the AMA has introduced a resolution in the AMA House of Delegates relative to Corporate Visitation Programs. The amended resolution as adopted reads as follows:

> **Resolved,** That the House of Delegates of the American Medical Association commend AMA officers and

> staff for their positive initiation in establishing an improved and ongoing communication with the nation's business community; and be it further
>
> **Resolved,** That this House of Delegates encourage all county and state medical associations to embark upon similar efforts and seek AMA's support in their implementation; such implementation may be enhanced by enlisting the cooperation of the senior medical officer or medical consultant, if any, of the corporations contacted.

A recommendation was introduced that in establishing liaisons with industrial concerns in the State of New York to effect a dicussion of the proper methodology of cost containment that physicians in such corporations who are acting as medical advisors may be involved. It was noted that this recommendation really affirms the action of the AMA House of Delegates in passing Resolution 44A during the AMA meeting in December 1980.

On January 22, 1981, the Council approved the recommendation of the committee.

Reimbursement for CAT Scanning. The published ruling of the Chairman that neurologists and neurosurgeons taking and interpreting their own CAT scans be paid the full radiology fee according to the Workers' Compensation Medical Fee Schedule was discussed as well as the import of such a ruling on other specialties, i.e., orthopedics, urology, etc., attempting to get the same principle.

This ruling (effective December 1, 1980) reads as follows:

> "Full fees are payable to "SD" rated specialists and to those physicians who are certified by the American Board of Neurological Surgery or the American Board of Neurology who perform and interpret CT scans for neurological diagnoses."

A motion was made that the ruling of the Chairman as it relates to Neurologists and Neurosurgeons be approved. This motion was defeated. However, the committee in defeating this motion recognized and stated that in the attempt to apply such a ruling to a single specialty all other qualified specialties, i.e., orthopedics, urology, etc., should be treated in a similar manner. The Executive Committee in discussing this problem, concurred with the latter statement of the Workers' Compensation Committee. This point of view has been transmitted to the Chairman of the Workers' Compensation Board for his consideration.

In considering the above proposal by the Workers' Compensation Board, the general consensus of the members present with the radiology representatives expressing differing views was that the MSSNY should continue to express its position that if any single non-radiology specialty be granted a fee equal to that of radiologists for taking and interpreting x-ray films within their specialty then all specialists be granted the same fee increase. However, realistically, the members present realized that the Chairman of the Workers' Compensation Board would not grant such a general fee increase at this time to all specialties and that the following suggestion for fee increases be accepted, if so offered, as a "better than nothing" approach while continuing to discuss the equal fee for equal service concept as it applies to radiology procedures.

SD Rated Physicians — to be paid full fee
D Rated Physicians — to be paid ¾ fee
S Rated Physicians — Increase from ⅔ to ¾
Specialists (not S rated) — Increase from ½ to ⅔

A Request for Establishing an Ambulatory Surgical Facility Fee Under WC. The committee discussed correspondence received from the Long Island Plastic Group relative to establishing an ambulatory surgical facility fee. It was reported that members of the staff of the Division of Medical Services had visited this facility. The committee reported that the Blue Plans in various parts of the State are now paying for hospital-based ambulatory surgical facilities and it was recommended that fees should be paid to ambulatory surgical facilities because it is a cost effective mechanism.

The committee recommended that, "an ambulatory surgical facility which has been accredited by the Joint Commission on Accreditation of Hospitals (JCAH) and other recognized accrediting agencies should be accepted by the Workers' Compensation Board for the payment of a facility fee."

The committee noted as an addendum, that they approved of the principle of this but stated that they were not in a position to recommend procedure for identifying specific accrediting agencies other than JCAH.

The MSSNY Council on January 22, 1981, approved the recommendation of the committee.

New Legal Decision Relative to Physicians Peer Review at the County Level. The Director of the Division of Medical Services informed the committee of the FTC ruling upheld by the U.S. Court of Appeals for the Second Circuit. The Court made one very significant modification when it changed the restraining order by adding the italicized language as follows:

> "Restricting, regulating, impeding, advising on the ethical propriety of, or interfering with the consideration offered or provided to any physician in any contract with any entity that offers physicians' services to the public, in return for the sale, purchase or distribution of his or her professional services, *except for professional peer review of fee practices of physician . . .*"

Legal opinion resulting from this action notes that county medical societies will be permitted to once again review complaints relative to physicians' fees.

A recommendation was made that the Council of the Medical Society of the State of New York render an opinion as to whether the committees of this Society may now discuss the reasonableness of physicians' fees.

The MSSNY Council, on January 22, 1981, approved the recommendation of the committee.

Discussion of Emergency Medicine Inclusion in Workers' Compensation Medical Fee Schedule. The following recommendation was established by the committee and passed by the MSSNY Council on March 19, 1981:

> "Board-certified emergency physicians should be treated in the same fashion as board-certified family practitioners except that special consideration should be

> given to the management of life or limb threatening emergencies which should be handled as A & A procedures."

Since the passage of this resolution, further communication has been received from the New York Chapter of the American College of Emergency Physicians (NY-ACEP) in which they report that the NY-ACEP and Emergency Medicine satisfy criteria for specialty representation on the Interspecialty Committee of the MSSNY. There is an American Board in Emergency Medicine, and they presently have 372 chapter members (over the required 100 members as outlined by the MSSNY Interspecialty Committee guidelines), and that NY-ACEP is a formal Chapter of the National organization (the American College of Emergency Physicians) with a regularly meeting Board of Directors. They have submitted the names of physicians for possible appointments to the committees of MSSNY and have stated that all these physicians are members of both ACEP and MSSNY.

Relative Value Scale Revisions. The committee was made aware of the virtually insolvable difficulties encountered by the Interspecialty Committee in complying with the request of the Chairman of the Workers' Compensation Board to update the Workers' Compensation Medical Fee Schedule; such difficulties being greatly magnified by the present medical liability crisis being faced throughout New York State. The deliberations of the Interspecialty Committee at its meeting of May 7, 1981, resulted in the following motion made and seconded and passed by a vote of 11 in favor, 3 against, and 1 abstention.

> "That the MSSNY inform the Chairman of the Workers' Compensation Board that the Workers' Compensation Medical Fee Schedule is an unacceptable and inequitable system for compensation to physicians and that the MSSNY reaffirm the principle of reimbursement based on usual, customary, and reasonable fee patterns."

The committee realizes that the passage of the above resolution, along with the September 1, 1981, deadline imposed on the MSSNY by the Chairman of the Workers' Compensation Board for submission of the Relative Value Scale updates, would undoubtedly result in the Chairman appointing a task force or utilizing some outside firm such as "Medata" to develop the new fee schedule. The following recommendation was made to the Council:

> "We recommend to the Council that the MSSNY continue its efforts to see that all fees are based on a usual, customary, and reasonable basis and that the MSSNY continue to cooperate in trying to establish a relativity scale to be used in paying usual and customary fees."

In view of the recognition of the fact that the Interspecialty Committee has not been able to update the Relative Value Scale as requested, a further recommendation was made that:

> "We utilize the 1976 California Workers' Compensation Relativity Guide as a basis for establishing an updated Relative Value Scale for use in New York State."

The Council at its meeting on Thursday, June 18, 1981, considered the above three recommendations and in their place reaffirmed the following substitute resolution for Resolutions 80-19 and 80-45 adopted by the 1980 House of Delegates:

> "**Resolved,** That the Medical Society of the State of New York disapprove fixed fee schedules and seek the adoption of payments based on usual, customary, and prevailing fees in all negotiations relating to fees where such negotiations are mandated by governmental agencies."

This effectively terminates any participation in RVS revisions.

Psychologists to Treat and Receive Payment Under Workers' Compensation (Calandra Bill S.4453). Legislation has been introduced into the Senate which would put clinical psychologists on par with physicians, osteopaths, chiropractors, and podiatrists in treating and receiving reimbursement for that treatment of work-related injured patients. At the present time the services of clinical psychologists are not reimbursable, under the Workers' Compensation Law. The Executive Committee of the MSSNY, on April 15, 1981, recommended that this legislative proposal be referred to the Committee on Mental Health for an opinion, and for report back to the Council.

In consultation with representatives of the Committee on Mental Health, a letter was drawn up explaining the position of MSSNY in this matter and was referred to the Chairman of the Workers' Compensation Board. The text of this letter is available in the Division of Medical Services.

The committee wishes to note with regret the death of Arthur Cooperman, Chairman of Workers' Compensation Board, on Thursday June 18th; while being a controversial figure in medical circles, the committee recognizes that he did establish many rules and regulations that were favorable for physicians and in all other respects he was always willing to listen and discuss our mutual problems.

The Chairman of the committee expresses his appreciation to the members of the committee for the time and effort they have devoted to the problems dealt with. He also wishes to thank Robert J. O'Connor, M.D., Director of the Division of Medical Services, Mr. William D. Brainin, Associate Director, and Mrs. Jeanette Palucci, Secretary, for their conscientious efforts and diligence.

Respectfully submitted,

John H. Morton, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

The annual report of the Committee on Workers' Compensation and Occupational Health was reviewed. Your reference committee notes that the Council at its meeting on June 18, 1981, reaffirmed the following substitute resolution for Resolution 80-19 and Resolution 80-45, adopted by the 1980 House of Delegates.

> "**Resolved,** That the Medical Society of the State of New York disapprove fixed fee schedules and seek the adoption of payments based on usual, customary, and prevailing fees in all negotiations relating to fees where such negotiations are mandated by governmental agencies."

This effectively terminates any participation by the Medical Society of the State of New York in Relative Value Scale revisions.

⇒ Your reference committee recommends that the report of the Committee on Workers' Compensation and Occupational Health be filed for information.

⇒ . . . *The report of the Committee on Workers' Compensation and Occupational Health was* **FILED FOR INFORMATION** . . .

Resolution 81-46, Regionalization of Workers' Compensation Fees

Introduced by Medical Society of the County of Monroe, Inc.

Whereas, The Workers' Compensation Board has promulgated regionalization of fees in New York State; and

Whereas, The regional fee is composed of a statewide professional fee plus a regional and, therefore, variable cost of practicing fee; and

Whereas, The use of zip codes to define regions has produced gross inequities; therefore be it

Resolved, That the Medical Society of the State of New York advocate the concept of equal pay for equal service, or urge the abolishment of the zip code area designation and the utilization of the Standard Metropolitan Statistical Area base.

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⇒ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

The committee amended Resolution 81-46 to read as follows:

Resolved, That the Medical Society of the State of New York advocate the concept of usual, customary, and prevailing fees, and urge the abolishment of the zip code area designation.

⇒ . . . *Your reference committee recommends that Resolution 81-46 be adopted as amended* . . .

⇒ . . . *The House voted to* **ADOPT** *Resolution 81-46 as* **AMENDED** . . .

Resolution 81-34, Medicaid Reimbursement

Introduced by Medical Society of the County of Westchester, Inc.

Whereas, Many physicians who have attempted to render medical service under the Title XIX program in good faith, have been forced to withdraw because remuneration received has not kept pace with economic conditions; and

Whereas, This loss of physicians' participation has resulted in Title XIX recipients receiving treatment in Emergency Rooms and Outpatient Clinics of hospitals that cost 5 to 6 times what the care would cost in a private physician's office; and

Whereas, Treatment under these circumstances destroys the personal relationship which exists between a private physician and his patient; and

Whereas, Proposed increases are but token and grossly inadequate and in fact increase the discrepancy in reimbursement between physician and hospital; therefore be it

Resolved, That discussions relative to increased Medicaid reimbursement continue at an accelerated pace between the Government of the State of New York and the Medical Society of the State of New York; and be it further

Resolved, That proposed increases more closely reflect usual and customary fees; and be it further

Resolved, That if the discussions are not productive in a reasonable time period, that MSSNY inform the membership in a clear and forthright manner.

PAST HOUSE ACTION: Resolutions 80-10, 80-26, 79-42, and Substitute Resolution 76-31

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⇒ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⇒ Your reference committee recommends that Resolution 81-34 be adopted.

⇒ . . . *The House voted to* **ADOPT** *Resolution 81-34* . . .

Resolution 81-53, Payment for Specialized Services Under Medicaid

Introduced by Medical Society of the County of Oneida

Whereas, Section 505.2(f)(ii) of the Social Services regulations provides that only Board-certified physicians qualify for payment for specialty services rendered to Medicaid patients; and

Whereas, Such regulation does not conform to the practical realities extant in many parts of the state wherein Board-certified specialists are often not available to provide such services; and

Whereas, Section 405.1023 of the Commissioner of Health's regulations (10 NYCRR 405.1023) provides standards pertaining to a hospital's medical staff and specifically states that "(t)he Governing body has the legal right to appoint the medical staff and the moral obligation to appoint only those physicians who are judged by their fellows to be of good character, and qualified, and competent in their respective fields"; and

Whereas, This section further provides that "under no circumstances is the accordance of staff membership or professional privileges in the hospital dependent solely upon certification, fellowship, or membership in a specialty body or society"; and

Whereas, Section 405.1031(b)(2)(iv) provides that "(t)he hospital staff designates those persons qualified to administer anesthetics and delineates what the person is qualified to do"; and

Whereas, Each of these sections is identical to the Federal Conditions of Participation required under Titles XVIII and XIX of the Social Security Act as noted in Section 405.1; therefore be it

Resolved, That the Medical Society of the State of New York seek the rescission of Section 505.2(f)(ii) of the Regulations of the Department of Social Services; and be it further

Resolved, That all services which are provided by physicians who have been authorized by their hospital to render such services qualify for reimbursement under Title XIX.

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⇒ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⇒ Your reference committee recommends that Resolution 81-53 be adopted.

⇒ . . . *The House voted to* **ADOPT** *Resolution 81-53* . . .

Resolution 81-36, Home Health Care Aides and Reimbursement for Same

Introduced by Broome County Medical Society, Inc.

Whereas, The care of the growing geriatric population is of increasing concern to physicians and the medical community at large; and

Whereas, Acute care beds throughout the State are being filled by patients needing long-term care but are denied a long-term care facility bed because of lack of space; and

Whereas, A portion of those patients currently residing in long-term care facilities could function effectively in their own homes with the assistance of a home health and/or personal care aides; and

Whereas, Financial barriers oftentimes prevent the utilization of existing home health care services; therefore be it

Resolved, That the Medical Society of the State of New York thoroughly investigate the potential of the home health care aide as a positive factor for mitigating the cost crisis, and the acute care beds problem; and be it further

Resolved, That the MSSNY as a part of the aforementioned study also examine the reimbursement mechanisms by which our elderly currently have access to home health care and home health care aides; and be it further

Resolved, That MSSNY, contingent upon the outcome of their study, vigorously advocate those components of the study which show indications cost effectiveness, show potential for lessening the pressure on acute care beds, and create reasonable reimbursement mechanisms for home health care aides and agencies.

PAST HOUSE ACTION: Resolutions 80-37 and 73-18

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-36 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-36 . . .*

Resolution 81-30, Medicaid Audits of Physician Billing Procedures

Introduced by Broome County Medical Society, Inc.

Whereas, The New York State Department of Social Services maintains an Office of Audit and Quality Control whose responsibility it is to review physician records with regard to billing of services for Medicaid patients; and

Whereas, Such reviews have taken place in physician offices throughout New York State and requests for refunds have been made from some individuals in excess of $100,000; and

Whereas, The review of records takes into consideration departmental regulations of which the physician could not have reasonably expected to have knowledge and that the review of records can take into consideration dates of service six years previous to the date of the review; and

Whereas, A statistical technique of untried legality and dubious integrity is used by the Department of Social Services in their calculation of overpayments; and

Whereas, The provision of health care to the indigent population is disrupted by the audit procedure which tends to discourage other providers from becoming involved with Medicaid patients, often forcing the patient to use the more costly service provided by an emergency room; and

Whereas, This system tends to hasten a two-class system of medical care; and

Whereas, Physicians generally are willing and able to comply with departmental regulations as long as they are informed adequately and are in fact contacted within a reasonable amount of time if they are not in compliance with the regulations; therefore be it

Resolved, That the Medical Society of the State of New York make known to the New York State Department of Social Services its extreme dissatisfaction with the present system of audit and that it apply the technical, legal, and manpower resources necessary to seek relief from the practices currently employed in the audit procedure; and be it further

Resolved, That the MSSNY actively consider and retain as a viable option a legal challenge to the current audit procedures.

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

Your reference committee took note of the efforts of the Committee on Medicaid to determine the validity of the statistical methodology being employed by the Bureau of Medicaid Fraud and Abuse.

Your reference committee feels that this resolution requires further study by the Council to determine whether the option of legal challenge should be pursued and recommends that this resolution be referred to the Council for referral to the proper committee.

⟹ Your reference committee recommends that Resolution 81-30 be referred to the Council.

⟹ . . . *The House voted to* **REFER** Resolution 81-30 to the Council . . .

Resolution 81-33, Prescriptions for Medicaid Patients

Introduced by Medical Society of the County of Westchester, Inc.

Whereas, New York State is the only State that does not recognize Federal Guidelines that permit a physician to order specific drugs for his or her patient; and

Whereas, New York State will not give approval for distribution of many commonly used drugs to Medicaid patients; and

Whereas, New York State mandates that prior approval be obtained for all of the higher-cost medications which almost always results in great delay and inconvenience to the patient and the pharmacist; and

Whereas, New York State is directly interfering with the practices of medicine by withholding medications for treatment of various illnesses; and

Whereas, New York State by their cumbersome regulations has been the direct cause of many pharmacists not accepting Medicaid prescriptions resulting in great hardships for the patient; therefore be it

Resolved, That the Medical Society of the State of New York urge the State of New York to recognize Federal Guidelines for prescribing medications by the physicians for Medicaid patients; and be it further

Resolved, That MSSNY urge New York State to discontinue regulations requiring prior New York State approval before dispensing high-cost drugs prescribed by physicians for Medicaid patients; and be it further

Resolved, That MSSNY encourage New York State to work more closely and in harmony with the Pharmacists of the State of New York for the ultimate benefit of the patient.

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

Your reference committee has considered Resolution 81-33 and wishes to present the following substitute resolution:

Resolved, That the Medical Society of the State of New York enter into discussions with the appropriate New York State officials, and the appropriate State Pharmaceutical Association officials, to simplify the regulations for prescribing medication for Medicaid patients.

⟹ Your reference committee recommends adoption of the substitute resolution for Resolution 81-33.

⟹ . . . *The House voted to* **ADOPT** *the substitute resolution for Resolution 81-33 . . .*

Resolution 81-44, An Investigation of the Medicaid Management Information System

Introduced by Medical Society of the County of Monroe, Inc.

Whereas, There continue to be major problems related to providing care to Medicaid patients; and

Whereas, The Medicaid Management Information System was a contractual agreement entered into to resolve these problems; and

Whereas, The situation in many parts of the State of New York has deteriorated, rather than improved; therefore be it

Resolved, That the Medical Society of the State of New York make every effort to have the Medicaid Management Information System contract re-evaluated to determine its effectiveness.

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

Your reference committee takes note that this matter is actively being discussed by the Medicaid Committee, MSSNY staff, and the staff of Bradford Administrative Services, and any specific action at this time might be counterproductive; therefore, your reference committee recommends that Resolution 81-44 be referred to the Council for referral to the proper committee.

⟹ Your reference committee recommends that Resolution 81-44 be referred to the Council.

⟹ . . . *The House, after discussion, voted to* **REFER** *Resolution 81-44 to the Council . . .*

Resolution 81-10, Physician Peer Review Committee

Introduced by Ralph M. Schwartz, M.D., as an Individual

Whereas, The American Medical Association endorses peer review that is physician controlled and applied to all patients; and

Whereas, The development and promotion of effective means of physician assessment of the quality and efficiency of medical care should be continued; and

Whereas, Experience has demonstrated that effective peer review is best accomplished at the local level by organized physician groups regardless of the funding source; and

Whereas, Individual local physician sponsored organizations, such as PSRO, should maintain their independence in activities relative to their areas; and

Whereas, A coordinated approach among such local physician-sponsored organizations will promote the efficiency and effectiveness which are prerequisites of peer review on a statewide basis; and

Whereas, The Medical Society of the State of New York endorses the concept of physician controlled peer review through locally sponsored physician organizations; therefore be it

Resolved, That the Medical Society of the State of New York establish a new committee of the Council to devise and recommend for implementation the mechanisms necessary to coordinate and assure physician-controlled peer review for all patients in the State of New York.

and

Resolution 81-26, Physician Peer Review Committees

Introduced by Medical Society of the County of Queens, Inc.

Whereas, The American Medical Association endorses peer review that is physician-controlled and applied to all patients; and

Whereas, The development and promotion of effective means of physician assessment of the quality and efficiency of medical care should be continued; and

Whereas, Experience has demonstrated that effective peer review is best accomplished at the local level by organized physician groups regardless of the funding source; and

Whereas, Individual local physician sponsored organizations, such as PSRO, should maintain their independence in activities relative to their areas; and

Whereas, A coordinated approach among such local physician-sponsored organizations will promote the efficiency and effectiveness which are prerequisites of peer review on a statewide basis; and

Whereas, The Medical Society of the State of New York endorses the concept of physician-controlled peer review through locally sponsored physician organizations; therefore be it

Resolved, That the Medical Society of the State of New York establish a new committee of the Council to devise and recommend for implementation the mechanisms necessary to coordinate and assure physician-controlled peer review for all patients in the State of New York.

FISCAL NOTE — None

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

Inasmuch as these two resolutions are identical and Resolution 81-26, submitted by the Medical Society of the County of Queens, Inc., is in support of Resolution 81-10, your reference committee recommends that Resolution 81-10 be adopted in lieu of Resolution 81-26.

After discussion, the House amended Resolution 81-10 by the deletion of the words "physician controlled" after the word "assure" and the addition of the phrase "be done by physicians only at the local level" after the words "New York." The resolved portion of Resolution 81-10 would then read as follows:

Resolved, That the Medical Society of the State of New York establish a new committee of the Council to devise and recommend for implementation the mechanisms necessary to coordinate and assure that peer review for all patients in the State of New York be done by physicians only at the local level.

⟹ . . . *The House, after considerable discussion, voted to* **ADOPT** *Resolution 81-10 as* **AMENDED** *in lieu of Resolution 81-26 . . .*

Resolution 81-28, Peer Review for Medicaid Patients

Introduced by New York County Medical Society, Inc.

Whereas, Physician peer review is one of the most effective ways of monitoring the appropriateness and quality of health care; and

Whereas, In New York physician-run professional standards review organizations (PSROs) have been performing peer review to assure appropriate utilization for Medicaid patients; and

Whereas, Recent federal legislation provides states with the option of contracting with PSROs for continued review of Medicaid utilization; therefore be it

Resolved, That the Medical Society of the State of New York urge New York State to contract Medicaid review to local PSROs that are operational.

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⟹ *Report of the Reference Committee on Medical Services:* The following report was presented by Duane M. Cady, M.D., *Chairman.*

At the reference committee hearing the introducer of Resolution 81-28, the New York County Medical Society, Inc., requested that an additional resolved portion be added to the resolution, thereby amending Resolution 81-28.

The additional resolved portion reads as follows:

Resolved, That in those areas where PSROs are not operative, the Medical Society of the State of New York urge the State of New York to contract Medicaid review with peer review groups organized by local County Medical Societies or District Branches.

⟹ Your reference committee recommends that Resolution 81-28 be adopted as amended by the addition of the above second Resolved.

A further amendment was proposed which would change the resolution to read as follows:

Resolved, That the Medical Society of the State of New York urge New York State to contract Medicaid review to local PSROs that are operational and whose Board of Directors is made up of only MDs and DOs; and be it further

Resolved, That in those areas where PSROs are not operative, the Medical Society of the State of New York urge the State of New York to contract Medicaid review with peer review groups organized by local County Medical Societies or District Branches.

⟹ . . . *The House, after considerable discussion, voted to* **REFER** *the original resolution and the proposed amended resolution to the Council . . .*

⟹ . . . *The House voted to* **ACCEPT** *the report of the reference committee as acted upon by the House . . .*

SCIENTIFIC ACTIVITIES, PUBLICATIONS, AND MISCELLANEOUS

ADMINISTRATIVE COMMITTEE FOR THE MSSNY PENSION PROGRAM

To the House of Delegates, Ladies and Gentlemen:

The members of the Administrative Committee for the MSSNY Pension Program are:

Milton Rosenberg, M.D., *Chairman*	Suffolk
G. Rehmi Denton, M.D.	Albany
Henry I. Fineberg, M.D.	Suffolk
Robert M. George, M.D.	Oneida
Edward Siegel, M.D.	Clinton

Our pension coordinator has advised us that approximately $1,613,782.00 has been invested thus far in our Medical Society of the State of New York Pension Program. The Medical Society of the State of New York Pension Plan Investment Fund has out-performed the Dow by 78% for the last nine months.

Your chairman would like to thank the members of the Committee for the time and energy they devoted to committee activities.

Respectfully submitted,

Milton Rosenberg, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*
⟹ Your reference committee recommends that the report of the Administrative Committee for the MSSNY Pension Program be filed for information.
⟹ . . . *The report of the Administrative Committee for the MSSNY Pension Program was* **FILED FOR INFORMATION** . . .

ADVISORY COMMITTEE TO THE AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, NEW YORK STATE SOCIETY, INC.

To the House of Delegates, Ladies and Gentlemen:

The members of the Advisory Committee to the American Association of Medical Assistants, New York State Society, Inc., are as follows:

Anthony F. Fragola, M.D., *Chairman*	Suffolk
Charles Poskanzer, M.D.	Albany
Carl C. Sansocie, M.D.	Monroe

Carl C. Sansocie, M.D., of Monroe, having served as a member of the Committee for the past several years, has resigned. The incoming President of the Medical Society of the State of New York will be appointing Sheppard Arluck, M.D., presently President of the Seventh District Branch of MSSNY.

The twenty-second annual meeting of the Society was held April 9–12, 1981, at the Rye Town Hilton, Port Chester, New York. Drs. Fragola and Poskanzer attended the meeting, and both were active participants in the educational programs, and in the Society's House of Delegates.

"The Medical Assistant as a Professional" was presented by Dr. Fragola.

Donald Fager, Esq., dealt with legal entanglements during the "Humanistic Medical Assistant" session.

Paul J. Rosch, M.D., F.A.C.P., President of the American Institute of Stress, Professor Hayward S. Gill, R.N., A.A.S., and John W. Angers, M.D., of New York, conducted a clinical workshop on "Nutrition — the Examination of Stress and the Immune System."

All educational sessions awarded participants continuing education unit credits.

As continuing education is the prime objective of the Association, most local chapters throughout the State sponsor educational seminars awarding the participants CEU credits. These seminars are offered in addition to the presentations of speakers who appear at the regular monthly meetings of the local chapters.

At the annual meeting in Port Chester, the MSSNY was represented by Pam Maichin, Manager, Department of Information. A Certificate of Appreciation was presented to Eunice Skelly, MSSNY, formerly of that Department.

A legislative resolution of commendation was passed in the State Senate and in the Assembly and presented to Margaret Retoske, CMA-AC President 1981–1982.

Harold L. Hirsch, M.D., J.D., of Washington, D.C., conducted a Medico-Legal Seminar in Syracuse on June 7, 1981. Because of the timely importance of the subject matter, the AAMA, New York State Society, Inc., has scheduled this program for presentation in Albany and in the downstate area this fall.

The AAMA celebrated its 25th anniversary in Milwaukee, Wisconsin on September 21–25, 1981; a quarter century of education and service by some 15,000 medical assistants. It is the goal of the AAMA to have 25,000 members for their 25th year. Therefore, the advisors strongly recommend that physicians not only urge their medical assistants to become members of their professional organization, but also encourage and assist them to become a CMA (Certified Medical Assistant). The members of the Medical Society of the State of New York are urged to pay all or part of the Medical Assistant's professional organization dues, and advise their assistants to attend the meetings, become involved, and participate in the educational seminars and workshops throughout the State.

Of interest is the fact that in 1983 the AAMA National Convention will be held at the Sheraton Centre in New York City, with the AAMA, New York State Society, Inc., acting as the host.

The question of the level of responsibility for medical assistants has been under examination for several months. My experience with the AAMA on the county and state level convinces me that this is a group of dedicated, loyal, exceptionally well trained people, deserving of any support MSSNY can offer.

Respectfully submitted,

Anthony F. Fragola, M.D., *Chairman*

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⇒ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*
⇒ Your reference committee recommends that the report of the Advisory Committee to the American Association of Medical Assistants, New York State Society, Inc., be filed for information.
⇒ . . . *The report of the Advisory Committee to the American Association of Medical Assistants, New York State Society, Inc., was* **FILED FOR INFORMATION** . . .

AWARDS AND PRIZE ESSAYS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Awards and Prize Essays are as follows:

Alfred A. Angrist, M.D., *Chairman*	Queens
John T. Ellis, M.D.	New York
Aaron Feder, M.D.	Queens
Milton Gordon, M.D.	Suffolk

The committee met on April 9, 1981, at Society headquarters. It had been requested by the Journal Division to make a recommendation concerning the advisability of purchasing a supply of medals for future Laurence D. Redway Awards.

The cost of these medals has increased tremendously over the past several years, and there is a general feeling that an award recipient has little occasion to display a medal other than on the day it is presented.

It was therefore the recommendation of the Committee on Awards and Prize Essays that the presentation of a medal with the Redway Award be discontinued after this year, and that a framed scroll be presented instead (with the cash award of $500).

The committee also discussed guidelines for selecting future recipients of the Albert H. Douglas, M.D., Memorial Teaching Award, but was unable to reach agreement on the appropriateness of the Douglas family's stipulations that the teacher be under 45 years of age and that the recipient be selected by the student body at each medical school.

It was decided, with the approval of the Douglas family, to waive presentation of the award until all parties can agree on which qualities of Albert Douglas the award seeks to recognize and perpetuate, and whether or not these qualities can exist in a teacher without Dr. Douglas's many years of experience. It must also be decided whether the selection process should be left up to the students alone or should include input from faculty and deans.

Finally, a recommendation was approved that the membership of the Committee on Awards and Prize Essays be increased next year.

Respectfully submitted,

Alfred A. Angrist, M.D., *Chairman*

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⇒ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*
⇒ Your reference committee recommends that the report of the Committee on Awards and Prize Essays be filed for information.
⇒ . . . *The report of the Committee on Awards and Prize Essays was* **FILED FOR INFORMATION** . . .

GENERAL INSURANCE

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on General Insurance are as follows:

Robert M. George, M.D., *Chairman*	Oneida
Renzo Basili, M.D.	Kings
Maurice J. Elder, M.D.	St. Lawrence
John Alan Ramsdell, M.D.	Westchester
Charles E. Rogers, M.D.	Nassau
Irwin J. Rosenberg, M.D.	Broome
William C. Stein, M.D.	Niagara
Kenneth W. Woodward, M.D.	Monroe

The Committee on General Insurance is pleased to announce that there are approximately 8,798 participants in the Medical Society of the State of New York Supplemental Insurance Programs. Group Life, Disability Income, Professional Overhead Expense, In-Hospital Indemnity, and Accidental Death and Dismemberment Insurance programs are available for our physician members. Participation increased in all plans this past year. All of our group insurance programs feature a special renewal guarantee.

Since the inception of our Group Life Insurance Program, the Bankers Life of Des Moines, Iowa, the underwriting company, has paid over $500,000.00 in dividends to our physician members insured under the plan. The balance of our insurance programs, underwritten by the Continental Insurance Companies have paid over $7,500,000.00 in benefits to our physicians since the programs were implemented. Hundreds of insured physicians have written letters to the Medical Society of the State of New York which are highly laudatory of the prompt claims payment service.

We have been informed by our endorsed administrator that a dividend of approximately 52.93% for a total of $212,195.00 will be distributed in the form of dividends this year to the participating members in our Group Life Insurance Program.

The maximum under our Group Life Insurance Program was increased to $250,000.00. In addition, a student member disability income protection plan, and an optional increased benefit in the supplemental Disability Income Program providing for additional lump sum payments following disability, were approved and implemented.

In January, 1981, the Society's sponsored Group Disability Overhead Expense Program was substantially improved. The maximum protection available was increased from $1,500 per month to $2,000 per month. The maximum payment period was extended from 15 months to 24 months. Premiums were reduced for all members under age 60.

A comprehensive multi-peril office package was specially designed by the General Insurance Committee and staff in conjunction with the Whiting National Insurance Company, the underwriting carrier for our physician members. It is expected that this program will be marketed this Fall.

A sophisticated financial analysis program was approved and implemented for our membership. This program, administered by Shearson Loeb Rhoades Inc., offers our physican members an indepth comprehensive analysis of their overall financial goals, at fees not available to the general public.

A special "free insurance," i.e., a limited amount of Group Life Insurance to be offered to new members under 35, for a six month period, without charge, is being explored.

The General Insurance Committee and staff continue to explore and review other forms of insurance for the personal and professional needs of our physician members. These include a Disability Benefits Law Insurance Program, a comprehensive Major Medical Plan, a Medicare Supplement, and Group Auto and Homeowners Insurance. It should be noted that the underwriting market for some of these proposed programs is limited, due to the adverse experience of the underwriting companies.

The General Insurance Committee and staff are studying the feasibility of administering some aspects of the General Insurance Program.

Your chairman would like to thank the members of the committee who have contributed a considerable amount of their time and energy to the work of this committee.

Also, I would like to take this opportunity to thank Bernard M. Jackson, CLU, and his secretary, Mrs. Sylvia Frank, for their able staff assistance.

Respectfully submitted,
Robert M. George, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

⟹ Your reference committee recommends that the report of the Committee on General Insurance be filed for information.

⟹ . . . *The report of the Committee on General Insurance was* **FILED FOR INFORMATION** . . .

MEDICAL SCHOOL RELATIONSHIPS

The members of the Committee on Medical School Relationships are as follows:

Richard N. Pierson, Jr., M.D., *Chairman*	New York
Hugh R. Barber, M.D.	New York
Robert S. Bourke, M.D.	Albany
R. Gordon Douglas, Jr., M.D.	Monroe
Patricia Kelly McCarthy, M.D.	Suffolk
Leonard Meiselas, M.D.	New York
John Naughton, M.D.	Erie
Lawrence Scherr, M.D.	Nassau
Julius E. Stolfi, M.D.	Kings
Tamarath K. Yolles, M.D.	Suffolk
Stanford Wessler, M.D.	New York
William J. Williams, M.D.	Onondaga
* Justin O. Schechter	Nassau
Frank Jones, *Advisor*	New York

The Committee on Medical School Relationships of the Medical Society of the State of New York grew suddenly in members and in the number of medical schools represented when faced with the challenge to the status quo of medical education in the State which was posed when the Regents first proposed, and then enacted, regulations directed at the two years of in-state clinical education of offshore medical students. This radical innovation in American medical education was passed over the objections of the Medical Society of the State of New York, presented by President Ralph M. Schwartz, M.D., in testimony to the Regents.

The effect of the Regents' action will be: to evaluate by site visit those schools which apply; to evaluate through the Medical Science Knowledge Profile (MSKP) the proficiency of offshore students applying for clerkships in New York State after two basic-science years; and to allow hospitals in the State with residency programs to undertake the third and fourth year "clinical training" of these students. Pressure from very large numbers of American students studying abroad (estimated at over 10,000 and many of them from New York State) and pressure from public officials concerned with the shortage of housestaff physicians in city hospitals and of practitioners in rural areas, have combined to support this extraordinary experiment in undergraduate education on a mass level in the more peripheral teaching hospitals of the State.

The committee considered the issues, and developed a response which integrated the viewpoints of member medical schools. After the Regents' passage of the new regulations, the committee developed advisories for its members working in those hospitals which might apply to train such students, and also proposed to monitor the impact of the program on hospitals, patient care, member physicians, existing medical schools and programs, and importantly, the reception and the education of the participating students in the mainstream of medicine in New York State.

Faced with this major issue, the committee postponed such other agenda items as developing a resident section or association, the recruitment of residents and students as

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* Medical Student

MSSNY members, and the development of programs linking medical school faculties and students with valid community service programs.

During this year an effective liaison was established with Frank Jones, Executive Director of the Associated Medical Schools of New York. Thanks are due to committee members, many of whom traveled long distances to attend meetings, and to Guy D. Beaumont and his staff, who effectively served the committee during the past year.

Respectfully submitted,

Richard N. Pierson, Jr., M.D., *Chairman*

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

The annual report of the Committee on Medical School Relationships was reviewed. The major activity of this committee was directed to regulations enacted by the Board of Regents concerning the two years of in-state clinical education of offshore medical students passed over the objections of the MSSNY. The committee plans to monitor the impact of this program on hospitals, patient care, member physicians, existing medical schools and the reception and education of the participating students in the mainstream of medicine in New York State.

⟹ Your reference committee recommends that the report of the Committee on Medical School Relationships be filed for information.

⟹ . . . *The House, after considerable discussion, voted to* **ADOPT** *the report of the Committee on Medical School Relationships in lieu of Resolution 81-29, Entrance of Foreign Medical School Trainees to Clinical Clerkships in the Hospitals of New York State . . .*

MEMBERSHIP BENEFITS

To the House of Delegates, Ladies and Gentlemen:

The members of the Committee on Membership Benefits are as follows:

John G. Hamilton, M.D., *Chairman*	Monroe
Kenneth Ho, M.D.	Onondaga
Karl Neumann, M.D.	Queens
Richard Petrillo, M.D.	Westchester
Perry Robins, M.D.	New York
Thomas J. Sheehy, Jr., M.D.	Nassau

The theme "Membership Pays, It Does Not Cost" continued to be developed and expanded by the Division of Insurance and Membership Benefits.

New benefit programs, including auto rentals, microfilming, office and home security protection, certified diamonds at wholesale prices were reviewed by staff and the Membership Benefits Committee and referred to the Council for approval. Also, medical equipment leasing and quality furniture for home and office at wholesale prices were reviewed by the Membership Benefits Committee and are pending Council approval. All these programs feature special discounts and service for our physician members and their families.

The Membership Benefits Committee and staff have studied and recommended to the Committee on Research and Development that a study be made on the feasibility of forming a "for profit corporation" within the framework of the Medical Society of the State of New York. The purpose of a "for profit corporation" would be to bring many thousands of dollars to the Medical Society of the State of New York in the form of dividends from the "for profit corporation" which would be considered related income and not taxable. This additional income could have the effect of stabilizing dues and expanding services for our physician members. Initial studies indicate that there is a trend among 501(C)6 associations to form "for profit corporations."

Periodic seminars are being held for the benefit of our physician members on subjects ranging from pension programing and financial analysis to the use of computers in medical practice.

Thousands of requests from our physician members, both written and telephoned, are serviced annually in a highly professional manner. An analysis of these requests show the most popular programs to be purchasing and leasing cars at group discounts, major appliances at wholesale prices, and our Group Insurance Programs.

Your chairman would like to thank the members of the Committee for the time and energy they devoted to committee activities.

In addition, I would like to thank Bernard M. Jackson, CLU, Director of the Division of Insurance and Membership Benefits, and his secretary, Mrs. Sylvia Frank, for their able staff assistance.

Respectfully submitted,

John G. Hamilton, M.D., *Chairman*

◆

⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

The annual report of the Committee on Membership Benefits was reviewed. Your committee felt that the House of Delegates should take note of an exciting possibility mentioned in the report, concerning a study of forming a "for profit corporation" within the framework of the Medical Society of the State of New York. The additional income thus derived could have the effect of stabilizing dues and expanding services for our physician members.

Testimony was heard before the reference committee that in no way would such a "for profit corporation" be permitted to jeopardize existing membership benefits.

⟹ Your reference committee recommends that the report of the Committee on Membership Benefits be filed for information.

⟹ . . . *The report of the Committee on Membership Benefits was* **FILED FOR INFORMATION** . . .

Your reference committee also felt that county medical societies should be kept informed of the activities of the Committee on Membership Benefits via their membership committees.

⟹ . . . *The House voted to* **ADOPT** *the recommendation of the reference committee . . .*

PUBLICATIONS

To the House of Delegates, Ladies and Gentlemen:

The Members of the Publications Committee are as follows:

Milton Gordon, M.D., *Chairman*	Suffolk
Arthur H. Diedrick, M.D.	Westchester
Alfred A. Angrist, M.D., *ex officio*	Queens
Julius E. Stolfi, M.D., *ex officio*	Kings
* Dan Dourtade	Monroe

This report covers the period of October, 1980 to June, 1981 and has been approved by the Publications Committee.

The recipients of the *Redway Award and Medal* and the *William Hammond Award for Distinguished Service* are in the process of being approved by a selected committee.

The *New York State Journal of Medicine* continues to be published on a monthly basis. The current policy of the *Journal* is to keep physicians abreast with the changes and advances in medicine, particularly in respect to disease mechanisms; and therapeutic approaches to treatment and diagnosis.

Articles are obtained through critical selection from those submitted voluntarily and through solicitation. Preference for publication is based on subject material and style.

In their report to the Publications Committee, the *Journal* editors and the Publication Committee agreed on further review and discussion in regard to the following issues and suggestions:

(1) It was suggested that an honorarium be given to Research Fellow(s) in return for particularly good and well-researched review papers and articles. (This was not approved by the Council.)

(2) Administration suggested that someone, impartial and not attached to the *Journal* review it to help determine its future policy or policies.

(3) Dr. M. Gordon, Chairman, Publications Committee, suggested that we look into having an ongoing Policy Board, in addition to the current policy change(s).

(4) It was agreed that other considerations should include the following:

a. Taking a financial look at the *Journal.*

b. Determination of whether or not the Society should take a financial, calculated risk to achieve a greater response to the *Journal.*

c. Utilization of the *Journal* as a research tool — for a sample survey to determine future policy change(s) in regard to articles and areas of readership interest.

(5) It was recommended and agreed upon by the Publications Committee to remove two members of the Associate Editorial Board and replace them with two new members. (The Council approved this at its June 18 meeting.)

The retirement of Miss Elizabeth Smith as managing editor of the *Journal* was formally announced and her successor introduced to the Publications Committee.

There is much significant interest in the current *Journal.* The number of manuscripts continue to increase, with articles coming from all over the United States. A western state study showed that the *Journal* is the state journal most favored as a reference. Requests for abstracts come from foreign countries, as well as within the U.S., including Russia. Reprint requests to authors are very high.

The *Journal* articles continue to be clinical, experimental, and scientific. The special articles are coming towards the medical-legal, psychiatric, and socioeconomic issues.

It was agreed that a new series on nutrition be published with a Subeditor; someone who is outstanding and prominent in that field. The new series will deal with infant, child, adolescent, and adult nutrition. It was also recommended that new material appear on sports nutrition to accompany the prospective sports medicine series.

During the 1980 year the total number of pages published, including covers, was 2,080. Editorial pages included the Minutes of the House of Delegates, Reports, Convention Programs, Continuing Medical Education Workshops (articles abstracted from papers given), and the What Goes On section. A total of 337 pages were devoted to advertising. The ratio of advertising/editorial pages (expressed in percentages) was 15% advertising and 85% editorial. These figures are based on yearly totals, which make them more accurate than monthly rates.

The *Journal* continues to attract high caliber manuscripts. In 1980 it received 460 manuscripts; 286 were accepted; 323 were sent to consultants for peer review. Of the 460 articles received, it published 316.

The Publications Committee, under Milton Gordon, M.D., Chairman is responsible for reviewing matters of policy, particularly in reference to new members of the Associated Editorial Board. The *Journal* continues to maintain its preeminent position because of the painstaking, conscientious, and capable service rendered over these many years by the editorial staff: Alfred A. Angrist, M.D., editor; Julius E. Stolfi, M.D., associate editor; Adele Spiegler, managing editor; Frances E. Casey, editorial production; Vicki Nott, manuscript editor, index, and copy; Audrey Hudson, copy editor; Adela Berkwits, secretary and copy editor; Eleanor Burns, reprints and clerk-typist.

It seems appropriate for all of the assistance that our Associate Editorial Board has rendered over the past years, that we list their names:

Anthony A. Albanese, Ph.D.
Lloyd T. Barnes, M.D.
Jeremiah A. Barondess, M.D.
Joshua A. Becker, M.D.
Stuart Bondurant, M.D.
Albert Cook, M.D.
Seymour Cutler, M.D.
William Dock, M.D.
Vincent P. Dole, M.D.
Steven D. Douglas, M.D.
Aaron Feder, M.D.
Vincent J. Fontana, M.D.
Lytt I. Gardner, M.D.
Carl Gemzell, M.D.
Carl M. Harris, M.D.
Alfred P. Ingegno, M.D.
Ralph F. Jacox, M.D.

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* Medical Student

Leslie A. Kuhn, M.D.
George J. Lawrence, Jr., M.D.
Harry M. LeVeen, M.D.
Gerald P. Murphy, M.D.
Stephen Nordlicht, M.D.
Richard H. Orr, M.D.
Edmund D. Pellegrino, M.D.
Ira Polisar, M.D.
Paul Reznikoff, M.D.
Howard A. Rusk, M.D.
Henry Schutta, M.D.
Joseph E. Snyder, M.D.
Bjorn Thorbjarnarson, M.D.
Vincent Tricomi, M.D.
Robert Turell, M.D.
James H. Wall, M.D.
Robert P. Whalen, M.D.
Frank M. Woolsey, Jr., M.D.
Alex W. Young, Jr., M.D.

Respectfully submitted,

Milton Gordon, M.D., *Chairman*

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

The annual report of the Publications Committee was reviewed.

⟹ Your reference committee recommends that the report of the Publications Committee be filed for information.

⟹ . . . *The report of the Publications Committee was* **FILED FOR INFORMATION** . . .

Your reference committee noted that featured in the Publications Committee report were tentative proposals of that committee to arrange for an impartial review of the *New York State Journal of Medicine* to help determine its future policy and to create a Policy Board to implement recommendations.

In addition, a review of the financial status of the *Journal* was suggested in that report. Many inquiries at the reference committee were directed toward the costs to the Society of the publication and distribution of the *Journal.* Many speakers felt that although the report of the Publications Committee was concerned with all aspects of the *Journal* other than financial considerations, it was difficult to separate these in reality. The success of the publication cannot be evaluated apart from its cost to the Society.

We feel these recommendations deserve urgent attention and should be the subject of a detailed report in the coming year. Your reference committee commends the Publications Committee for its dedicated service and scholarly achievements. In addition, it recommends that a fiscal note be appended by Administration to future annual reports of this Committee.

⟹ . . . *The House voted to* **ADOPT** *this portion of the reference committee report* . . .

Resolution 81-12, John T. Farrar, M.D., In Appreciation of Services as Past-Chairperson of the Medical Student Membership of the Medical Society of the State of New York

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, John T. Farrar, M.D., graduated with distinction May, 1981 from the University of Rochester School of Medicine; and

Whereas, For the past two and one-half years he has excelled in his service as Chairperson of the Medical Student Membership of the Medical Society of the State of New York and as its chief advocate at the state and national levels of organized medicine; and

Whereas, Under Dr. Farrar's leadership the Medical Student Membership of MSSNY, despite its short history of existence, has made considerable strides toward maturity of purpose and of organization; and

Whereas, Throughout his concurrently-held terms of office as Chairperson he exhibited outstanding judgement and uncompromising positions in the best interest of his fellow students of medicine and of osteopathy, often at personal sacrifice to himself and his family; therefore be it

Resolved, That the members of the Medical Student Membership of the Medical Society of the State of New York wish to express their deep appreciation to John T. Farrar, M.D., for his dedication and accomplishments; as Past-Chairperson of the Medical Student Membership; and be it further

Resolved, That the House of Delegates of the Medical Society of the State of New York adopt this resolution and direct it to become part of the permanent record of the Medical Society of the State of New York.

■

⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-12 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-12* . . .

Resolution 81-14, Mr. Guy D. Beaumont, In Appreciation of Services as Liaison to the Medical Student Membership of MSSNY

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, Mr. Guy D. Beaumont retired August 1st, 1981, as Director of the Division of Communications of the Medical Society of the State of New York after dedicating considerable years to serving the medical profession and the people of the State of New York at the state and national levels of organized medicine; and

Whereas, Mr. Beaumont has provided exemplary service and guidance as liaison to the members of the Medical Student Membership of the Medical Society of the State of New York; therefore be it

Resolved, That the members of the Medical Student Membership of the Medical Society of the State of New York wish to express their deep appreciation to Mr. Guy D. Beaumont for his dedication and accomplishments; and be it further

Resolved, That the House of Delegates of the Medical Society of the State of New York adopt this resolution and direct it to be a part of the permanent records of the Medical Society of the State of New York; and be it further

Resolved, That as testimony of its deep appreciation to Mr. Beaumont, the Medical Student Membership of MSSNY present to him a commemorative scroll and a copy of this resolution.

■

⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-14 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-14* . . .

Resolution 81-57, Commendation to the American Association of Medical Assistants

Introduced by Sheppard Arluck, M.D., as an Individual

Whereas, The American Association of Medical Assistants is not only an outstanding professional organization dedicated to the education and self-improvement of medical assistants, but is the one and only professional organization endorsed and continuously supported through liaison with organized medicine at all levels; and

Whereas, It is recognized that the loyalty and allegience and devotion of the members of this organization is to their doctors and their patients; and

Whereas, The American Association of Medical Assistants is one of the most constant, able, and devoted allies of the medical profession; and

Whereas, The American Association of Medical Assistants is a nonprofit organization, totally pledged against ever becoming a union or a collective bargaining agency; and

Whereas, The American Association of Medical Assistants is celebrating its silver jubilee — 25 years of professional growth, education, and service; therefore be it

Resolved, That the Medical Society of the State of New York hereby commend the American Association of Medical Assistants for their devotion and accomplishments in the field of medical assisting education, both locally and nationally; and be it further

Resolved, That the MSSNY request all of its county medical societies to continue active, formal support of this organization and further urge individual physicians to pay the dues of their medical assistants, so that membership in this most important and worthwhile organization will continue to grow.

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

⟹ Your reference committee recommends that Resolution 81-57 be adopted.

⟹ . . . *The House voted to* **ADOPT** *Resolution 81-57* . . .

Resolution 81-18, Opposition to Representation by the "Student Association of the State University" of Students Enrolled in Programs of Medicine of the State University of New York

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, The Student Association of the State University (SASU) purports to represent the interests of all students enrolled in diverse programs to study in the sixty-four colleges and universities of the State University of New York (SUNY); and

Whereas, SASU, to support this representative function, has proposed to levy a tithe against the Activities Fee paid by all SUNY students; and

Whereas, The projected SUNY enrollment estimates for 1984 are 163,900 for state-operated campuses and 123,000 for community colleges, compared to fewer than 2,500 students of medicine at SUNY units; and

Whereas, The SUNY schools of medicine are unique among all SUNY units in terms of student program and operations; and

Whereas, The Medical Student Membership of the Medical Society of the State of New York is better suited to represent the interests of SUNY enrolled medical students than is SASU; therefore be it

Resolved, That the Medical Society of the State of New York express opposition to the Board of Trustees of the State University of New York relative to the Student Association of the State University's assumed role as official representative of SUNY students enrolled in its programs of medicine, and to a mandatory SASU Activities Fee levied against SUNY enrolled medical students.

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

The committee amended Resolution 81-18 by the insertion of the phrase "on behalf of its Medical Student Membership" after the words "New York." The Resolved portion would then read as follows:

Resolved, That the Medical Society of the State of New York, on behalf of its Medical Student Membership, express opposition to the Board of Trustees of the State of New York relative to the Student Association of the State University's assumed role as official representatives of SUNY students enrolled in its programs of medicine, and to a mandatory SASU Activities Fee levied against SUNY enrolled medical students.

⟹ . . . *The House, after discussion, voted to* **ADOPT** *Resolution 81-18 as* **AMENDED** . . .

Resolution 81-42, Student Membership in County Medical Societies

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, It is to the advantage of the Medical Society of the State of New York to encourage early interest in the activities of organized medicine by students of medicine or of osteopathy enrolled in respective programs in New York State; and

Whereas, The county medical societies are in the best position to provide the forum for involvement by locally enrolled students of medicine or of osteopathy; and

Whereas, There is not currently a consistent policy among the sixty-one component county medical societies of the Medical Society of the State of New York relative to student membership and extent and avenues of involvement; therefore be it

Resolved, That the Medical Society of the State of New York encourage every component county medical society to provide for a student membership class. Membership in the student membership class should be extended to any student member of the Medical Society of the State of New York who is enrolled in a recognized school of medicine or of osteopathy in the county, or who maintains legal residence in the county; and be it further

Resolved, That the MSSNY encourage every component county medical society to exempt student members from the dues and assessments of the county medical society, and to accord student members with the rights and privileges including the right to attend membership meetings, to have voice and vote thereat, and to hold elective office.

PAST HOUSE ACTION: Resolution 73-58

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⟹ *Report of the Reference Committee on Scientific Activities, Publications, and Miscellaneous:* The following report was presented by William P. Clark, M.D., *Chairman.*

Your reference committee noted that Jeffrey H. Dresner, a delegate from the Medical Student Membership and one of the introducers of this resolution, requested the reference committee to delete the second resolved. The deletion was agreed upon. In addition, your reference committee further recommends amending the resolution by deleting the second sentence in the first resolved. The amended resolution 81-42 reads as follows:

Resolved, That the Medical Society of the State of New York encourage every component county medical society to provide for a student membership class.

⟹ Your reference committee recommends that Resolution 81-42 be adopted as amended.

⟹ . . . *The House, after discussion, voted to* **ADOPT** *Resolution 81-42 as* **AMENDED** . . .

⟹ . . . *The House voted to* **ACCEPT** *the report of the reference committee as acted upon by the House* . . .

BYLAWS

PROPOSED AMENDMENTS TO THE BYLAWS

⟹ *Report of the Reference Committee on Bylaws:* The following report was presented by Daniel F. O'Keeffe, M.D., *Chairman.*

The following items were referred to and considered by the Reference Committee on Bylaws.

These resolutions, together with the minutes of the reference committee hearing, will be forwarded to the House Committee on Bylaws for its consideration and action.

Resolution 81-3, Chairman of the Board of Trustees as a Member of the Executive Committee

Introduced by Paul M. DeLuca, M.D., as an Individual

Whereas, Under the Bylaws of the Medical Society of the State of New York the Executive Committee has the authority to take action in case of emergency arising in the interim between the meetings of the Council; and

Whereas, Under the Bylaws, the Board of Trustees is given charge of property, including trust funds, and supervises the financial affairs of the Medical Society of the State of New York; and

Whereas, The chairman of the Board of Trustees is a member of the Council; and

Whereas, In his capacity as both a member of the Board of Trustees and Council, the chairman of the Board of Trustees may have expertise which may be of great assistance to the Executive Committee in its deliberations; therefore be it

Resolved, That the Medical Society of the State of New York amend its Bylaws so that the chairman of the Board of Trustees will become a member of the Executive Committee of the Council; and be it further

Resolved, That Article IV, Section 4, paragraph 1 be amended by adding the words "chairman of the Board of Trustees" after the word "treasurer."

Article IV, Section 4, paragraph 1 would then read as follows:

"The Council shall establish an executive committee to be composed of the president, the vice-president, the president-elect, the immediate past-president, the secretary, the treasurer, the chairman of the Board of Trustees, and two additional members of the Council appointed by the president with the approval of the Council."

Resolution 81-7, Rescinding of Continuing Medical Education Requirement for Membership

Introduced by Medical Society of the County of Columbia, Inc.

Whereas, The Bylaws of the Medical Society of the State of New York state that continuing medical education be a requirement for membership; and

Whereas, Physicians have always taken pride in voluntarily continuing their education; and

Whereas, This often creates a hardship in smaller communities where physicians must leave their practices uncovered in order to obtain Category 1 credit; and

Whereas, The high cost of obtaining Category 1 credit may impose hardship; and

Whereas, Only 26,000 physicians of the estimated 48,000 licensed in New York State belong to MSSNY; and

Whereas, The remaining 22,000 do not have this mandate and may still practice good medicine; and

Whereas, This may cause some of the 26,000 members of MSSNY to resign; therefore be it

Resolved, That the Continuing Medical Education requirement for membership in the Medical Society of the State of New York be dropped; and be it further

Resolved, That Article II, section 3, of the Bylaws of the Medical Society of the State of New York be deleted to effectuate this change.

Article II, section 3 presently reads as follows:

"An active member who fails to fulfill the requirements for continuing medical education established by the Council of the Medical Society of the State of New York shall not be in good standing. This section shall become effective on March 1, 1981.

"An active member as defined in Article II, Section 1, who is found not to be in good standing as of March 1, 1981, or March 1 of any subsequent year, for failing to comply with paragraph 1 of this Section shall receive reasonable notice that he must fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing. An active member who does not fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing shall automatically cease to be a member of the component county medical society and the State Society, unless, in the view of the Council, specific mitigating circumstances exist that the physician could not complete the CME requirements."

Resolution 81-41, Proposed Member of the Medical Student Membership as a MSSNY Delegate to the AMA House of Delegates

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates Medical Student Membership

Whereas, The precedent has been established by a number of state medical societies to annually reserve for a medical student member a position of society delegate or alternate delegate to the House of Delegates of the American Medical Association; and

Whereas, By voicing opinions, through their medical student member delegate to the House of Delegates of the American Medical Association, the medical student sections of these respective states have assumed unique and dominant positions in national medical politics; and

Whereas, The Student Membership of the Medical Society of the State of New York counts its constituents from among the largest per capita pool of students and schools of medicine and of osteopathy than any other state in the Union, but continues to lag behind much smaller states in both student interest and political clout of the national level of organized medicine; and

Whereas, The Student Membership of MSSNY is currently funded by the Medical Society of the State of New York to send a nonvoting observer to the proceedings of the House of Delegates of the American Medical Association; and

Whereas, Without a voice on the New York State Delegation to the House of Delegates of the American Medical Association the scope of accomplishment and impact of the Medical Student Membership of MSSNY on "organized student medicine" outside the confines of New York State is essentially crippled, relegating MSSNY's student membership to a back-seat when compared with the national voice exercised by the American Medical Student Association (AMSA) chapter in New York State; and

Whereas, The establishment of a New York State student delegate to the House of Delegates of the American Medical Association would significantly increase the interest and political leverage of New York State medical students and thereby serve as a positive factor in aiding membership recruitment efforts by the Medical Student Membership of the MSSNY; therefore be it

Resolved, That Article III, Section 2, paragraph 2 of the Bylaws of the Medical Society of the State of New York be amended by adding a sentence to read:

"In each year at least one delegate or one alternate delegate from the total number of delegates that the Medical Society of the State of New York shall be entitled at the American Medical Association shall have been elected from among qualified student members nominated by the medical student membership."

Article III, Section 2, paragraph 2 will then read as follows:

"It shall elect the officers, councilors, and trustees of the State Society and the delegates to the American Medical Association. In each year, at least one delegate or one alternate delegate from the total number of delegates that the Medical Society of the State of New York shall be entitled at the American Medical Association shall have been elected from among qualified student members nominated by the medical student membership."

Resolution 81-43, Student Membership in County Medical Societies

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, It is to the advantage of the Medical Society of the State of New York to encourage early interest in the activities of organized medicine by students of medicine or of osteopathy enrolled in respective programs in New York State; and

Whereas, The county medical societies are in the best position to provide the forum for involvement by locally enrolled students of medicine or of osteopathy; and

Whereas, There is not currently a consistent policy among the sixty-one component county medical societies of the Medical Society of the State of New York relative to student membership and extent and avenues of involvement; therefore be it

Resolved, That Article XVIII, Section 2 of the Bylaws of the Medical Society of the State of New York be amended by adding a new paragraph 5 and 6 to read:

"Every component county medical society shall provide for a student membership class. Membership in the student membership class of the component county medical society shall be extended to any student member of the Medical Society of the State of New York who is enrolled in a recognized school of medicine or of osteopathy situated in the county, or who maintains legal residence in the county."

"Student members shall not be subject to the dues or assessments of the county medical society but shall be accorded rights and privileges in the county medical society to include the right to attend membership meetings, to have voice and vote thereat, and to hold elective office."

⟹ . . . *The House voted to* **ACCEPT** *the report of the reference committee for information and refer it to the House Committee on Bylaws . . .*

Annual Meeting of the Medical Society of the State of New York

. . . The Speaker adjourned the House of Delegates on Wednesday, October 14, 1981, and President Schwartz called the annual meeting of the Medical Society of the State of New York to order . . .

. . . President Schwartz introduced President-Elect Milton Rosenberg who addressed the House (See Addresses to the House, page 443) . . .

. . . President Schwartz adjourned the annual meeting . . .

ELECTIONS

Tellers

Tellers were the following:
Lawrence Ravich, Nassau, *Chairman*
Nicetas H. Kuo, Queens
Carl E. Marlow, Onondaga
Bentley D. Merrim, Kings
James R. Nunn, Erie

Nominations

. . . Speaker Shanaphy introduced G. Rehmi Denton, M.D., *Chairman*, who presented the report of the Nominating Committee.

President
Milton Rosenberg, Suffolk
President-Elect
Richard D. Eberle, Onondaga
Vice-President
Bernard J. Pisani, New York
Secretary
Victor J. Tofany, Monroe
Assistant Secretary
Allison B. Landolt, Westchester
Treasurer
John A. Finkbeiner, New York
Assistant Treasurer
Charles D. Sherman, Jr., Monroe
Speaker
John L. Clowe, Schenectady
Vice-Speaker
William P. Clark, Westchester

Trustee (one for five years)
G. Rehmi Denton, Albany

Councilors (four for three years)
Edgar P. Berry, New York
James M. Flanagan, Wayne
George Lim, Oneida
M. Theodore Tanenhaus, Kings

Delegates to the AMA
David M. Benford, New York
John H. Carter, Albany
George L. Collins, Jr., Erie
Paul M. DeLuca, Broome
G. Rehmi Denton, Albany
John A. Finkbeiner, New York
James M. Flanagan, Wayne
Samuel M. Gelfand, Nassau
Robert M. George, Oneida
Allison B. Landolt, Westchester
Daniel F. O'Keeffe, Warren
George Lim, Oneida
Bernard J. Pisani, New York
Morton Kurtz, Queens
Charles D. Sherman, Jr., Monroe
M. Theodore Tanenhaus, Kings

. . . The nominees for president-elect, vice-president, secretary, assistant secretary, treasurer, assistant treasurer, speaker, vice-speaker, councilors (four for three years), and trustee (one for five years) were unopposed and were elected by a single ballot, cast by the secretary.

Balloting

. . . Assistant Secretary Landolt called the roll of members of the House who had registered to vote as follows:

OFFICERS, COUNCILORS, TRUSTEES

Ralph M. Schwartz
Milton Rosenberg
Richard D. Eberle
Victor J. Tofany
Allison B. Landolt
John A. Finkbeiner
Joseph F. Shanaphy
John L. Clowe
Edgar P. Berry
Charles D. Sherman, Jr.
Charles N. Aswad
Daniel F. O'Keeffe
John H. Carter
Morton M. Kurtz
Stanley A. Steckler
Paul M. DeLuca
Lynn R. Callin
George L. Collins, Jr.
Arthur H. Diedrick
Bernard J. Pisani
Carl Goldmark, Jr.

PAST-PRESIDENTS

Henry I. Fineberg
Norman S. Moore
Walter T. Heldmann
Edward Siegel
G. Rehmi Denton

PAST PRESIDENT OF AMA

Gerald D. Dorman

COMMISSIONER, NEW YORK STATE DEPARTMENT OF HEALTH

DISTRICT DELEGATES (9)

Duane M. Cady
James M. Flanagan
Thomas W. Greenlees
Richard A. Hughes
Paul C. Lehmuller
Vincent I. Maddi
Paul W. Sum

SECTION DELEGATES (27)

Harold E. Berson
Jack Hardy Carleton
John Stewart Davis
Gerald L. Haines*
Max Nathaniel Howard
Russell C. Johnson
Arthur A. Manfredi*
Fouad B. Michael
James R. Nunn
Arthur Q. Penta
Frank J. Piper
Irving M. Ratner*
Laurence George Roth
Charles R. Salamone
Edward C. Sinnott
Jack Sokolow
John D. States
Sidney S. Weinstein*

DELEGATES FROM COMPONENT COUNTY SOCIETIES

Albany (4)
- John W. Abbuhl
- Robert H. Randles*
- Nathan P. Reed*
- Anthony P. Tartaglia

Allegany (1)
- Muhammad Akmal Khan

Bronx (12)
- John P. Albanese
- Marcos A. Charles
- William G. Chorba*
- Manuel F. Kirschtein
- Dattatraya G. Lanjewar
- Michael N. Lavacca
- Charles Laverdi
- Raul Pohorille

Broome (4)
- Kavasseri S. Agneshwar*
- John K. Garan*
- John A. Kalb
- John F. Spring

Cattaraugus (1)

Cayuga (1)
- Richard J. Freeman

Chautauqua (2)
- George William Lewis*
- Charles R. Sinatra*

Chemung (2)
- Gerald P. Schneider
- Edward F. Steele

Chenango (1)
- Norman C. Lyster, Jr.*

Clinton (1)
- Nicholas W. VanLeeuwen

Columbia (1)

Cortland (1)
- Nicholas J. Gabriel

Delaware (1)
- Glen Joshpe

Dutchess (3)
- Stephen R. Chernay
- Samuel Simon
- Seymour R. Stall

Erie (9)
- Frank J. Bolgan
- James H. Cosgriff, Jr.
- Anthony J. Federico
- George W. Fugitt
- Edmond J. Gicewicz
- Milford C. Maloney
- James F. Phillips
- Joseph A. Prezio

Essex (1)
- George G. Hart

Franklin (1)
- Alfred A. Hartmann, Sr.

Fulton (1)
- Armand J. D'Errico

Genesee (1)
- Alfred L. George

Greene (1)

Herkimer (1)
- Krishna K. Vadlamudi

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* See summary for substitution for delegates

- *Jefferson* (2)
  - Eugene M. Renzi*
- *Kings* (22)
  - Grace A. Altenau
  - Lawrence Ames
  - Joseph R. Brennan
  - Matthew Brody
  - George W. Calvosa*
  - Vernal G. Cave
  - Duncan W. Clark
  - Vashti R. C. Curlin*
  - Paul Finkelstein*
  - Vincent J. Geraci
  - Robert E. Gordon
  - David Kershner
  - David R. Levine
  - George Liberman
  - Martin Markowitz
  - Bentley D. Merrim
  - Bernard S. Post*
  - Harold N. Schwinger
  - John H. Shelley*
  - Leo J. Swirsky
  - M. Theodore Tanenhaus
  - Dorothy L. Trice*
- *Lewis* (1)
  - William S. Reed
- *Livingston* (1)
  - Norman W. Wetterau*
- *Madison* (1)
  - Theodore J. Prowda
- *Monroe* (7)
  - Ronald C. Bruce
  - Thomas E. Cardillo*
  - Carlo E. DeSantis
  - William A. Dolan
  - Nathaniel J. Hurst
  - William A. Kern, Jr.
  - Joyce M. McChesney
- *Montgomery* (1)
  - Feori F. Pipito
- *Nassau* (12)
  - Harry F. Abe
  - Arnold M. Behrer, Jr.
  - Ray S. Crampton
  - Samuel M. Gelfand
  - Waldemar F. Hermann
  - Chester E. Kaminester*
  - Sidney Mishkin
  - Felix A. Monaco
  - John A. Ostuni*
  - Patricia G. Squillace
  - Walter A.Trenkle
  - Jerome Zwanger
- *New York* (22)
  - Melvin H. Becker
  - David M. Benford
  - Robert S. Bernstein*
  - Irwin J. Cohen
  - High C. Davidson, Jr.
  - Wilbur J. Gould*
  - Michael H. Grieco*
  - George Hyams
  - Virginia Kanick*
  - Charles S. LaMonte*
  - Vance Lauderdale, Jr.
  - Klaus Mayer*
  - Aaron G. Meislin
  - Richard B. Nolan
  - Stuart I. Orsher*
  - Andrew H. Patterson
  - Richard N. Pierson, Jr.
  - William B. Rawls
  - Albert M. Schwartz
  - Jerome H. Siegel*
  - Clifford L. Spingarn
  - Meyer Texon
- *Niagara* (3)
  - James J. Kropelin
  - William C. Stein, Jr.
- *Oneida* (3)
  - Robert M. George
  - Robert B. Wallace
- *Onondaga* (5)
  - Robert B. Bryant
  - Carl E. Marlow
  - David L. Poushter
  - John T. Prior
  - George P. Tilley
- *Ontario* (2)
  - Verne M. Marshall
  - Harold S. Ross*
- *Orange* (4)
  - Ansel R. Marks
  - Albert A. Mazzeo
  - Seymour J. Wiener
  - W. Brewster Wolfe
- *Orleans* (1)
  - Antoine A. Nassar
- *Oswego* (1)
  - Zia Segatol-Islami*
- *Otsego* (1)
  - Rodman D. Carter
- *Putnam* (1)
- *Queens* (16)
  - Alexander De la Garza
  - Robert M. Farrell
  - Fred N. Flatau
  - Leo Arthur Green
  - Victor Guarneri
  - Edith Gutman
  - Joseph Klements
  - Nicetas H. Kuo
  - Felix R. Rosenhain
  - Morton M. Safran
  - Ralph E. Schlossman
  - Lester R. Tuchman
  - Ezra A. Wolff
- *Rensselaer* (2)
  - Thomas P. Engster*
  - Raphael M. Verdile, Jr.*
- *Richmond* (3)
  - B. Basil Hyman*
  - Gerald J. Lustig*
  - William A. Schwarz
- *Rockland* (4)
  - Roy H. Lieberman
  - Stanley H. Oransky
- *St. Lawrence* (1)
  - Maurice J. Elder
- *Saratoga* (1)
- *Schenectady* (3)
  - Robert J. Cassidy
  - Richard H. Lange*
  - John M. Spring
- *Schoharie* (1)
  - Frederick J. Michel
- *Schuyler* (1)
- *Seneca* (1)
  - Donald W. Bidwell
- *Steuben* (2)
  - Jack D. O'Neil*
  - Wayne C. Templer
- *Suffolk* (10)
  - William H. Bloom
  - Stephen I. Braitman
  - Melvyn Bruckstein*
  - Frank R. Collier
  - John G. Egner
  - Phillip I. Levitan
  - Nathaniel B. Messinger
  - Herman P. Saltz
  - Melvin Shuter
- *Sullivan* (1)
  - J. Arthur Riesenberg
- *Tioga* (1)
  - John R. Scott
- *Tompkins* (2)
- *Ulster* (2)
  - Norman N. Burg
  - John Peter Roberts*
- *Warren* (2)
  - Robert A. Francomano
  - Betty L. Voelker
- *Washington* (1)
  - Michael J. Lynch
- *Wayne* (1)
  - Norbert Menuhin
- *Westchester* (9)
  - William P. Clark
  - Edwin I. Cleveland
  - Peter B. Farnsworth*
  - Armond V. Mascia
  - Harry H. Moorhead
  - John A. Ramsdell
  - Daniel A. Sherber*
  - Kenneth W. Trout*
  - William J. Walsh, Jr.*
- *Wyoming* (1)
- *Yates* (1)
  - Sheppard Arluck

MEDICAL SCHOOL DELEGATES (12)

- Alfred Alvin Angrist
- Joseph Theobald Doyle
- Albert S. Lyons*
- Jack Richard
- Edward Albert Wolfson
- Tamarath Knigin Yolles

MEDICAL STUDENT DELEGATES (2)

- Matthew Joseph Kuhn

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* See summary for substitution for delegates

SUMMARY OF SUBSTITUTION FOR DELEGATES

SECTION — Gerald L. Haines
Served for Russel H. Patterson, Jr.
Arthur A. Manfredi
Served for Thomas J. Doyle
Irving M. Rabiner
Served for Herbert Lansky
Sidney S. Weinstein
Served for Robert M. Kohn

COUNTIES
Albany — Robert H. Randles
Served for Nicholas P. Teresi
Nathan P. Reed
Served for William O'Dwyer
Bronx — William G. Chorba
Served for Aftab A. Siddiqui
Broome — Kavasseri S. Agneshwar
Served for George F. Gitlitz
John K. Garan
Served for Lloyd C. Peters
Chautauqua — George William Lewis
Served for Russell S. Elwell
Charles R. Sinatra
Served for Bert W. Rappole
Chenango — Norman C. Lyster, Jr.
Served for Errol G. Jacobi
Jefferson — Eugene M. Renzi
Served for Frederic A. Stone
Kings — George W. Calvosa
Served for A. W. Martin Marino, Jr.
Vashti R. C. Curlin
Served for Stanley I. Fishman
Paul Finkelstein
Served for Norman S. Blackman
Bernard S. Post
Served for Irving G. Kroop
John H. Shelley
Served for Yehudi M. Felman
Dorothy L. Trice
Voted for Philip Cohen who served 10/11 to 10/13 for Joseph R. Fontanetta
Livingston — Norman W. Wetterau
Served for Sheppard Arluck
Monroe — Thomas E. Cardillo
Served for Robert J. Peartree
Nassau — Chester E. Kaminester
Served for Morton Goldfarb
John A. Ostuni
Served for Lawrence Ravich
New York — Robert S. Bernstein
Served for Edgar P. Fleischmann
Wilbur J. Gould
Served for George W. Melcher, Jr.
Michael H. Grieco
Served for Elizabeth A. Goessel
Virginia Kanick
Voted for Donna B. O'Hare who served 10/11 to 10/13 for Edgar P. Berry
Charles S. LaMonte
Served for John A. Finkbeiner
Klaus Mayer
Served for William F. Mitty, Jr.
Stuart I. Orsher
Served for Shepard G. Aronson
Jerome H. Siegel
Served for Roger W. Steinhardt
Ontario — Harold S. Ross
Served for Thomas A. McCormick
Oswego — Zia Segatol-Islami
Served for Milton W. Kogan
Rensselaer — Thomas P. Engster
Served for William A. Whyland
Raphael M. Verdile, Jr.
Served for Thomas D. Pemrick
Richmond — B. Basil Hyman
Served for Joseph F. Shanaphy
Gerald J. Lustig
Served for Robert J. O'Connor
Schenectady — Richard H. Lange
Served for John L. Clowe
Steuben — Jack D. O'Neil
Served for Mario A. Argentieri
Suffolk — Melvyn Bruckstein
Served for Stanley A. Steckler
Ulster — John Peter Roberts
Served for John A. Cooke, Jr.
Westchester — Peter B. Farnsworth
Voted for Thomas Dignan Rizzo
Daniel A. Sherber
Voted for Stanley M. Mendelowitz
Kenneth W. Trout
Served for Michael Sierp
William J. Walsh, Jr.
Served for Richard L. Petrillo

MEDICAL SCHOOLS — Albert S. Lyons
Served for David Adolph Dreiling

Report of Tellers

. . . Speaker Shanaphy recognized Lawrence Ravich, M.D., *Chairman*, who presented the following report:

Delegates to the American Medical Association

The following eight were declared elected delegates to the American Medical Association, their two year terms of office to start on January 1, 1982.

GEORGE L. COLLINS, JR.	234
JOHN A. FINKBEINER	231
BERNARD J. PISANI	226
G. REHMI DENTON	217
ALLISON B. LANDOLT	208
CHARLES D. SHERMAN, JR.	206
PAUL M. DELUCA	168
MORTON KURTZ	133

The following eight were declared alternate delegates to the American Medical Association, their two year terms of office to start on January 1, 1982.

M. THEODORE TANENHAUS	80
SAMUEL M. GELFAND	66
JAMES M. FLANAGAN	58
GEORGE LIM	37
DANIEL F. O'KEEFFE	26
JOHN H. CARTER	19
DAVID M. BENFORD	8
ROBERT M. GEORGE	4

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* See summary for substitution for delegates

Closing Proceedings

Thanks to Committees and Staff

. . . Speaker Shanaphy thanked the convention committees and the members of the staff who worked so hard at the convention, as follows:

Committees of the House of Delegates: House Committee on Bylaws, Daniel F. O'Keeffe, M.D., Chairman. Reference Committees — Credentials, William A. Schwarz, M.D., Chairman; Reports of Officers, Robert E. Gordon, M.D., Chairman; Bylaws, Edgar P. Berry, M.D., Chairman; Scientific Activities, Publications, & Miscellaneous, William P. Clark, M.D., Chairman; Public Health & Education, Ralph E. Schlossman, M.D., Chairman; Medical Services, Duane M. Cady, M.D., Chairman; Governmental Affairs and Legal Matters, Samuel M. Gelfand, M.D., Chairman; Tellers, Lawrence Ravich, M.D., Chairman; Sergeant at Arms, Stephen R. Chernay, M.D., Chairman; Dinner Committee, Arthur H. Diedrick, M.D., Chairman.

MSSNY Staff: Edward Siegel, M.D., Executive Vice-President; Henry I. Fineberg, M.D., Executive Vice-President Emeritus; Robert Miller, Convention Manager; Director, Division of Advertising Sales & Meeting Services; J. Richard Burns, J.D., General Counsel; George W. Forrest, Jr., Dinner Dance Coordinator; Director, Division of Management Services; Alfred A. Angrist, M.D., Editor, New York State Journal of Medicine, and Director, Division of Scientific Publications; Jay Garnock, Director, Division of Computer Systems & Services; Bernard M. Jackson, Director, Division of Insurance and Membership Benefits; Mark Kafka, Director, Division of Membership; Philip G. Keating, Director, Division of Finance; George J. Lawrence, Jr., M.D., Director, Division of Scientific Activities; James McCloskey, Acting Director, Division of Communications; Editor, News of New York; Robert J. O'Connor, M.D., Director, Division of Medical Services; Martin J. Tracey, J.D., Director, Division of Governmental Affairs; Elizabeth Daepp, Assistant Director, Division of Scientific Activities; Mario Menghini, Associate Director, Division of Medical Services; Donald Moy, J.D., Staff Attorney; Carol Raimondi, Assistant to the Convention Manager; Deborah Siegel, Department of Research and Development; Eunice Skelley, Associate Director, Division of Membership; Paul Tagliaferro, J.D., Assistant to the Director of the Division of Governmental Affairs.

House of Delegates: Irma A. Erickson, Executive Associate; Patricia Mouquin, Coordinator; Elizabeth Bernardi, Recorder; Imelda Morrissey, Assistant Coordinator. Reference Committee Secretaries — Vita Chilleme, Joan Grimm, Barbara Lacey, Cynthia Mustapich, Jeanette Palucci, Catherine Quigley, Joan Riley, Dorothy Zoltowski; Frances Casey, Workroom Aide. Registration — Mary Singer, Coordinator; Judith Chiauzzi, Lila Gerber, Tina Koty, Florence Lynch, and Joan Rosenberg. Information Desk — Cindy Luberto, Coordinator; John Brady. Production — Charles Struzinski, Coordinator; Fred McIlroy, Jack O'Brien, Jack Oropallo, and Theodore White. Purchasing — Florence Bambek, Coordinator.

Press Room: Gerald Sullivan, News Room Supervisor; Pamela Maichin, Staff, Auxiliary; News Room Staff: John Mucci.

MSSNY Exhibit: Harry Dexter and Frank Salant.

Computer Services: Patty Ann Shurman.

Staff of the Grand Hyatt New York: Paul M. Gottwald, Sales Manager; Lisa Haller, Convention Service Manager; Joseph Cozza, Director of Catering; Jeff Clough, Public Space Manager.

Thanks to the Speaker and Vice-Speaker

. . . The House gave a rising vote of thanks to Speaker Shanaphy and Vice-Speaker Clowe for their just and excellent handling of the meeting . . .

Adjournment

. . . Speaker Shanaphy adjourned the House at 10:40 a.m. on Wednesday, October 14, 1981, sine die . . .

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81-4	Alcohol and Drug Abuse Teaching Programs in Medical Schools	Livingston	596
81-5	Thomas F. McCarthy, M.D.	Bronx	440
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81-7	Rescinding of Continuing Medical Education Requirement for Membership	Columbia	630
81-8	Frederic W. Holcomb, Sr., M.D.	Ulster	440
81-9	Change of the Name of the Section on Otolaryngology and Maxillofacial Surgery to the Section on Otolaryngology-Head and Neck Surgery	Fouad B. Michael, M.D., Delegate, Section on Otolaryngology and Maxillofacial Surgery	539
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OFFICIAL POSITION PAPERS

of the

MEDICAL SOCIETY OF THE STATE OF NEW YORK

In accordance with the directive of the 1980 House of Delegates, the official positions of the Medical Society of the State of New York are included in this publication in conjunction with the proceedings of the House of Delegates. This will make these official positions available to every member of the Society.

All positions taken have been approved by either the Council, acting on behalf of the House of Delegates, or the House itself. These positions may vary from time to time and, therefore, a stated position may no longer be valid. If in doubt, a call to headquarters at Lake Success is suggested for current stands and new developments. Since the Principles of Professional Conduct incorporate many of the ethical standards promulgated by our Society, we have included the latest revision of the Principles on pages 671–680.

Edward Siegel, M.D.
Executive Vice-President

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ABORTION

The Medical Society of the State of New York takes no official position involving the pros and cons of abortion for moral, ethical, or philosophical reasons.

It does take the position that when and if an abortion is performed, that it be done under the following guidelines:

MSSNY GUIDELINES

1. An abortional act should be performed only in a hospital having an obstetrical, gynecological, or surgical service and holding a currently valid operating certificate from the New York State Department of Health or the Health Services Administration of the City of New York or in a suitably equipped and staffed facility administered by such hospital or in a suitably staffed and equipped facility having a hospital affiliation agreement acceptable to the State Hospital Council.
2. An abortional act is an obstetrical procedure and should be performed only by a physician with a currently valid license to practice medicine and surgery in the State of New York, and in accordance with the medical staff rules of the hospital or facility where the abortional act is performed.
3. Prior to the performance of an abortional act, positive evidence of pregnancy by test result, history, and physical examination, or other reliable means, should be recorded on the patient's chart, with an estimate of the duration of the pregnancy.
4. No physician or other person should be required to perform or participate in a medical or surgical procedure which may result in the termination of pregnancy. It is recommended that a patient be advised to consult another physician or physicians when the first physician's refusal to participate in an abortional act is based on a matter of medical judgment or conscience.
5. An abortional act should be performed only in a room suitably staffed and equipped for the type of procedure or procedures being performed and according to the rules and regulations of the hospital or facility in which the abortional act is being performed and in conformity with the relevant sections of the New York State Hospital Code.
6. Blood and blood derivatives should be available whenever an abortional act is performed; and an appropriately equipped and staffed operating room should be immediately available.
7. An abortional act may be performed on an outpatient basis in the outpatient department of a currently licensed hospital or facility only up to and including the twelfth week of pregnancy. Therefore it should be performed on an inpatient basis only.
8. Preoperative evaluation should include the usual routine procedures necessary for the protection of the patient; and the results of such procedures should be recorded on the patient's chart.
9. Prior to the initiation of an abortional act, with or without analgesia or anesthesia, there should also be on the patient's chart a consent form duly signed, according to the requirements of the hospital or the facility.
10. Anesthesia should be administered only by qualified personnel, in accordance with the provisions of the State Hospital Code.
11. The methods by which an abortional act is performed should be those best suited under the circumstances, taking into consideration the experience of the operator, the duration of the pregnancy, and the female's mental and/or physical condition.
12. In the case of an abortional act done after the twelfth week of gestation, it is recommended that consultation be obtained to protect the patient's health and welfare, according to the applicable regulations of the hospital or facility and as outlined in the Hospital Code.
13. Physicians must complete and sign all necessary certificates required under the law for the registration of the products of the abortional act (stillborn or liveborn, etc.).
14. Each hospital, hospital-administered facility, or facility holding a hospital affiliation agreement acceptable to the State Hospital Council should develop its own rules and regulations to cover the performance of abortional acts on its premises — not inconsistent with the above guidelines.
15. Medical fees and hospital charges will vary from area to area, but should conform to the usual and customary levels for those procedures involved in completing the abortional act.
16. Abortional acts performed by a female upon herself are *NOT* condoned.

CAUTION: THE MEDICAL SOCIETY OF THE STATE OF NEW YORK WOULD LIKE TO CAUTION ALL PHYSICIANS THAT AN ABORTION PERFORMED AFTER THE TWELFTH WEEK OF GESTATION IS FRAUGHT WITH TREMENDOUS DANGER.

COUNCIL 5/21/70
REAFFIRMED HOUSE OF DELEGATES 1981

Addendum to Abortion Guidelines — passed by the Council Jan. 24, 1974

It is the recommendation of the Committee on Maternal and Child Welfare of MSSNY and the special Ad Hoc Committee on Guidelines for Abortion that induced termination of pregnancy after the 12th week of pregnancy be performed only in a hospital and only on an inpatient basis. The committee also recommended that following inducement of abortion all patients must remain in the hospital until the abortion process is totally completed.

For medical liability insurance purposes, abortion is considered major surgery.

The Medical Society of the State of New York takes no official position involving the pros and cons of abortion for moral, ethical, or philosophical reasons. It does take the position that when and if an abortion is performed, that it be done under the guidelines outlined in the MSSNY position paper on abortions.

Executive Committee 5/21/80

ACUPUNCTURE

The Medical Society of the State of New York regards acupuncture involving the human body as an experimental procedure which falls within the practice of medicine and, hence, should be performed only by or under the direct supervision of a physician licensed in this State, and in an institution appropriate for human research.

MSSNY recognizes the need for, and desires to encourage further research in the techniques, mechanisms of action, and uses of acupuncture. However, because acupuncture is considered at this time strictly as an investigational procedure, it should be performed only in medical centers and teaching hospitals having committees on human research, which will provide the necessary peer review of protocols and appropriate monitoring of such studies.

Council 12/16/76

ADVERTISING AND SOLICITATION

The Medical Society of the State of New York does not prohibit the use of advertising when used in making certain information known to the public, which is entitled to know the names of physicians, the types of their practice, the location of their offices, their office hours, and other useful information; i.e., biographical data, that will enable people to make a more informed choice of a physician.

The physician may furnish this information through the accepted local media for advertising; i.e., office signs, professional cards, dignified announcements, telephone directory listings, and reputable directories, which are open to all physicians on like conditions.

Solicitation of patients, directly or indirectly, by a physician, by groups of physicians, clinics, institutions, or organizations is unethical. Solicitation includes, (1) the not always obvious devices of furnishing or inspiring newspaper, magazines, or television comment concerning cases in which the physician, group, or institution has been, or is, concerned; (2) the use of statements or claims intended or likely to create inflated or unjustified expectations of favorable results; (3) the use of statements or claims that are self-laudatory and imply that the physician's skills are superior to other physicians engaged in his field or specialty of practice; or (4) the use of statements or claims that certain incorrect or incomplete facts or representations or implications that are likely to cause the average person to misunderstand or be deceived.

Council 9/15/77

ALCOHOLISM

The International Classification of Diseases includes alcoholism in the section described as mental disorders. The Medical Society of the State of New York believes that alcoholism should be listed as both a mental disorder and a medical disorder, for these reasons:

1. Clinical and investigative work of the past three decades has led many workers in the field of alcoholism to the conclusion that it may well be a medical condition with concomitant emotional and psychiatric components.
2. Listing of the disease as a purely mental disorder adds an unnecessary and undesired stigma to an already overly stigmatized illness.
3. Adequate medical education as well as research concerning alcoholism might be significantly broadened and advanced by its inclusion within a "medical" classification of illness.
4. Such reclassification might also result in significant improvement in the accuracy with which alcoholism is reported in documents dealing with public health.
5. As long as alcoholism remains classified as a psychiatric disease, insurance payments for health care are limited to amounts ordinarily offered for psychiatric conditions. These amounts are often less than adequate for medical treatment.

Based on a Resolution Passed by
the Council on 4/28/77

ALCOHOLISM (HEALTH INSURANCE COVERAGE FOR)

MSSNY on January 24, 1974, approved recommendations that to receive the endorsement of MSSNY for its members, any medical insurance plan shall cover not only inhospital treatment when acute detoxification is necessary, but also inpatient treatment in good quality rehabilitation settings. MSSNY also suggests similar provisions be included in any group medical insurance offered to MSSNY members by a county or national medical society with which MSSNY is affiliated.

Council 12/16/76

APPEALS FROM RECOMMENDATIONS OF THE PROFESSIONAL MEDICAL LIABILITY INSURANCE AND DEFENSE BOARD

1. All recommendations of the Professional Medical Liability Insurance and Defense Board may be appealed.
2. Parties shall be given at least 30 days notice of the hearing before the Ad Hoc Committee of the Council.
3. Both the Defense Board and physician shall be accorded the opportunity to make written submission to the Ad Hoc Committee in advance of the hearing. Counsel may prepare the submission on behalf of the physician.
4. The parties shall be interviewed by the Ad Hoc Committee of the Council separately. After reviewing the information previously made available, the Ad Hoc Committee shall interview the member of the Defense Board, preferably in the specialty under discussion, and

the Executive Secretary (or his representative.) The Ad Hoc Committee should have available to it the same information that was available to the Board or the subcommittee, if any, of the Board, which interviewed the physician seeking the appeal. This shall include the names of the members of the Board or the subcommittee, along with their specialties, who made the original recommendations to the Board. Afterwards, the Ad Hoc Committee of the Council shall interview the physician privately.

5. If the physician has Counsel, Counsel shall not be permitted to be present during the interview.
6. At the conclusion of the hearing, the physician will be asked if he will need additional time to submit any material to the Ad Hoc Committee of the Council. If the physician so desires, the Ad Hoc Committee may allow the physician a reasonable time to make submissions as to procedural error.
7. After all materials have been submitted, the Ad Hoc Committee will make a decision and report to the Council.

COUNCIL 4/26/79
AMENDED BY COUNCIL 9/4/80 AND 6/18/81

BANK CARD (CREDIT CARD) PLAN IN MEDICAL PRACTICE

The Medical Society of the State of New York approved in 1973 that a physician may participate ethically in a bank card plan upon approval of the plan by the county medical society. This method of payment of medical fees is to be on a strictly voluntary basis on both the part of the physician and on the part of the patient.

The following principles are to be used by the county medical society for guidance in approving a bank card plan:

1. The county medical society should be satisfied as to the financial and professional integrity of the bank card plan.
2. Bank card plans should make their plans open to all physicians on the same terms, and the plans should not exploit or capitalize on physicians' participation in the plans.
3. The bank card plan should be notified that the listing of physicians in directories of participating members is contrary to the ethics of the medical profession.
4. A physician may not, because of his participation, increase his fees for medical services rendered to the patient.
5. The physician may not use the plan to solicit patients, and should not encourage patients to use the plan.
6. Plaques, signs, or other devices indicating participation in the plan should be kept to a discrete and dignified minimum in the office, and should not be visible outside the physician's office.

The Medical Society of the State of New York will not encourage its members to utilize the bank card plan in the payment of medical fees.

The use of a bank card in connection with the payment of larger fees — which might normally be paid to the physician in installments — is not to be encouraged. All members of the Society are expected to continue the traditional practice of permitting patients of limited means to pay relatively large fees in installments without interest or carrying charges. Out of respect for the dignity and traditions of the medical profession, the physician may not relieve himself of his obligations "to render service to humanity, reward, or financial gain being a subordinate consideration."

HOUSE OF DELEGATES, 1973

BIRTH CONTROL AND FAMILY PLANNING

MSSNY approved support for legislation which would liberalize the sale of contraceptives in New York State by the removing of age restrictions and the limitation of sales to pharmacies.

COUNCIL 12/2/72

MSSNY believes information and services on family planning should be as available to persons receiving public welfare assistance as to other members of the community, and that the State Department of Social Services should allow for reimbursement for costs of family planning services and supplies to welfare clients. However, no welfare client or worker, the Society feels, should be required to accept or make a referral for family planning services if it is against his religious principles.

COUNCIL 1/21/65

CANCER OF THYROID

The Medical Society of the State of New York in October, 1975, considered the problems surrounding possible side effects resulting from x-ray treatment given to children between the late 1930s and early 1960s for head and neck abnormalities, and advised as follows:

At the time, x-ray was deemed a medically safe and effective procedure for shrinking tonsils, adenoids, and the thymus gland as well as for treatment of other benign conditions. Although this type of treatment has been generally discontinued for at least 15 years, recent evidence suggests that persons who received it are at a higher risk of developing benign or malignant thyroid growths.

Compared to other types of cancer, thyroid cancer is uncommon. The type of cancer associated with x-ray treatment grows slowly and has a high cure rate.

The MSSNY urges persons who had, or suspect that they had, x-ray treatment of the head or neck during childhood or adolescence to contact their physician for a checkup.

Persons who do not have a personal physician can seek referral to a physician by writing to their local medical society or their hospital for referral to a physician.

COUNCIL 12/16/76

CERTIFICATE OF NEED

The MSSNY has adopted the policy that no mandatory Certificate of Need be required relative to the purchase of any equipment in a private physician's office setting.

House of Delegates, 1978
Reaffirmed by Council 6/26/80

CHILD ABUSE

The Medical Society of the State of New York, to combat the increasing abuse of children, has approached this problem and has notified all physicians in the State of their moral, medical, and legal responsibility to report all suspected cases of child abuse.

CHIROPRACTIC

The Medical Society of the State of New York has consistently held to the position that chiropractic is an unscientific cult; and has sought to educate the public to that effect.

The MSSNY has continued to stress the fact that chiropractic is not based on scientific principles. We regard it as a cult because it follows the hypothesis of its founder — that disease results from pressure on nerves due to minor misalignments of the spinal column. The chiropractors claim that most illnesses can be cured by adjusting or manipulating certain areas of the spinal column. Of course, such a theory runs counter to the established facts of medical science.

Chiropractors are not educated or equipped, either by background, or training to diagnose human illness. This inability, coupled with their pseudo-scientific method of treatment, and their vociferous stand against life-saving vaccines and the well-recognized advances of the medical profession in the control, diagnosis, treatment, and prevention of disease requires, or perhaps demands, that no recognition be given to them.

Physicians and others interested in public health have a duty to fight this unscientific cult with great vigor.

Council 12/16/76

The Medical Society of the State of New York wishes to reaffirm its belief that a physician should at all times practice a method of treatment which is founded on a scientific basis and which is in the best interest of the patient.

The Medical Society of the State of New York knows of no scientific evidence to condone spinal manipulation as appropriate treatment for the majority of human diseases. The Medical Society of the State of New York will continue to warn the public of the dangers to health in relying on the theory that disease is caused by misalignment of the spine which can be cured by manual manipulation and adjustment.

House of Delegates, 1979

CLAIMS MADE MEDICAL LIABILITY INSURANCE COVERAGE

The Medical Society of the State of New York is unequivocally opposed to claims made policies because such policies do nothing to reduce the cost of medical liability insurance.

House of Delegates 1981

CONTINUING MEDICAL EDUCATION

For many years MSSNY has been developing a Statewide program which will help physicians throughout the State fulfill their continuing medical education needs with a minimum loss of medical practice time. At the November, 1975, meeting of the MSSNY House of Delegates, a resolution was passed to make continuing medical education mandatory for membership.

Through the leadership of MSSNY, in 1976 the New York State Council on Continuing Medical Education was organized with representation from MSSNY, the Associated Medical Schools of New York, and the Association of Medical Specialty Societies of New York. The New York State Departments of Health and Education participate in advisory capacities.

The Council on Continuing Medical Education will foster a Statewide plan to improve the quality of medical care which will utilize relevant educational means. It will determine the medical education needs of physicians, encourage the development of related educational programs, maintain a program registry, and establish procedures for documenting physician participation.

MSSNY, cooperating with the AMA Physician's Recognition Award program, has been making site visits to institutions throughout the State which elect to participate in the program.

Council 12/16/76

An active member who fails to fulfill the requirements for continuing medical education established by the Council of the Medical Society of the State of New York shall not be in good standing. This section shall become effective on March 1, 1981.

An active member as defined in Article II, Section 1, who is found not to be in good standing as of March 1, 1981, or March 1 of any subsequent year, for failing to comply with paragraph 1 of this Section shall receive reasonable notice that he must fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing. An active member who does not fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing shall automatically cease to be a member of the component county medical society and the State Society, unless, in the view of the Council, specific mitigating circumstances exist that the physician could not complete the CME requirements.

Article II, Section 3 of The MSSNY Bylaws

The Medical Society of the State of New York is opposed to any state or federal legislation and/or regulation which would mandate proof of Continued Medical Education for reregistration of a license to practice medicine.

Based on House of Delegates
Resolution 81-50

CONTINUING MEDICAL EDUCATION FOR RETIRED AND SEMI-RETIRED PHYSICIANS

Retired physicians who have no connection with medical practice, medical education, or medical administration, and who do not earn a living from any of these activities need not fulfill the membership requirement for continuing medical education of the Medical Society of the State of New York.

Semi-retired physicians, if they in any way treat patients or teach or administer to other physicians who treat patients, must fulfill the continuing medical education requirement in order to retain membership in MSSNY.

Council 4/28/77

If for any reason, such as sickness, disability, or hardship, a physician feels that he should not be obliged to fulfill the CME requirement, he should present his case to his county medical society. If the county medical society recommends that he be relieved of his CME obligation, the recommendation will be accepted by MSSNY, for the period of time designated by the county society.

Council 9/28/78

COST CONTAINMENT

The Medical Society of the State of New York believes in addressing the problem of cost containment through voluntary effort in our offices and hospitals.

"Cost Containment" of medical care is, to use the current jargon, the "in" topic. Unquestionably this subject deserves the serious attention of all citizens, particularly the medical profession, to determine that available funds are expended most effectively. The MSSNY is troubled by what is left "out" of the ongoing publicity, namely that the quality of medical care not be compromised and accessibility to such care not be restricted by proposals that consider solely costs. It is acknowledged that the quality of care in the U.S. is the highest in the world and, for the great majority of our people, so is accessibility to that care. This is not to deny that there is room for improvement, but in endeavoring to make available to that small percentage of the population which at present does not have access to the best medical care, it is important not to destroy the fabric of the existing structure which has functioned so effectively and been characterized by marked advances in medical knowledge, technology, and therapy. It is disturbing to the medical profession to note that almost all the proposals being advanced concentrate on cost with little consideration given to maintaining and enhancing quality and access, ignoring the intent of Congress in enacting P.L. 93-641 that "the achievement of equal access to quality health care at a reasonable cost is a priority of the federal government." Limiting attention to cost alone, is, therefore, contrary to the expressed purpose of the National Health Planning and Resources Development Act (P.L. 93-641).

Some general observations must be considered. Monetary resources will never be unlimited, and decisions as to priorities must be made by an informed citizenry as to the percentage it wants expended on medical care vis-à-vis other national needs. That decision must be arrived at by the public and not by governmental regulatory bureaus. The self-discipline of individuals and the correction of social environmental conditions that are conducive to poor health are the prime factors in "preventive" medicine and must be addressed by public bodies. Proposed measures to cut costs must recognize that the ill patient and his family insist on all available care, including diagnostic procedures. The physician by historical ethics and training is motivated to render to the individual patient all measures that may possibly assist in recovery and health maintenance, with costs a secondary consideration. Rigid bureaucratic restrictions lead to dictating when, how, and where medical care will be provided and the public must be made aware of trends that will ultimately result in circumscribing the individual's freedom of decision and choice, and the overriding of physicians' professional judgements. Mandated cost controls programs are likely to be antithetical to individuals' rights to make unfettered decisions in regard to their medical care.

Legislative bodies continuously broaden existing health care programs and initiate new ones. The merits of these programs are not at issue here, but the contradiction between controlling costs and mandating expensive new programs must be acknowledged. Also recognized must be the expense involved in responding to government-imposed regulations, an expenditure in time, personnel, and resources that contributes nothing to the direct care of patients, but consumes a not inconsiderable portion of the health dollar. Much has been said of late about simplifying and decreasing governmental regulatory paper work, but in the health field the converse has been true.

The above caveats recorded, there are feasible measures to be considered, designed to obtain the greatest usefulness of the health dollar. The largest portion of the latter goes to hospital care. In considering hospital cost containment proposals, sight must not be lost that to survive hospitals need to be financially sound, a basic concept that recent New York State mandated controls seem to ignore. It is unrealistic to restrict hospital rate increases on one hand, and leave their expenses a wide open door. Measures to be considered are:

— Facilitating the care of patients from in-hospital to ambulatory management with a realistic payment system provided for the latter.

— Cooperative studies by hospital staffs in suitable geographic areas of shared facilities and services.

— The closing of hospitals or the merging of hospital facilities to be effected only after thorough determination of the local needs. The AMA response to HEW's statement contained in the commentary accompanying revised National Guidelines for Health Planning that the primary goal is "short term opportunities for cost containment" is most pertinent; "while we recognize that health care costs must be considered, we believe that it is improper and inimical to quality medical care to consider only economic issues at the expense of other important factors." It also subverts the intent of Congress as noted above.

— Review and improvement of regulations and procedures to ease the transfer to nursing homes of patients as soon as acute hospital care is no longer needed, but to provide for ready readmission to the hospital should the necessity arise.

— Removal of restrictions to encourage home health care as the preferable alternative to nursing home confinement, including informing physicians of the home health care services available in their community.

— Increasing the awareness of physicians, the decision-makers, of the costs of hospital stays and services by furnishing them, in an appropriate manner, copies of physician-influenced expenses they engender. Similar programs should be instituted for house staffs.

— Conducting seminars on cost control involving medical staff presidents, chiefs of staffs, PSRO representatives, hospital administrators, insurance carriers, and nurse representatives.

— Hospital staff clinical conferences to incorporate in discussions of cases the cost factors influenced by the ordering of diagnostic and therapeutic procedures that may not have been warranted.

— Individual hospitals to constitute multi-disciplinary cost containment committees, with physicians participating where medical care of patients is involved.

— Hospitals to establish patient safety programs through liability control systems, designed to limit or diminish the soaring costs of liability insurance.

— Expanding preadmission evaluation of patients' arrangements to decrease length of hospital stay, with costs to be covered by hospital insurance programs.

Measures involving physicians apart from in-hospital patient care:

— Expansion of PSRO activities for review of challenged patterns of practice in the office setting.

— Coinsurance to be part of all health care insurance as the most effective measure to control overutilization demands by the patient, with appropriate provisions for the low income and a top amount for catastrophic illnesses.

— Making available to the patient multiple forms of health care delivery systems (i.e. fee-for-service, prepayment plan, HMOs, etc.) competing on equal terms without subsidization, either overt or concealed, with the success of one or the other determined by the patients' choice. This equality of selection to prevail in employer- or union-sponsored health plans as well, with the factors of coercion removed.

— Apart from the one-to-one patient-physician relationship, medical organizations to cooperate with groups whose goals are the education of the public in health prevention life styles and "preventive" medicine.

— The institution of corrective measures in the field of medical liability to decrease the expense of "defensive" medical practices and abate the excessive cost of this insurance which ultimately is borne by the public.

— Establishment of criteria for physicians' office surgical suites that would qualify for adequate insurance reimbursement as a less costly alternative to inhospital care or outpatient hospital centers.

— Government-financed programs such as Medicaid to fund realistic payment schedules that would encourage participation of the ethical, competent physician and would be less costly than the "Medicaid Mill" alternative.

Proposals other than those listed above will undoubtedly be developed with further exploration of the subject of cost containment. It is recommended that to avoid immoderate disruption in the present system of providing medical care, major innovations be tested first in pilot projects to avoid the costly failures that have characterized hastily conceived governmental projects in the past. There will always be room for modification and improvement with changing times, but such should be effected only after deliberate consideration and in an orderly manner. In a recent survey HEW found that the nation wants changes in the health delivery system to "build on the strength of the existing system" and we urge that course rather than attempt to foist on the public politically glamorous but unsound programs of dubious merit that would reduce medical care to the level of mediocrity. The medical profession, through its various organizations, stands ready to participate in and make available its unique expertise to any and all projects designed to improve health care delivery. It needs only to be requested to do so.

COUNCIL 4/27/78

Suggestions for Hospital Cost Awareness Programs

1. Maintenance of High Quality Care — the siné qua non.
    Educational programs.
2. Discussion of economic factors included in at least one case presentation at monthly meetings of Departments; e.g. length of stay, tests ordered, medications prescribed, etc. — necessity, alternatives.
3. Ambulatory Care Facilities
    Adequate facilities, utilization, ease of scheduling.
4. Length of Stay for Routine Cases
    Evaluation of utilization review effectiveness.
    Appropriate arrangements for readmission.
    Duplication of tests on readmission.
5. Pre-admission scheduling of tests (e.g. x-ray) to avoid undue delay and unnecessary hospital stay.
6. Acceptance of Tests Performed Prior to Admission
    Where performed both by hospital or staff physicians.
    X-rays to accompany patient for interpretation by hospital radiologist and entered on hospital chart.
7. Intensive Care Units
    Appropriate utilization.
    Step-down units.
8. Early Discharge Planning
    Involving family members.
9. Home Health Care
    Adequate arrangements with Social Service Department and outside agencies.
    Early planning.
10. Involvement of house staff in program.
11. Coordination with Nursing and other Hospital Departments.
12. Coordination with Hospital Board of Trustees and Administrator.

13. Hospitals should develop a concept of "Swing Beds."
14. Public Relations
    Communication media briefing.
    Community organizations.
15. Establishment of Hospital Professional Efficiency Committees where such do not exist.
16. Establishment of Local Area Inter-relationships between Hospital Committees.
    County Medical Society Involvement.
    Stated meetings.

Council 4/17/80

DEFINITION OF DEATH

Any proposed legislation concerning death must, in its determination of when death may be proclaimed, follow this definition in order to receive the approval of the Medical Society of the State of New York:

> A person shall be dead when in the announced opinion of a duly licensed physician based on prevailing standards of medical practice, such person has experienced an irreversible cessation both of spontaneous respiratory and circulatory functions. If the use of artificial means of support precludes a determination that these functions have ceased, a person shall be dead if in the announced opinion of a duly licensed physician, based on prevailing standards of medical practice, such person has experienced a total and irreversible cessation of brain function.

Council 4/28/77
Reaffirmed by House of Delegates Resolution 80-6

In addition, the Medical Society of the State of New York adopted the criteria on the legal definition of death as formulated by the Ad Hoc Committee of the Harvard Medical School (Reference JAMA 205: 337–340, 1968)

House of Delegates, 1978

PRONOUNCEMENT OF DEATH

The position of the MSSNY is that it opposes any legislation which would designate individuals other than physicians to pronounce death.

House of Delegates, 1979

DISCIPLINE

In our judgment, we cannot either enlarge upon or diminish the rules concerning the subject of discipline outlined in the "Principles of Professional Conduct" of the Medical Society of the State of New York.

Council 12/16/76

DISCRIMINATION

The Medical Society of the State of New York is unalterably opposed to the denial of membership in component county medical societies and the State Medical Society to any physician practicing or residing in the State of New York, because of race, color, religion, sex, ethnic affiliation, or national origin. It calls upon all component county medical societies, and upon all members of the MSSNY, to exert every effort to end every instance in which such equal rights are denied.

The Judicial Council of the MSSNY, pursuant to Section 2 of Article VII of the Bylaws, shall hear appeals from applicants for membership in a component county medical society who have been excluded from membership in such society for any reason, including discrimination.

Council 12/16/76

DRUGS

The Society's position on various drugs as well as Generic Drugs, Generic Drug Substitution, Identification of Unit Medication by a Uniform National Drug Code Number, is listed individually below:

ANOREXIGENIC DRUGS — (See Amphetamines)

AMPHETAMINES

It is the position of the Medical Society of the State of New York that amphetamines should not be used in the management of weight control problems; however, it recognizes that there are legitimate reasons for prescribing amphetamines (e.g., narcolepsy, minimal brain damage, and in conjunction with narcotics in control of intractable pain).

Council 1/22/81

EXPIRATION DATE AND CONTROL NUMBER ON DRUG LABELS

The Medical Society of the State of New York supports appropriate legislative or regulatory action that would mandate the inclusion of the expiration date and control number on all prescription drug labels on containers dispensed to patients.

Based on House of Delegates Resolution 79-4

GENERIC DRUGS

A distinctive feature of the practice of medicine is insistance by physicians that the highest possible quality characterize all the modalities utilized in the care of their patients. This feature is responsible for a level of care in the United States which is the highest anywhere in the world.

GENERIC DRUG SUBSTITUTION

The members of the Medical Society of the State of New York are as interested, if not more, as any other group of citizens in the State, in eliminating unnecessary costs in the delivery of health care and are actively engaged in developing measures that will lead to the most effective use of the dollars expended on health care, provided that none of these measures results in a lowering of the quality of medical care available to and afforded the public.

Two measures that could lead to a wider use of generic drugs should be considered.

The first is to conduct controlled, scientifically valid studies to conclusively establish that generic drug substitutes are equivalent in bio-availability and therapeutic equivalence. Disturbing reports have appeared in scientific medical literature that seriously question whether generic drugs approved by the FDA do, in fact, satisfy these criteria. In the face of such doubts, it is understandable that physicians will be reluctant to authorize drug substitutes for medications with which they are familiar by experience. The necessary studies do entail expenditure of money and delays, but these are small prices to pay when one is primarily concerned with providing the very best available drug to an ill patient.

A second major deterrent to physicians readily agreeing to generic drug substitution is the question of their liability if a substitute, of which they have insufficient knowledge and no control in choice, should prove to be ineffective for the purpose intended and the patient suffers thereby. Our Society has had correspondence with both the State and Federal Governments to determine the limitations of a physician's liability and the responses have been equivocal. It is our interpretation, as the Law now stands, that the physician may still be liable. An unequivocal statement of acceptance of complete liability, by either the Federal or State Government, in the event of untoward effects developing solely from the use of a generic drug substitute, such as was promulgated for the swine flu immunization program, would remove this anxiety from the physician's mind and encourage wider use of generic substitution.

There is a basic principle to be stressed in the consideration of this subject, namely, that no law should curb the professional judgment of a physician in the treatment of his patient. Years of intensive schooling and training mark the education of a physician and his licensure. It is such training that establishes the physician as the one best able to determine the most effective means of therapy for the individual problems of a particular patient. It is most earnestly to be hoped that no inadequate substitute for this professional judgment, based solely on cost, will ever be enacted.

HEROIN

The Medical Society of the State of New York opposes the use of heroin for pain relief in the terminally ill patient because there are as yet no data which show its superiority over other drugs currently being used. The increased availability of heroin could also open up avenues permitting its divergence to street and other abuses.

COUNCIL 6/21/79

LAETRILE

The Medical Society of the State of New York believes that there is no scientific evidence that laetrile is effective or safe in treating or preventing cancer, and that making it available to cancer patients could prove medically detrimental.

Patients, who are persuaded of the effectiveness of laetrile as a treatment for cancer often postpone seeking proven medical treatment which may eradicate or ameliorate the disease, and such delay may allow progression from a curable to an incurable situation.

In addition, some patients who may be considered terminal in one center may, in fact, respond to the newest therapies available. The decision that there is no further treatment which has any chance of benefit is a highly sophisticated one. Those who advocate the use of laetrile as a treatment for malignancies in effect exploit the victims of cancer and their families by offering unfounded representations that the patient's cancer will be cured.

COUNCIL 6/9/77
REAFFIRMED 4/27/78

MARIJUANA

The Medical Society of the State of New York (MSSNY) believes that laws pertaining to individual use and possession of small amounts of marijuana for personal use should be decreased to misdemeanor status; that the sale and/or importation of marijuana be continued to be regarded a felony; that driving under the influence of marijuana should be prohibited by motor vehicle law; that State and federal health departments should develop means of quickly testing the potency of confiscated marijuana and develop rapid test methods for determining its presence in blood and urine.

MSSNY believes that, to prevent people from thinking there is no risk attached to the use of marijuana, an adequate education and drug information program to disseminate the latest information on the drug should be started by the New York State Health Department in conjunction with MSSNY and the State Education Department.

MSSNY urges that more serious research should be done at the Federal and State levels on the effects of long-term and short-term use of marijuana.

COUNCIL 12/21/78

The Medical Society of the State of New York supported a legislative action which provides for the use of marijuana to alleviate the ill effects of cancer chemotherapy, glaucoma, and for other therapeutic uses.

COUNCIL 6/26/80

TRIPLICATE PRESCRIPTION PROGRAM

The House of Delegates in 1980 called on the Medical Society of the State of New York to encourage the establishment of prescription practice committees throughout the State and to undertake discussions with the Department of Health of the State of New York with the objective of establishing a procedure which would require that the State Health Department verify the accuracy of the data in the Triplicate Prescription Computer Data Banks with these committees.

BASED ON HOUSE OF DELEGATES RESOLUTION 80-28

The Medical Society of the State of New York recommended to the New York State Legislature that the authority of the Commissioner of Health of the State of New York to add a controlled substance to the New York State Triplicate Prescription Program in an emergency situation expire after 60 days unless specifically authorized for continuation by the Legislature, and that the Triplicate Prescription Program be studied by an independent group five years from January 1, 1978, by which time enough evidence may have been accumulated to evaluate its continuation.

Based on Substitute Resolution for Resolution 80-39 and 80-53, House of Delegates

UNIT IDENTIFICATION

The Medical Society of the State of New York seeks Federal legislation requiring that all unit medications such as pills, capsules, ampules, etc., manufactured and sold for human consumption, be required to have clearly imprinted upon each, the uniform National Drug Code Number (NDC #) for easy and ready identification of the drug contents of such medication units.

Based on House of Delegates Resolution 78-56

DUE PROCESS

The basic principles of a fair and objective hearing should be accorded to the physician whose professional conduct is being reviewed. These basic guarantees are: a specific charge, adequate notice of hearing, the opportunity to be present and to hear the evidence, and to present a defense. These principles apply whether the hearing body is a medical society tribunal or a hospital committee composed of physicians.

Council 12/16/76

EUTHANASIA

The use of Euthanasia is not in the province of the physician.

Council 12/16/76

See also *Living Wills*

EXPERT MEDICAL WITNESS

Ethical Guidelines for MSSNY Members as Medical Experts

Whereas, The spirit of justice is being thwarted by the fact that some doctors pose and testify as experts in medical fields in which they lack expertise; and

Whereas, The Medical Society of the State of New York has the obligation to provide ethical guidelines for its membership; therefore be it

Resolved, That the Medical Society of the State of New York establish ethical guidelines for its membership providing the criteria for medical experts as follows:

1. An expert witness must have basic educational and professional knowledge as a general foundation for his testimony, and, in addition, have current personal experience and practical familiarity with the problems being considered and be actively engaged in the practice of the medical subject under discussion.

   This may be evidenced by one or more of the following:

   a. Board certification.

   b. Current active membership in a recognized specialty organization, such as ACS, ACOG, or ACP, etc.

   c. Where the physician has been granted privileges in a hospital or institution in the department in which the physician holds himself to be an expert.
2. Physicians completely retired from active practice, shall be considered expert if the time of completed retirement is not greater than five (5) years, and if the physician has previously been qualified as an expert in any of the above categories.

Council 2/22/79

FEDERAL TRADE COMMISSION

The Federal Trade Commission has exceeded the authority conferred upon it by Congress and has, through exercise of its rule-making powers, overriden State laws and prevented voluntary associations from setting standards of professional responsibility for their own members. The Medical Society of the State of New York firmly believes that Congress should reaffirm the traditional role of the states to regulate the professions as well as the authority of professional societies to conduct their activities without unwarranted and excessive federal government interference.

Council 6/26/80

FLUORIDE RINSE PROGRAM

The Medical Society of the State of New York endorses the concept of school fluoride rinse programs and that members of MSSNY encourage the schools to participate in fluoride rinse programs in those communities without fluoridation of drinking water.

Based on House of Delegates Resolution 80-12

GASOLINE RATIONING

The Medical Society of the State of New York respectfully requests that the Departments of Energy, both federal and state, understand and take regulatory recognition of the fuel priorities of all health professionals so that any fuel plan does not impact adversely on the rendering of quality medical care.

Council 9/28/78

GENETIC DEFECTS — PHYSICIAN RESPONSIBILITY TO INFORM PATIENT INFORMED CONSENT—OBSTETRICS

The physician has a responsibility to inform the patient/couple of the risk of possible genetic defects when the patient is at risk because of age, previous obstetrical history, maternal/paternal family history, or exposure to predisposing factors; to advise the patient/couple of the availability of genetic counselling, types of diagnostic procedures, and the related risks involved.

The patient/couple has a responsibility to seek counseling when the possibility of genetic defects exists, as evidenced in their personal or family history, and to secure information that will enhance the patient/couple's accountability in productive decision-making.

Physician responsibility should be based on the standards of medical practice and the methods of procedure prevailing at the time of counseling.

Only a small percentage of birth defects have specific diagnostic tests. The great majority of defects are not able to be diagnosed prenatally.

Council 5/17/79

HEALTH INSURANCE CLAIM FORMS

The Universal (Common) Insurance Claim Form HCFA 1500 (color coded) is to be used by all carriers in New York State on a mandated basis starting in early 1982. The commercial carriers, however, may continue to use the AMA Modified Claim Form but must accept the HCFA 1500 when submitted to them. The Medical Society of the State of New York fully supports the use of the Common Claim Form by all carriers and recognizes that the mandated use of this Common Claim Form is a major step forward toward simplifying current reimbursement procedures.

HEALTH SYSTEMS AGENCIES

The MSSNY questions the constitutionality of PL 93-641. However, as it is the law, MSSNY encourages its component county medical societies to establish HSA committees, to become knowledgeable and involved, and to make themselves available to the Agencies for discussion. It also endorses the AMA action in its legal challenge of the law.

We question whether PL 93-641 will attain its stated goals because of the minimal role alloted to the practicing physician. The keystone of any successful health care plan is the practicing physician. Good medical patient-physician relations.

The introduction to PL 93-641 reads: ". . . it is imperative that the provider be encouraged to play an active role in developing health policy at all levels." The MSSNY has been discouraged to observe that HSA activity within New York State has ignored this concept at all levels. We are disturbed that a program which has the potential to completely alter the delivery of medical care ignores the benefits to be derived from the expertise of the privately practicing physician.

The PL 93-641 program should be a cooperative effort, with practicing physicians a prime source of information to be utilized by HSA at all levels.

Council 12/16/76

The Medical Society of the State of New York supports the efforts of the AMA in attempting to repeal PL 93-641. While supporting the repeal of PL 93-641 the Medical Society of the State of New York recognizes and understands the need for realistic health planning with funding from whatever source, but only when that planning effort cooperatively draws from the great expertise of organized medicine at all levels. The State Medical Society categorically states that meaningful, constructive, cost effective, and definitive health planning cannot occur without constant input from organized medicine.

Council 11/12/81

HMOs — IPAs

Whereas, The Federal government is fostering the development of HMOs; and

Whereas, Industry, hospitals, entrepreneurs, politicians, and others are developing HMOs in their communities; and

Whereas, Health planning agencies are recommending the development of HMOs as an alternative to the conventional system; and

Whereas, The development of physician-sponsored fee-for-service type of individual practice associations (IPA) are being explored as an alternative method of health care delivery; and

Whereas, County medical societies are beginning to develop this type of program; therefore be it

Resolved, That the Medical Society of the State of New York encourage county medical societies to study the development of individual practice associations as one possible alternative method of health care delivery; and be it further

Resolved, That the MSSNY develop a mechanism to aid the county medical societies in this effort.

Council 6/21/79

HOME HEALTH CARE

The Medical Society of the State of New York encourages the stimulation of physician interest in and acceptance of home care as an integral part of the overall continuum of medical care. We also emphasize the need for medical schools and internship programs to educate medical students, interns, residents, and practicing physicians in the value and proper use of home health care programs. Hospital boards and medical staffs should encourage community interest in support of home health care programs. Community health planning agencies should have representation from organizations concerned with providing home care services; and practicing physicians should involve themselves in developing home health care programs along with community health planning agencies.

The Medical Society of the State of New York supports the concept that all home health agencies, voluntary or proprietary, should be subject to the same controls, regulations, and standards.

The Medical Society of the State of New York also supports the concept that the physician is responsible for monitoring the home health care of his patients, or for the transferal of this responsibility to another physician.

Council 9/15/77 (Abstract)

For further information relative to the Medical Society of the State of New York position on Home Health Care inquire at the Medical Society of the State of New York headquarters about —

1. An article on Home Health Care, published in the October, 1978, issue of the New York State Journal of Medicine, and
2. Statement of the Medical Society of the State of New York re Alternatives to Institutionalization, presented to the Senate and Assembly Committees in December, 1976.

HOME HEALTH CARE FOR THE ELDERLY

The Medical Society of the State of New York supports the concept that reimbursement for home health care for the elderly be provided on a twenty-four hour a day basis, seven days a week, if required for the adequate care of the patient and to prevent the institutionalization of such patient for reasons not requiring institutional care.

Based on House of Delegates Resolution 80-37

HOSPICE

A hospice is a concept of care, home and family centered, designed to meet the physical, psychological, spiritual, and social needs of terminally ill patients and their families. This care shall be rendered by a physician-led interdisciplinary team.

The Medical Society of the State of New York concurs with the position of the American Medical Association "approving the physician-directed hospice concept to enable the terminally ill to die in surroundings more homelike and congenial than the usual hospital environment and encouraging extension and third party coverage of this specialized approach for the provision of terminal care."

The seven goals of good hospice care are:

1) To keep the patient at home as long as possible.
2) To help the patient to live as fully as possible.
3) To support the family as the unit of care.
4) To supplement, not duplicate, existing services.
5) To keep costs down through adequate peer review.
6) To educate health professionals and lay people.
7) To limit the use of hospices to clearly defined terminal needs.

   (Clearly defined terminal needs mean those physical, psychological, spiritual, and social requirements necessary to ensure the tranquillity, fulfillment, and dignity of the dying patient. A terminal state implies the cessation of heroic, highly technological treatment and the initiation of palliative, comfort-oriented procedures)

Council 6/21/79

HOSPITAL MEDICAL STAFF CRITERIA

The policy of the Medical Society of the State of New York is that admission to a hospital medical staff should be on an individual basis, after an impartial review by the medical staff credentialing committee of the applicant's qualifications; such impartial review should serve as the basis for the hospital Board of Trustees' final determination upon request for appointment to the medical staff, and that membership in any group affiliated with the hospital shall not be a substitute for review of the individual's qualifications.

Based on House of Delegates Resolution 80-25
Amended by Council 1/22/81

See also *Medical Staff Membership*

HYPNOSIS

Hypnosis is a medical procedure which should only be used by qualified physicians. The Medical Society of the State of New York believes there is great potential for its abuse by unqualified persons.

House of Delegates 1964

LICENSURE

At the present time there is no official State Society policy as to the requirement of licensure as a prerequisite for membership in the county or State medical societies.

Council 12/16/76

LITIGATION

Guidelines to be Followed by County Medical Societies in Requesting Financial Assistance from the Medical Society of the State of New York in Connection with Legal Fees for Litigation or Administrative Hearings Concerning the County Medical Society or its Members

The following policies shall govern the administration of the MSSNY legal fee aid plan:

1. The County Medical Society shall promptly advise the Executive Vice-President of the contemplated litigation or administrative hearing giving full details of the matter involved.

2. The County Medical Society shall give an estimate of the amount of legal fees involved and a specific request for the financial assistance requested.

3. Aid will be provided for legal fees only in matters clearly redounding to the benefit of the Medical Society of the State of New York and its membership at large.

4. The final decision as to whether legal fee aid will be granted will be made by the Council of the MSSNY with the concurrence of its Board of Trustees.

5. In the event that MSSNY wishes to participate in legal action initiated by a county medical society, it shall be understood that there may be a requirement for county medical societies to participate financially.

Council 11/20/80
Amended by Council 4/16/81

LIVING WILLS

As to the question of "living wills," the Medical Society of the State of New York has adopted the following position:

1. The concept of an agreement between a patient and his doctor on how best to work out the treatment patterns

of a terminal illness is valid.

2. Whether this concept should be embodied in a written document signed by doctor and patient, is open to question. The Medical Society of the State of New York feels at this time that such a contract will create a rigid and arbitrary agreement seriously affecting the doctor-patient relationship negatively.
3. Any legislation authorizing "living wills" further solidifies the danger of locked-in positions and the possibility of the irreversibility of a prior decision because the patient is incapable of informed rescission. The Medical Society of the State of New York now feels that statutory permission will exacerbate the uncertainties of this very delicate situation rather than clarify the matter.

Therefore it is our present recommendation that the entire matter of how best to treat the terminally ill patient should rest on a privileged verbal communication between a patient and the physician responsible for care. Should the Legislature seek to enact law pertinent to this problem, the Medical Society of the State of New York has taken the position that support of such a measure should be avoided but outright opposition is not indicated.

COUNCIL 4/27/78

See also *EUTHANASIA*

MANPOWER ASSISTANCE

The Medical Society of the State of New York supports the concept of continuing some form of federal manpower financial assistance and support, including general institutional grants, special project grants for medical schools, and the continuation of the National Health Service Corps and other support mechanisms such as long-term low-interest loans for medical students.

COUNCIL 6/26/80

MEDICAL CARE OF THE INDIGENT

The "Indigent" is composed of more than those individuals with a per capita income below the poverty level fixed by federal agencies (OEO). It was recognized that variation by age, place of residence in the state, education, life style, and race provided a spectrum of "Indigent" including those with incomes beyond the poverty level.

The statement "health is a right" was discussed; we believe that nothing which requires the individual's participation is a right in itself. There is a right, however, to access to information and services leading to health. To the extent that this includes physician's services, there is a right to access to medical care.

Medical care includes the series of processes solely in the competence of a physician, which may be delegated. This includes diagnosis and formulation of treatment programs for human disease, past, present, or potential. It includes all those activities of data collection and therapy carried out by others under a physician's direction. (It thus includes activities carried out by technicians and therapists, as well as physician assistants or associates, and nurse clinicians or practitioners.)

From a physician's point of view, the care of the "Indigent" once an accepted part of practice, has become professionally and economically unsatisfactory. With fixed fee schedules, often below usual fees, plus undue amounts of paper work, and external restrictions on practice behavior, many physicians (especially in primary patient care) have problems in treating the "Indigent" in their offices. The "Indigent" and near "Indigent" receive care in emergency rooms, hospital and medical school clinics, neighborhood and storefront health centers, and from individual physicians who conduct high-volume practices.

The root of this change is considered by the MSSNY to be low fees for care under the Medicaid program. Other factors in this behavior include patient noncompliance, patient unreliability with appointments and publication of Medicaid receipts; but, mainly, good doctors' services are not purchasable at Medicaid fees.

Care of the "Indigent" by salaried physicians in clinic settings, while often professionally excellent, is very expensive. The MSSNY believes this results from decreased incentives for efficiency in salaried practice, plus the impact of other expenses such as social services, dental services, health education, and family planning.

Crisis medicine (often not truly emergent) in emergency rooms is considered expensive, discontinuous, devoid of health education, and inherently unsatisfactory to patients and physicians. The brief visits to volume practitioners seeing "Indigent" patients solve few problems, the MSSNY believes, because adequate study for diagnosis, preventive health education, and evaluation of treatment is neglected.

It is therefore the quality of care which has suffered most by the shift in style of care of the "Indigent." Low unit fees, especially without review of performance, has not saved money, either. The quality of medical care and economics are inseparable.

The dissatisfaction with the present medical care of the "Indigent" is widespread. Noted are the cultural gaps between "Indigent" patients and most physicians; the absence of artful concern in volume care settings; the discontinuity in emergency rooms and clinics. While admitting that many of the "Indigent" lack skill in using available medical care, the frustrations of relative unavailability are recognized.

The Medical Society of the State of New York makes the following suggestions for legislative, regulatory, and professional system changes:

1. Return "Indigent" patients to physicians' offices and teaching clinics or family practice models, through
2. Revision of New York State Medicaid schedules to provide usual and customary fees, and
3. Recognition by Medicaid and Medicare of organized Primary Patient Care teams
4. Well-developed Peer Review to assure quality, and
5. Administered on a local level by government contract with the medical profession.

HOUSE OF DELEGATES 1973

MEDICAL DATA

CONFIDENTIALITY

Every patient should be treated with attention and consideration, and the confidences which doctors of medicine receive should be guarded with the most scrupulous fidelity and honor. The obligation extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by doctors of medicine except when required by statute law or by the courts.

PRINCIPLES OF PROFESSIONAL CONDUCT (Chapter II, Section 2)

MEDICAL DATA CONFIDENTIALITY

The Medical Society of the State of New York strongly opposes the identification of patients by name unless the patient is informed of the fact that the medical data relating to him or her will be provided to a data bank, and for the purpose it will be used.

BASED ON HOUSE OF DELEGATES RESOLUTION 78-65

A complete set of Ethical Guidelines for Data Centers Handling Primary Medical Records is available, upon request, at the Society headquarters in Lake Success.

See also *CONFIDENTIALITY*

MEDICAL RECORDS — RELEASE OF

Section 17 of the Public Health Law — Release of Medical Records:

Upon the written request of any competent patient, parent or guardian of an infant, or committee for an incompetent, an examining, consulting or treating physician or hospital must release and deliver, exclusive of personal notes of the said physician or hospital, copies of all x-rays, medical records, and test records including all laboratory tests regarding that patient to any other designated physician or hospital, provided, however, that such records concerning the treatment of an infant patient for venereal disease or the performance of an abortion operation upon such infant patient shall not be released or in any manner be made available to the parent or guardian of such infant. Either the physician or hospital incurring the expense of providing copies of x-rays, medical records, and test records including all laboratory tests pursuant to the provisions of this section may impose a reasonable charge to be paid by the person requesting the release and deliverance of such records as reimbursement for such expenses.

For the purposes of this section the term "laboratory tests" shall include but not be limited to tests and examinations administered in clinical laboratories or blood banks.

RELEASE OF MEDICAL INFORMATION TO THE PUBLIC

Many people, literate and well educated, do not possess a special knowledge of medicine. Medical books and journals are not always easily accessible or readily understandable.

The medical profession considers it ethical for a doctor of medicine to meet the request of a component or constituent medical society to write, act, or speak for general readers or audiences. On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. In such a situation the doctor of medicine may be asked to release to the public some information, exhibit, drawing, or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.

An ethical doctor of medicine therefore may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published, and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies, and a list should be issued which identifies them and discloses the manner in which they may be reached. These provisions are made with full knowledge that the primary responsibility of the doctor of medicine is the welfare of his patient, but proper observation of these ethical provisions by the doctor of medicine concerned should protect him from any charge of self-aggrandizement.

Scientific articles written concerning hospitals, clinics, or laboratories which portray clinical facts and technics and which display appropriate illustrations may well have the commendable effect of inspiring public confidence in the procedure described. Articles should be prepared authoritatively and should utilize information supplied by the doctor of medicine or doctors of medicine in charge with the sanction of appropriate associates.

When any sort of medical information is released to the public, the promise of radical cures or boasting of cures or of extraordinary skill or success is unethical.

An institution may use means, approved by the medical profession in its own locality, to inform the public of its address and the special class, if any, of patients' accommodated.

PRINCIPLES OF PROFESSIONAL CONDUCT, (Chapter I, Section 4)

STATEWIDE PLANNING AND RESEARCH COOPERATIVE SYSTEM (SPARCS) PROGRAM

The Medical Society of the State of New York approves of any program that secures statistically valid data which can be used in determining how health care is delivered in New York State. We take exception, however, to any procedure which might violate patient/physician privacy and confidentiality.

We agree with the basic principle of SPARCS as a research mechanism for obtaining data for determining and developing information concerning the delivery of health care to our residents at reasonable cost. It, therefore, concurs with the stated objectives of SPARCS as being a "comprehensive, centralized hospital data system which includes hospital stay information, billing information, and hospital financial information. Its purpose is to establish a data base which will contribute to the State's goal of providing high quality medical care to all New York residents at reasonable cost. Information from the system will be used for studies of hospital financing and reimbursement, for investigation of hospital fraud and abuse, utilization review and review of quality of care, for health planning and resource allocation studies, and for identification of areas of prevalence of disease, high mortality and high morbidity."

The Medical Society of the State of New York takes exception to any data collection mechanism that interferes with the patient/physician relationship by identifying either the physician or the patient. SPARCS should not be a device to obtain information that would be ultimately used to determine if and when punitive action could be taken. If, after evaluation of available data, it is obvious that there are other areas where it becomes necessary that material be gathered for studies related to physicians and their patients, the request for additional information should entail collaborative efforts on the part of the Medical Society of the State of New York and the New York State Department of Health and the Office of Health Systems Management.

The Medical Society of the State of New York feels the inclusion of individual patient/physician data is not necessary for the compilation of the required information and, therefore, serves no purpose in being included as a data element. Individual physician and patient identifiers must not be utilized by this system in order not to violate the confidentiality and privacy that exists between such physicians and patients.

Until such time as those two specific data elements can be removed, the Medical Society of the State of New York cannot support this particular data system.

COUNCIL 11/15/79

MEDICAL EXAMINER'S SYSTEM — FORENSIC MEDICINE

The Medical Society of the State of New York feels that the Medical Examiners System should be extended on a regional basis throughout the State to replace any existing Coroner Systems; and that the Medical Examiner's Office should be an entirely independent unit of government with a direct line of responsibility in a municipality to the mayor, who should not delegate his responsibility to the appointee of another agency.

Any funding for Medical Examiner's Offices available from the State should be paid to the city or county government and earmarked for the Medical Examiner's Office and not diverted to other agencies' nonrelated needs.

HOUSE OF DELEGATES 1980

MEDICAL STAFF MEMBERSHIP AND HOSPITAL PRIVILEGES FOR PRIVATE PRACTICING PHYSICIANS

GUIDELINES ESTABLISHED BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK FOR INDIVIDUAL HOSPITALS AND THEIR MEDICAL STAFFS IN DETERMINING MEDICAL STAFF MEMBERSHIP AND HOSPITAL PRIVILEGES

A. General Guidelines for Membership on the Medical Staff.

1. License to practice medicine in New York State.
2. Ethical and moral character.
3. Residence within a reasonable working distance from the hospital.
4. Willingness to contribute with service in an assigned role within the hospital provided that the nature of this service is commensurate with his type of practice and is approximately equal to that, provided by other members of the medical staff.
5. Willingness to abide with the bylaws of the medical staff.

B. Granting of Hospital Privileges

Privileges shall be granted on the basis of the individual qualifications which shall take into consideration the interest, training, experience, and ability of each practitioner.

1. Hospitals without clinical departments shall grant privileges on an individual basis in accordance with the interest, training, and experience of the applicant. Such hospitals may consult with the nearest departmentalized hospital, if necessary, in the determination of such privilege. It shall be accepted that in today's medical community there is no role for the partially trained specialist.

2. Hospitals with clinical departments shall grant privileges based on training and experience consistent with the requirements of the various Specialty Boards. Family physicians who apply to such hospitals shall become members of the Department of Family Practice, where it has been developed, with clinical privileges assigned by the Department of Family Practice with the approval of the specific department in which privileges are requested.

3. The dilemma of teaching hospitals in obtaining an adequate patient population that would permit the fulfillment of their purposes results in large measure from the lack of admissions by the personal physicians because of the loss of control of their patients when the latter are admitted into such institutions. A solution to this problem can be reached if university hospitals establish a methodology that will effect close cooperation between the personal physicians and the university hospital attending and resident staff, with the personal physicians continually involved in the care of their patients, and observe the policy originally proposed by this

society and later adopted by the AMA and that is that there shall be one physician responsible for the patient's care, and that physician shall be the patient's own private physician.

All new medical staff members shall pass through a period of observation and supervision to assure that each member shall be able to demonstrate the ability to apply his training and experience in an appropriate manner.

Furthermore, all members of all clinical departments shall be subject to appropriate peer review on a periodic and equitable basis as a means of assuring continuing quality patient care.

C. Appeals Mechanisms

While it realized that most hospitals have bylaws with a built-in due process mechanism for staff membership and medical privileges, the possibility for obstruction to staff membership and medical privilege for inappropriate reasons does exist.

Therefore, it is recommended that an Appeals Board consisting of representatives from the MSSNY and the HANYS be created as a BODY to which individual appeals might be submitted, but only after an attempt for a local solution to the problem by the concerned county medical society has proved to be unacceptable to either the hospital or to the individual practitioner.

House of Delegates 1979
Amended, House of Delegates 1980

See also *Hospital Medical Staff Criteria*

HANYS POSITION STATEMENT ON DISPLACED PHYSICIANS

Background

Since January, 1975, over 30 hospitals in New York State have closed. During the same period a number of obstetrical and pediatric units of hospitals have also closed. Currently, there is a trend toward hospital mergers, consolidations, and shared clinical programs.

Whenever a hospital service or entire hospital is closed, there is a possibility that a physician, or physicians, will be deprived of access to a hospital by that action. It has happened in the past, and in all probability will happen more frequently and in larger numbers with future actions.

Issue

In cases where physicians from hospitals that have closed in whole or part apply for appointment at a neighboring hospital, reviews of their applications have not always been objective. It has been shown, in a few significant cases, that the recommendations of the review committees were based more on fear of competition than on the character, competence, and qualifications of the applicants.

It is clear that the livelihood of many physicians is dependent on their ability to secure hospital appointments and be granted hospital privileges based on objective review. Not so apparent, but more important, is the right of the patients of those physicians to have access to hospital facilities when medically necessary and appropriate through the physician of their choice.

Action

The Hospital Association of New York State urges its member hospitals, their boards of trustees, administrators and medical staffs to review and monitor their appointment and credentialing procedures to assure they are sensitive to the needs of the displaced physician and his patients. Hospital boards must exercise their responsibilities to their hospitals to assure the competence of the medical staff through objective appointment and credentialing procedures. They must also exercise their responsibility to the larger community and see that qualified physicians have hospital appointments and their patients are afforded equal access to hospital services.

(Note: Appointment of certain traditionally hospital-based specialists, such as radiologists and pathologists, may need to be made on the basis of hospital need as well as qualifications.)

Adopted HANYS Board of Trustees October, 1978

MENTAL HYGIENE PROGRAMS

There has been a fragmentation of services available to the mentally disabled, between State, county, and local programs. This has produced duplicative delivery and a tendency toward an uncoordinated approach to treatment. The result has been either wasteful or dysfunctional, leading to the "Long Beach Syndrome" or "Revolving Door" patient care.

The Medical Society of the State of New York takes the position that all State mental health services for the mentally disabled should be within a single organizational component under the direction of a qualified psychiatrist with authority over all the administrative and program elements of these services. This is in accord with the position of the American Psychiatric Association.

Any program must include a department of mental hygiene with authority over and direct input into all health delivery services. There should be a hierarchy of structure encompassing community mental health centers at the local level, halfway houses for those recently discharged, guidance clinics, and hospital facilities comprising both acute and chronic care beds. All this should function in a smooth transition from hospital inpatient care to follow-up clinics with continued, closely monitored supervision.

Community and consumer participation is desirable but should be advisory rather than directive. All local services should be under the jurisdictional surveillance of the State mental health department. The entire delivery system should be a quasi-independent body free of undue interference from the legislative and executive departments of government.

NATIONAL HEALTH INSURANCE

The Medical Society of the State of New York endorses the concept of Comprehensive Health Insurance for all including both basic and catastrophic benefits. Such benefits must be all inclusive and be available with parallel coverage in both the private practitioner's office and in the institutional setting. The program should be based on the fundamental principle that the integrity of the physician–patient relationship must be maintained and that both the physician and the patient be guaranteed the freedom to exercise his/her own best judgement as to the delivery and the receipt of such medical care.

The program should be administered primarily in the private sector thru the use of private health insurance with government participation being limited essentially to assisting the poor and low-income individuals to pay health insurance premiums. Within their administrative area there should be alternate methods of medical care delivery that have been shown to be cost effective.

The financing of such a program should be in the private sector and must be predicated on a cost sharing basis which will take into consideration Employer-Employee funding plans as well as governmental plans where recipients fall into the categories of the indigent, non-employed, self-employed, and the elderly. The program should establish *uniform* benefit coverage for all persons with plans for coverage continuation when individual conditions suddenly change. To further enhance fiscal integrity there must be a mandated system of coinsurance and deductibles scaled to various categories of individual incomes with a set expenditure cap above which catastrophic coverage will begin.

It is the further position of the Medical Society of the State of New York that:

a) Licensure and certification of Health Manpower should remain a State-Level responsibility.

b) Peer Review should be a integral part of the program recognizing the use of multiple methods for such review.

c) Cost effective methodology must be established which takes into consideration a reasonable reimbursement formula without sacrificing quality care. This may require multiple plans.

d) There should be a coordination of benefits program, and lastly

e) Flexibility of plans for promoting cost effectiveness in the delivery and financing of medical care is acceptable, but such flexibility must not compromise Quality Care.

The above position of the Medical Society of the State of New York is not inconsistent with the four basic principles of the American Medical Association.

BASED ON 1978 HOUSE OF DELEGATES POSITION
AND COUNCIL POSITION 11/81

ROLE OF NONPROFESSIONALS IN SURGERY AND OPERATING ROOMS

1. With the exception of a licensed health professional whose contact shall be limited to activity within the statutorily defined scope of practice of that particular licensed health profession, under no circumstances should a nonphysician have any direct contact with a patient undergoing surgery in the operating room.

2. No licensed physician should utilize any device without first becoming fully familiar with its properties and the proper procedures to be followed with respect to its inclusion in any operative procedure.

3. The best interests of the patient will be served if technically expert representatives of equipment manufacturers are available for consultation in connection with an operation. Such availability shall be for the sole purpose of providing the physician with expert technical advice in the event that the device in any way malfunctions.

The Medical Society of the State of New York does not in any way condone and, indeed, affirmatively condemns any direct interaction between a nonphysician, other than a licensed health professional acting within statutorily defined areas of capability, and a patient.

This statement does not preclude the presence of legally assigned medical students, as well as students of paraprofessional occupations who are duly enrolled in the accredited programs of teaching and affiliated hospitals.

COUNCIL 1/26/78

NURSING

The Medical Society of the State of New York and the New York State Nurses Association recognize the increasing knowledge, expertise, and responsibility of the medical and nursing professions. As health science and technology have advanced, practitioners of both disciplines have incorporated new tools, techniques, and therapeutic measures into their practices. The utilization of particular diagnostic and therapeutic tools by nurses and physicians is determined by the distinctive education and scope of practice of the respective professions.

Although it is obvious that patients have distinct medical and nursing needs it must be recognized that there are areas of practice common to both professions. It is essential that the traditional cooperative relationship of the physician and nurse be maintained. To assure this principle, the parameters of overlapping or common areas of practice must continue to be determined by the medical and nursing professions.

Both societies agree that there is no need for amendments to either the Nurse Practice Act or the Medical Practice Act. Such action is unnecessary for the following reasons:

1. The promulgation of a list of "Medical Acts" would be totally impractical. Creation of such a list would ignore differences in various areas of the State and various types of institutions. Any additions or deletions would require separate legislative acts.
2. The medical profession has established methods for setting standards in various specialties. Physicians must be qualified in respect to training, experience, and capability before being recognized as specialists. The nursing profession has also developed and continues to strengthen mechanisms for regulating the preparation and practice of nurses. Such systems have functioned as efficient safeguards for the public and have not, in the past, required legislative action.
3. The State Education Department already has statutory responsibility to promulgate regulations required to implement articles of the Education Law for each profession. Such regulations could be more effectively accomplished through advice from the appropriate professional organizations than through restrictive legislation.

Therefore, the two societies have established a Joint Practice Commission, composed of representatives of the

Medical Society of the State of New York and New York State Nurses Association. This Commission is charged with defining areas of practice common to both professions and establishing guidelines for interdisciplinary practice of physicians and nurses. Such guidelines are similar to joint position statements developed by these organizations in the past and would serve to advise and assist the Commissioner of the Department of Education.

Council 12/16/76

Addendum to Position Paper on Nursing

The Council of the Medical Society of the State of New York on March 23, 1978, reiterated its opposition to legislation which would increase the scope of nursing practice so as to blur the distinction between nursing and medical practice.

OBSTETRICS — OUT OF HOSPITAL DELIVERIES

Labor and delivery, while a physiologic process, clearly presents potential hazards to both mother and fetus before and after birth. These hazards required standards of safety which are provided in the hospital setting and cannot be matched in the home situation. We recognize, however, the legitimacy of the concern of many that the events surrounding birth be an emotionally satisfying experience for the family. We support those actions that improve the experience of the family while continuing to provide the mother and her infant with accepted standards of safety available only in hospitals which conform to standards as outlined by the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics.

Council 10/25/79

PATIENTS' COMPLAINTS

Complaints against physician members are handled at the county medical society level. Any violation of the Medical Practice Act, the Constitution and Bylaws of the County Medical Society, the Bylaws of the Medical Society of the State of New York, or the Principles of Professional Conduct of the Medical Society of the State of New York, can lead to censure, suspension, or expulsion from membership.

Charges against a member physician must be submitted in writing to the county medical society secretary, who will furnish a copy to the accused and the chairman of the proper committee at once. The Committee will investigate the charges on the merits, and the accused physician will be given a reasonable time to file a written answer to the charges.

The Committee will then hold a hearing, at which the complainant, the accused, witnesses, and counsel may all be present and submit evidence, enter objections to evidence submitted by the other party, and call and cross-examine witnesses. The Committee may question the complainant, the accused physician, and witnesses. The Committee may accept any evidence deemed appropriate and pertinent.

A report of the hearing will be submitted by the Committee to the medical society. It should include a determination by the Committee that the charges be either sustained or not sustained, and a recommendation that the accused be (a) censured, (b) suspended, or (c) expelled.

A copy of this report shall be mailed to the acused physician, who may submit written objections to the report to the Medical Society. The report, and the accused physician's objections, if any, shall be on file at the Secretary's office and available to the membership.

The report and objections will be considered at a properly announced meeting of the membership. The accused may also request permission to present oral arguments. The granting of permission is discretionary with the president of the Medical Society.

The membership shall vote to determine the decision of the county medical society. Censure or suspension shall require a two-thirds vote of the members present and voting. A three-fourths vote of the members present and voting shall be required to expel a member.

The accused may request to be furnished, at his own expense, a copy of the recording or transcript which must be made of the Committee hearing and the meeting of the membership.

The accused physician has the right to appeal the decision of the county medical society to the Judicial Council of the MSSNY and to the Judicial Council of the AMA (if the accused is a member of the AMA) under such rules as these two bodies may adopt. However, the disciplinary actions voted by the county medical society shall remain in full force and effect during the pendency of such appeal or appeals.

Council 1/27/77

PHYSICIAN'S ASSISTANT

The Medical Society of the State of New York (MSSNY) defines a physician's assistant as "a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant."

The MSSNY strongly endorses the concept of innovation and experimentation in developing new categories of health manpower.

MSSNY supports the development of a certification examination for the assistant to the primary care physician. This will help ensure orderly development of the "physician's assistant" concept under medical guidance, thereby helping to assure the maintenance of high standards.

The MSSNY opposes employment of physician's assistants by hospitals. Direct responsibility to and supervision by a physician is a critical element in the safe and effective performance of a physician's assistant. A physician's assistant should not function in that capacity when employed and paid by a hospital or a full-time, salaried, hospital-based physician.

The MSSNY recommends a holding action on licensure of any additional allied health occupations until long-term solutions are developed. Such a moratorium is needed in order to forestall perpetuating a system of narrowly defined, legally circumscribed health service roles and permit time for coordinated development of practical alternatives.

Because of different patterns of practice from one locality to another, questions involving the duties and supervision of specific categories of allied personnel can best be resolved at State and local levels.

Council 12/16/76

Addition to Position Paper on Physicians' Assistants

It is further recommended that a system be evolved to assure firmer controls of the training, supervision, and utilization of physicians' assistants.

The Medical Society of the State of New York is constantly evaluating the position of physicians' assistants and the effect on the delivery of health care in New York State, and is attempting to control the activity of such physicians' assistants in order to avoid abuse.

SERVICES PERFORMED BY PHYSICIANS' ASSISTANTS

Services performed by physicians' assistants should not be payable unless such services are rendered under the *direct* and *personal* supervision of the physician.

Council 6/26/80

PHYSICIAN DISTRIBUTION

The MSSNY recognizes that a shortage of available medical professionals exists in several locales within the State, and therefore supports efforts to encourage communities to acquire the necessary medical manpower to serve its citizens. The MSSNY has called upon its 61 component county medical societies to work with communities within their areas to resolve the problem of maldistribution of medical practitioners.

Experience indicates that no single approach will solve the health needs of every community but careful review of some solutions will surely benefit those communities having problems in obtaining appropriate health care delivery for its citizens. It is the responsibility of the local rural or urban community to secure the necessary information on health care requirements and manpower availability and provide health education with emphasis on utilization of health services by its citizens.

Council 12/16/76

The Medical Society of the State of New York at the present time is undertaking a demographic survey of physicians which we hope will clarify those areas which are underserved. We hope that this information will be available in the near future so that we may help those communities where such a shortage exists.

PHYSICIAN REPRESENTATION ON HOSPITAL GOVERNING BOARDS

The Medical Society of the State of New York recommends that to insure the delivery of quality medical care to the hospitalized patient at the lowest possible cost it is incumbent upon hospitals to have a physician member representing the medical staff on its governing board (Board of Trustees, Board of Managers, etc.). Physicians, by virtue of their experience and training, are best able to assist other members of the governing board in developing priorities regarding medical services.

Privately practicing physicians from the community served by the hospital, elected or appointed by the medical staff to the board, and serving in a capacity equal to all other members of the board will provide the most effective form of liaison between the medical staff and the board.

Council 12/16/76

PROFESSIONAL LIABILITY

The problem of professional liability litigation and insurance has resulted from a significant increase in the number and size of claims against physicians and other health care providers. This phenomenon has not only increased the cost of health care services for patients, but has also threatened the availability of such care due to a lack of adequate professional liability insurance coverage.

The basic cause of any malpractice case is some injury to the patient. Once sustained the question arises whether the injury was caused by the negligence of the health care provider or was the result of some uncontrollable circumstance. In some cases, unforeseen complications will develop which are the natural outcome of the treatment administered to the patient and not the result of negligent treatment by the physician. There are also instances when total recovery cannot be achieved regardless of the treatment used. In addition, there may be adverse results which occur simply because of the patient's physical makeup, his lack of response to certain treatments or his unwillingness to care for himself and follow the doctor's orders. In each of these cases, there is no malpractice.

It is generally recognized that litigation in the area of malpractice is a social problem as well as a medical-legal problem. People are more suit-conscious today, and are aware of the existence of liability insurance and presence of a large sum for payment of claims. However, they mistakenly believe that it is the insurance company, and not the public, who ultimately pays these claims. The medical profession believes that this propensity toward litigation to solve our grievances is one of the major causes of the present malpractice crisis.

What the medical profession seeks in its search for a solution to this problem is fairness for both the patient and the physician. Doctors have no interest in trying to deprive any patient injured by a negligent act from recovering compensation for the damages he has sustained. What the profession is interested in is discouraging unwarranted suits and encouraging the just and rapid settlement of legitimate claims.

As a result of this changing social and legal climate, the present tort law/liability insurance system has been incapable of handling the professional liability problem. In studying the various elements of this system, the Medical Society of the State of New York has recognized three main areas which require corrective action:

1. Objectivity in the decision making process.
2. Expeditious handling of cases.
3. Realistic guidelines for compensation.

To correct the shortcomings and inequities in the present litigation system, the Medical Society of the State of New York advocates the creation of an administrative system in which professional medical liability cases would be decided by a panel of medical and legal experts, liability would be determined in accordance with established criteria, and compensation would be awarded for the actual losses which the claimant has sustained.

Council 12/16/76

PROTEIN SUPPLEMENTS

The Medical Society of the State of New York is of the opinion that the use of high protein food supplements is contraindicated for the purpose of weight reduction and reiterates its warning that high protein formulae not be used in weight reduction programs.

Council 6/21/79

PEER REVIEW AND PSRO

PSRO

The Medical Society of the State of New York is on record as recognizing the necessity of implementing PSRO legislation through local PSRO organizations.

However, in view of the ever-increasing new demands upon a physician's time and skill for review activities, established by governmental laws and regulations, MSSNY has approved the principle that physicians be paid for such activities and that the remuneration be adequate.

MSSNY urges all county medical societies, or groups thereof, to undertake peer review.

The Council of the Medical Society of the State of New York opposes the Health Department of the State of New York doing utilization review for Medicaid and recommends that appropriate PSRO groups in the State be responsible for this program.

Council 12/16/76

PEER REVIEW

The Medical Society of the State of New York, along with the AMA, endorses peer review that is physician controlled and is applicable to all patients and not just specific groups as currently exists; continual development and promotion of new procedures for physician assessment of the quality and efficiency of medical care must be sought. This development and assessment can best be accomplished by organized physician groups at the local level regardless of funding source. The local review approval by local physician-sponsored organizations must be coordinated on a statewide level, keeping always in mind that physician-controlled peer review through locally sponsored physician organizations is the basis for effective peer review.

It is, therefore, the position of the Medical Society of the State of New York that the State Society should coordinate and assist in implementing mechanisms for peer review for all patients and that such coordination will insure the review being done by physicians at the local level.

House of Delegates 1981

QUACKERY

From the very beginning of its existence, the Medical Society of the State of New York has fought health quackery in order to protect the health of our people and to promote the highest quality of medical care.

The Medical Society of the State of New York, wherever possible, must expose and attempt to eradicate unscientific cultists, nostrums, false claims for therapeutic advices and treatment, diploma mills, food fadism, medical imposters, and all types of pseudo-healing.

The Principles of Professional Conduct of the Medical Society of the State of New York declare that a sectarian or cultist, as applied to medicine, is one who alleges to follow or in his practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience. All voluntarily associated activities with cultists are unethical. A consultation with a cultist is a futile gesture if the cultist is wrongfully implied to have the same high grade of knowledge, training, and experience as is possessed by the doctor of medicine. Such consultation lowers the honor and dignity of the profession in the same degree in which it elevates the honor and dignity of those who are irregular in training and practice.

Council 12/16/76

REHABILITATION IN SKILLED NURSING FACILITIES

The patient's need for rehabilitation services is one of the two primary bases for the admission and acceptance of eligible patients under Medicare and Medicaid in an approved skilled nursing facility. Little attention has been paid to the standards and criteria by which the quality of this care can be evaluated in terms of medical audit. Many patients are admitted, on the basis of need for rehabilitation services, to skilled nursing facilities that do not provide adequate programs. The comprehensive rehabilitation services to which these patients are entitled by law appear to be determined to be provided if there is a physical therapist providing some physical therapy services on a part-time, or full-time basis. This is manifestly inadequate.

If the need for comprehensive rehabilitation services is to be met, each institution that accepts patients on this basis must document the fact that comprehensive rehabilitation services are available, and have been provided when prescribed. In particular, each such admission must have a comprehensive rehabilitation evaluation or assessment which starts with the services of a physician who has training in this specialty field of medical care. This physician need not be a Diplomate of the American Board of Physical Medicine and Rehabilitation, although this would certainly seem desirable.

However, the medical staff organization should provide for a physician who has had training and demonstrated interest in this field and who has accepted the responsibility for providing rehabilitation evaluation of new patients to the facility, and for providing leadership to the other members of the rehabilitation team from the various disciplines. In those cases where the attending physician wishes to maintain primary responsibility for the comprehensive rehabilitation evaluation, interaction with the rehabilitation team members, formulation of the group decisions including goals, prescription of the specific program, and reevaluations, this may be provided for in the medical staff rules and regulations. The consultant in rehabilitation medicine would then have responsibility for seeing that these functions are performed and documented. In most situations it would appear more appropriate for the rehabilitation medicine consultant to provide these functions for the attending physician on referral. There must be written documentation of the rehabilitation conference, the goals, prognosis, anticipated length of trial, prescription of the therapeutic program, results of reevaluations, and discontinuation of therapy when deemed no longer feasible. The rehabilitation medicine consultant must be in a position to prescribe braces, prostheses, and other assistive devices, including appropriate wheelchairs as indicated. Unless an appropriately trained physician has been so designated, and has accepted, and is performing this function on a regular basis, the extended care facility cannot be considered to be providing for the comprehensive rehabilitation needs of the patients.

The directives from Washington and the interpretation by State officials and inspectors have done little to properly see that capital "R" Rehabilitation programs are developed in these facilities. In fact, it has been brought to our attention in New York State that facilities have been advised that a physician in this role is not necessary, as long as there is a part-time or full-time physical therapist on the staff. This shows a complete misunderstanding of the place of rehabilitation medicine in the spectrum of comprehensive health care. This is particularly important because the skilled nursing facility is one of the primary loci in the continuum of health care services in which the rehabilitation needs of patients can be met. If the patient with rehabilitation potential must be discharged from the acute general hospital, and a rehabilitation center is not available, then capital "R" Comprehensive Rehabilitation in the skilled nursing facility is mandatory. The recognition of this responsibility was clearly in the minds of the Congress when these provisions were enacted. It is high time that the medical profession developed positive recommendations to see that this serious gap is corrected.

Council 6/8/78

SACCHARIN

The Medical Society of the State of New York is totally opposed to any ban on the use of saccharin, especially since there is no other sugar substitute available.

Council 11/17/77

SAFETY REGULATIONS FOR MOTORCYCLE OPERATORS

It is the position of the Medical Society of the State of New York that the New York State Legislature should make the wearing of helmets mandatory for operators of motorcycles, trail bikes, mopeds, and similar motorized vehicles and that the New York State Legislature should take action to require that all motorcycle operators, including operators of trail bikes, mopeds, and similar motorized vehicles, meet State regulations concerning the age of the operator, operational skills, and safety standards, including helmet provisions.

House of Delegates 1978

SECOND OPINION

It is a time-honored practice of the medical profession for physicians to request consultations when the patient's condition merits it. Reputable physicians never refuse a patient's request for consultation.

In regard to the current popular demand for "second opinion" programs, the Medical Society of the State of New York believes that such programs should always be voluntary, without any pressure on the patient, either subtle or overt, and that when sponsored by a third-party payer there should be no added cost to the patient. Physicians selected for consultation should be from an open and not a closed panel and the consultant used for the "second opinion" should not take over the care of the patient.

Publicity material regarding "second opinion" programs should be factual and not instill fears in the patient or imply distrust of the medical profession.

Council 5/17/79

SICK OR IMPAIRED PHYSICIAN

At its House of Delegates Meeting in 1976 the Medical Society of the State of New York adopted a set of guidelines for hospitals to use in handling staff physicians who are sick or impaired. The guidelines can be used in setting up procedures and in writing or amending staff bylaws.

The guidelines will be provided to hospitals or medical societies by MSSNY upon request.

See also *Alcoholism*

SMOKING

The Medical Society of the State of New York has adopted a series of resolutions relative to smoking.

> The Medical Society of the State of New York, on May 24, 1973, approved and supported the concept of smoking clinics, which are organized and publicized through appropriate voluntary health agencies, and have public health support and participation of physicians and health professionals.
>
> In January of 1974 the Medical Society of the State of New York approved the use of "No Smoking" signs in MDs offices on a voluntary basis.

The Council of the Medical Society of the State of New York on November 30, 1978, approved the following:

— Support of the principle that smoking in public places be limited to certain designated areas.

— Urged hospital authorities to take steps to remove cigarette vending machines and the sale of cigarettes from their premises, since this is totally inconsistent with a hospital's mission to protect the public health and is not in keeping with its standing as a symbol thereof.

— Indicated its support of current national efforts to reduce the habit of smoking and charge those of its committees which have a responsibility in the area to review their potential contribution to the control of this public health problem, including those with a special concern for the young.

UNPROFESSIONAL CONDUCT

Unprofessional Conduct is defined under the New York State Board of Regents Rules as published in the October, 1977, issue of the *New York State Journal of Medicine* and amended by the Board of Regents in October, 1978.

The Office of the General Counsel of the Medical Society of the State of New York should be consulted for specific information on any aspect of the Board of Regents Rules.

See also *Principles of Professional Conduct*

WORKERS' COMPENSATION FEES—REGIONALIZATION OF

The Medical Society of the State of New York disapproves of fixed fee schedules and seeks the adoption of payments based on usual, customary, and prevailing fees in all negotiations relating to fees were such negotiations are mandated by governmental agencies.

House of Delegates 1980

MEDICAL SOCIETY OF THE STATE OF NEW YORK
ORGANIZED 1807

PRINCIPLES

of

PROFESSIONAL CONDUCT

AMENDED 1977

REPRINTED 1982

MEDICAL SOCIETY OF THE STATE OF NEW YORK
420 LAKEVILLE ROAD
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PREFACE

THIS revision, entitled the *Principles of Professional Conduct of the Medical Society of the State of New York*, defines the duties of doctors of medicine to the profession, to the patient, and to the public without regard to penalties for any infraction thereof. The various county societies are charged with the duty of carrying out these principles and deciding the degree of discipline for those found guilty of unprofessional conduct. All such cases should be investigated by the boards of censors, or committees on discipline of the county societies, in order to determine the underlying motive, habit, or intention of those accused. The reports, recommendations, or decisions of the boards or committees should express full justice to those who are guilty and mercy to the innocent. This procedure should be used for the purpose of raising the ethical standard of the practice of medicine in the several counties of the State.

The oath as administered by Hippocrates at the Island of Cos, Asia Minor, to his students in the fifth century B.C., the prayer by Maimonides, and the Geneva Declaration appear in appendix number one. At the present time the oath, or a modification of it, is administered to the graduates of the majority of the medical colleges of this State.

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THE PRINCIPLES OF PROFESSIONAL CONDUCT

CHAPTER I

General Principles

Section 1. The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration. Health care is the sole condition of its ministry, without stint or scruple. Whoever chooses this profession assumes the obligation to conduct himself in accord with its ideals. A doctor of medicine should be "an upright man, instructed in the art of healing." He must keep himself pure in character and be diligent and conscientious in caring for the sick. As was said by Hippocrates, "He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life."

Groups and Clinics

Section 2. These Principles of Professional Conduct shall apply to doctors of medicine as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, partnerships, corporations, or groups, by whatsoever name they may be known.

Advertising and Solicitation

Section 3. The Medical Society of the State of New York does not prohibit the use of advertising when used in making certain information known to the public, which is entitled to know the names of physicians, the types of their practice, the location of their offices, their office hours, and other useful information; i.e., biographical data, that will enable people to make a more informed choice of a physician.

The physician may furnish this information through the accepted local media for advertising; i.e., office signs, professional cards, dignified announcements, telephone directory listings, and reputable directories, which are open to all physicians on like conditions.

Solicitation of patients, directly or indirectly, by a physician, by groups of physicians, clinics, institutions or organizations is unethical. Solicitation includes: (1) the not always obvious devices of furnishing or inspiring newspaper, magazine or television comment concerning cases in which the physician, group, or institution has been, or is, concerned; (2) the use of statements or claims intended or likely to create inflated or unjustified expectations of favorable results; (3) the use of statements or claims that are self-laudatory and imply that the physician's skills are superior to other physicians engaged in his field or specialty of practice; or (4) the use of statements or claims that contain incorrect or incomplete facts or representations or implications that are likely to cause the average person to misunderstand or be deceived.

The Relationship of the Doctor of Medicine to Media of Public Information

Section 4. Many people, literate and well-educated, do not possess a special knowledge of medicine. Medical books and journals are not always easily accessible or readily understandable.

The medical profession considers it ethical for a doctor of medicine to meet the request of a component or constituent medical society to write, act, or speak for general readers or audiences. On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. In such a situation the doctor of medicine may be asked to release to the public some information, exhibit, drawing, or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.

An ethical doctor of medicine therefore may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published, and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies, and a list should be issued which identifies them and discloses the manner in which they may be reached. These provisions are made with full knowledge that the primary responsibility of the doctor of medicine is the welfare of his patient, but proper observation of these ethical provisions by the doctor of medicine concerned should protect him from any charge of self-aggrandizement.

Scientific articles written concerning hospitals, clinics, or laboratories which portray clinical facts and technics and which display appropriate illustrations may well have the commendable effect of inspiring public confidence in the procedure described. Articles should be prepared authoritatively and should utilize information supplied by the doctor of medicine or doctors of medicine in charge with the sanction of appropriate associates.

When any sort of medical information is released to the public, the promise of radical cures or boasting of cures or of extraordinary skill or success is unethical.

An institution may use means, approved by the medical profession in its own locality, to inform the public of its address and the special class, if any, of patients accommodated.

Patents, Commissions, Rebates, and Secret Remedies

Section 5. An ethical doctor of medicine will not receive remuneration from patents or on the sale of surgical instruments, appliances, and medicine, nor profit from a copyright on methods of procedures. The receipt of remuneration from patents or copyrights tempts the owners thereof to retard to inhibit research or to restrict the benefits derivable therefrom to patients, the public, or the medical profession. The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of patients is unethical.

An ethical doctor of medicine shall not have any financial interest in or own an optical dispensing facility such as a retail commercial store which sells optical products to the general public, unless it is established to the satisfaction of the local county medical society that such participation or ownership is necessary to meet the needs of the community.

An ethical doctor of medicine shall not have any financial interest in or own a pharmacy unless it is established to the satisfaction of the local county medical society that such ownership or participation is necessary to meet the needs of the patients of the community.

An ethical doctor of medicine does not engage in barter or trade in the appliances, devices, or remedies prescribed for patients but limits the sources of his professional income to professional services rendered the patient.

He should receive his remuneration for professional services rendered only in the amount of his fee specifically announced to his patient at the time the service is rendered or in the form of a subsequent statement, and he should not accept additional compensation, secretly or openly, directly or indirectly, from any other source, except as provided in Article VI, Section 3, of Chapter III.

The prescription or dispensing by a doctor of medicine of secret medicines or other secret remedial agents, of which he does not know the composition, or the manufacture or promotion of their use is unethical.

Evasion of Legal Restrictions

Section 6. An ethical doctor of medicine will observe the laws regulating the practice of medicine and will not assist others to evade such laws.

CHAPTER II

DUTIES OF DOCTORS OF MEDICINE TO THEIR PATIENTS

Standards, Usefulness, Nonsectarianism

Section 1. In order that a doctor of medicine may best serve his patients, he is expected to exalt the standards of his profession and to extend its sphere of usefulness. A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience. All voluntarily associated activities with cultists are unethical. A consultation with a cultist is a futile gesture if the cultist is wrongfully implied to have the same high grade of knowledge, training, and experience as is possessed by the doctor of medicine. Such consultation lowers the honor and dignity of the profession in the same degree in which it elevates the honor and dignity of those who are irregular in training and practice.

Guarding the Patient's Confidence

Section 2. Every patient should be treated with attention and consideration, and the confidences which doctors of medicine receive should be guarded with the most scrupulous fidelity and honor. The obligation extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by doctors of medicine except when required by statute law or by the courts.

Prognosis

Section 3. The doctor of medicine should be a minister of hope and comfort to the sick; however, he should not fail to give timely notice of dangerous manifestations to the family or friends of the patient and also to the patient, when necessary.

The Patient Must Not Be Neglected

Section 4. A doctor of medicine is free to choose whom he will serve. He should, however, respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service. Once having undertaken a case, the doctor of medicine should not neglect the patient, nor should he withdraw from the case without giving notice to the patient, his relatives, or his responsible friends sufficiently long in advance of his withdrawal to allow them to secure another medical attendant.

CHAPTER III

DUTIES OF DOCTORS OF MEDICINE TO EACH OTHER AND TO THE PROFESSION AT LARGE

Article I—Duties to the Profession

Upholding the Honor of the Profession

Section 1. A doctor of medicine is expected to uphold the dignity and honor of his vocation.

Membership in Medical Societies

Section 2. For the advancement of his profession, a doctor of medicine should affiliate with medical societies and contribute of his time, energy, and means so that these societies may represent the ideals of the profession.

Safeguarding the Profession

Section 3. Every doctor of medicine should aid in safeguarding the profession against admission to it of those who are deficient in moral character or education.

Section 4. A doctor of medicine should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession. Questions of such conduct should be considered, first, before proper medical tribunals in executive sessions or by special-duty appointed committees on ethical relations, provided such a course is possible and provided, also, that law is not hampered thereby. If doubt should arise as to the legality of the doctor of medicine's conduct, the situation under investigation may be placed before officers of the law, and the investigators may take the necessary steps to enlist the interest of the proper authority.

Article II—Professional Services of Doctors of Medicine to Each Other

Dependence of Doctors of Medicine on Each Other

Section 1. As a general rule, a doctor of medicine should not attempt to treat members of his family or himself. Consequently, a doctor of medicine should cheerfully and without recompense give his professional services to doctors of medicine or their dependents if they are in his vicinity except otherwise herein provided.

Compensation for Expenses

Section 2. When a doctor of medicine from a distance is called to advise another doctor of medicine about his own illness or about that of one of his family dependents, and the doctor of medicine to whom the service is rendered is in easy financial circumstances, a compensation that will at least meet the traveling expenses of the visiting doctor of medicine should be proffered him. When such a service requires an absence from the accustomed field of professional work of the visitor that might reasonably be expected to entail a pecuniary loss, such loss may, in part at least, be provided for in the compensation offered.

One Doctor of Medicine in Charge

Section 3. When the doctor of medicine or a member of his dependent family is seriously ill, he or his family should select one doctor of medicine to take charge of the case. The family may ask the doctor of medicine in charge to call in other doctors of medicine to act as consultants.

Article III—Duties of Doctors of Medicine in Consultations

Consultations Should be Encouraged

Section 1. Doctors of medicine should request consultations in perplexing cases, and the attending doctor of medicine should cheerfully consent to a consultation when desired by the patient or his representative.

Conduct in Consultations

Section 2. In consultations no insincerity, rivalry, or envy should be indulged. All due respect should be observed toward the doctor of medicine in charge of the case, and no statement or remark should be made which would unjustly impair the confidence reposed in him.

Punctuality

Section 3. The utmost punctuality should be observed by doctors of medicine in meeting for consultation; only a rare emergency should interfere with such an engagement.

Patient Referred to Consultant

Section 4. When a patient is sent to a consultant and the doctor of medicine in charge of the case cannot accompany the patient, the doctor of medicine in charge should provide the consultant with a history of the case, together with the doctor of medicine's opinion and outline of the treatment, or so much of this as may be of service to the consultant. As soon as possible after the consultant has seen the patient, he should address the doctor of medicine in charge and advise him of the results of the consultant's investigation. The opinions of both the doctor of medicine in charge and the consultant are confidential and must be so regarded by each.

Discussions in Consultation

Section 5. After the doctors of medicine called in consultation have completed their investigations, they and the doctor of medicine in charge should meet by themselves to discuss the course to be followed. Statements should not be made nor should discussions take place in the presence of the patient, his family, or his friends, unless all doctors of medicine concerned are present or unless all of them have consented to another arrangement.

Responsibility of Attending Doctor of Medicine

Section 6. The doctor of medicine in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such a change is warranted. However, after such a change, it is best to call another consultation; then the doctor of medicine in charge should state his reasons for departing from the course decided at the previous conference. When an emergency occurs during the absence of the doctor of medicine in charge, a consultant may assume authority until the arrival of the doctor of medicine in charge.

Disagreement in Consultation

Section 7. It may happen that the attending doctor of medicine and the consultant cannot agree in their views of the case or of the treatment to be pursued; with the consent of the patient another consultant may be called.

Consultant and Attendant

Section 8. When a doctor of medicine has acted as consultant in an illness, he should not become the doctor of medicine in charge in the course of that illness, except with the consent of the doctor of medicine who was in charge at the time of the consultation, unless the patient insists on the change.

Article IV—Duties of Doctors of Medicine in Cases of Interference

Misunderstandings to be Avoided

Section 1. A doctor of medicine, in his relationship with a patient who is under the care of another doctor of medicine, should not give hints relative to the nature and treatment of the patient's disorder, nor should a doctor of medicine do anything to diminish the trust reposed by the patient in his own doctor of medicine. In embarrassing situations, or whenever there seems to be a possibility of misunderstanding with a colleague, a doctor of medicine should seek a friendly interview with his fellow.

Social Calls on Patient of Another Doctor of Medicine

Section 2. When a doctor of medicine makes social calls on another doctor of medicine's patient, he should avoid conversation about the patient's illness.

Services to Patient of Another Doctor of Medicine

Section 3. A doctor of medicine should not take charge of, or prescribe for, another doctor of medicine's patient during any given illness (except in an emergency) until the other doctor of medicine has relinquished the case or has been formerly dismissed.

Criticism to be Avoided

Section 4. When a doctor of medicine does succeed another doctor of medicine in charge of a case, he should not disparage, by comment or insinuation, the one who preceded him. Such comment or insinuation tends to lower the confidence of the patient in the medical profession and so reacts against the patient, the profession, and the critic.

Emergency Cases

Section 5. When a doctor of medicine is called in an emergency because the personal or family doctor of medicine is not at hand, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the personal or family doctor of medicine. However, he should first report to the personal or family doctor of medicine the condition found and the treatment administered.

Precedence When Several Doctors of Medicine are Summoned

Section 6. In cases of sudden illness or accidents when several doctors of medicine are summoned, the doctor of medicine acting in such emergency should request that the family doctor of medicine be called and, upon his arrival, should withdraw in his favor.

A Colleague's Patient

Section 7. Whenever a doctor of medicine requests another doctor of medicine to attend his patients during his temporary absence from his practice, professional courtesy requires the acceptance of such appointment if consistent with his other duties. The doctor of medicine acting under such an appointment should give the utmost consideration to the interests and reputation of the absent doctor of medicine. All such patients should be restored to the care of the latter upon his return.

Substitute in Obstetric Work

Section 8. When a doctor of medicine attends a woman who is in labor because the one who was engaged to attend her is absent, the doctor of medicine summoned in the emergency should relinquish the patient to the first engaged on his arrival. The one in attendance is entitled to compensation for the professional services he may have rendered.

Article V—Disputes Between Doctors of Medicine—Arbitration

Section 1. Whenever there arises between doctors of medicine a grave difference of opinion, or of interest, which cannot be promptly adjusted, the dispute should be referred for arbitration, preferably to an official body of a county medical society.

Article VI—Compensation

Limits of Gratuitous Service

Section 1. Indigency of a patient, and the obligation of doctors of medicine to attend one another and the dependent members of the families of one another, should command the gratuitous services of a doctor of medicine. Institutions and organizations for mutual benefit or for accident, sickness, and life insurance, or for analogous purposes should meet such costs are covered by the contract under which the service is rendered.

Conditions of Medical Practice

Section 2. A doctor of medicine should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patient concerned might be deprived of immediately necessary care.

Contract Practice

Section 3. Contract practice as applied to medicine means the practice of medicine under an agreement between a duly licensed doctor of medicine or a group of doctors of medicine, as principals or agents, and a corporation, organization, political subdivision, or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for salary or for a fixed rate per capita.

Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Professional Conduct or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered. Contract practice which allows diversion of fees for professional medical services to a hospital, organization, or political subdivision is unethical.

Free Choice of Doctor of Medicine

Section 4. The right of the patient freely to choose his doctor of medicine must be preserved and maintained. Nothing in any individual or group method of practice must be permitted to interfere with this right.

Free choice of doctor of medicine is defined as the unrestricted freedom of a patient to choose his own doctor of medicine. The interjection of a third party who has a valid interest or who intervenes between the doctor of medicine and the patient does not per se cause a contract to be unethical. A third party has a valid interest when, by law or volition, the third party assumes legal responsibility and provides for the cost of medical care and indemnity for occupational disability.

If, however, the third party be an organization or corporation which agrees to provide medical and/or surgical services through the medium of individual or group practice, payment to the doctors of medicine under contract being either on an indemnity or a per capita basis, a requirement restricting choice of doctor of medicine to either the individual or group practitioners under contract vitiates the subscriber's right to free choice of doctor of medicine. This is against the best interests of the public and of the medical profession.

Commissions

Section 5. When a patient is referred by one doctor of medicine to another for consultation or for treatment, whether the doctor of medicine in charge accompanies the patient or not, the giving or receiving of a commission by whatever term it may be called or under any guise or pretext whatsoever is unethical.

Purveyal of Medical Service

Section 6. Except where permitted by law, and only in the manner permitted and to the extent permitted by law, any doctor of medicine who in any way contributes to the coercion or exploitation of a fellow physician is unethical.

Proration of Fees

Section 7. It is not unethical for a fee to be prorated among two or more doctors of medicine when such physicians have actively participated in the medical and/or surgical care of a patient and each physician's fee is commensurate with the services he has rendered. The patient who has received such joint services shall be advised of the participation of each physician and shall receive a separate, itemized statement from each. Such proration would be considered ethical if it was limited to instances where a contracted fee payment for a service has been made by an insurance company.

CHAPTER IV
THE DUTIES OF DOCTORS OF MEDICINE TO THE PUBLIC

Doctors of Medicine As Citizens

Section 1. Doctors of medicine, as good citizens, possessed of special training, should promote the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the intrests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations.

Public Health

Section 2. Doctors of medicine should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases. At all times the doctor of medicine should notify the constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules, and regulations of the health authorities. When an epidemic prevails, a doctor of medicine must continue his labors without regard to the risk of his own life.

Pharmacists

Section 3. Doctors of medicine should recognize and promote the practice of pharmacy as a profession and should recognize the cooperation of the licensed pharmacist in education of the public concerning the practice of ethical and scientific medicine and pharmacy.

Conclusion

These Principles of Professional Conduct have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community. The life of the doctor of medicine, if he is capable, honest, decent, courteous, vigilant, and a follower of the Golden Rule, will be in itself the best exemplification of ethical principles.

Enforcement of the Principles of Professional Conduct

Component county medical societies should cooperate with the properly constituted authorities in the enforcement of the laws of the State of New York and of their respective localities relating to the public health and to the practice of medicine and should report promptly to such authorities any evidence received by them indicating any violation of such laws. The commission of an act or acts by a doctor of medicine which would subject him to reprimand or discipline or which would subject his license to practice medicine to revocation, suspension, or annulment shall constitute a violation of these Principles of Professional Conduct.

Amendments or Alterations

Any component county medical society may adopt other or amend or alter these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Bylaws of the Medical Society of the State of New York.

Enforcement, Discipline, and Punishment

Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society, shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws, provisions adopted in accordance with its own constitution and bylaws and in accordance with the Bylaws of the Medical Society of the State of New York, shall (*a*) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (*b*) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction.

APPENDIX I

The Oath

I swear by Apollo the physician and Aesculapius and Hygeia and Panacea and all the gods and goddesses that according to my ability and judgment I will keep this Oath and this stipulation—to reckon him who taught me this Art equally dear to me as my parents—to share my substance with him and relieve his necessities if required—to look upon his offspring in the same footing as my own brothers and to teach them this Art if they shall wish to learn it without fee or stipulation—and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons and those of my teachers and to disciples bound by a stipulation and oath, according to the Law of Medicine, but to none others.

I will follow the system of regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times. But should I trespass and violate this Oath, may the reverse be my lot.

Hippocrates
(460–357 B.C.)

Prayer

I begin once more my daily work. Be thou with me, Almighty Father of Mercy, in all my efforts to heal the sick. For without Thee, man is but a helpless creature. Grant that I may be filled with love for my art and for my fellowmen. May the thirst for gain and the desire for fame be far from my heart. For these are the enemies of Pity and the Ministers of Hate. Grant that I may be able to devote myself, body and soul to thy children who suffer from pain.

Preserve my strength, that I may be able to restore the strength of the rich and the poor, the good and the bad, the friend and the foe. Let me see in the sufferer the man alone. When wiser men teach me, let me be humble to learn, for the mind of man is so puny and the art of healing is so vast. But when fools are ready to advise me or to find fault with me, let me not listen to their folly. Let me be intent upon one thing, O Father of Mercy, to be always merciful to thy suffering children.

May there never rise in me the notion that I know enough, but give me strength and leisure and zeal to enlarge my knowledge. Our work is great and the mind of men presses forward forever. Thou has chosen me in thy grace, to watch over the life and death of Thy creatures. I am about to fulfill my duties. Guide me in this immense work so that I may be of avail.

Maimonides
(1135–1204 A.D.)

Declaration of Geneva

At the Time of Being Admitted as Member of the Medical Profession:

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due.

I will practice my profession with conscience and dignity.

The health of my patient will be my first consideration.

I will respect the secrets which are confided in me.

I will maintain by all means in my power, the honor and the noble traditions of the medical profession.

My colleagues will be my brothers.

I will not permit considerations of religion, nationality, race, party politics, or social standing to intervene between my duty and my patient.

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely, and upon my honor.

Adopted by the General Assembly
of the World Medical Association
at Geneva, Switzerland, September, 1948.

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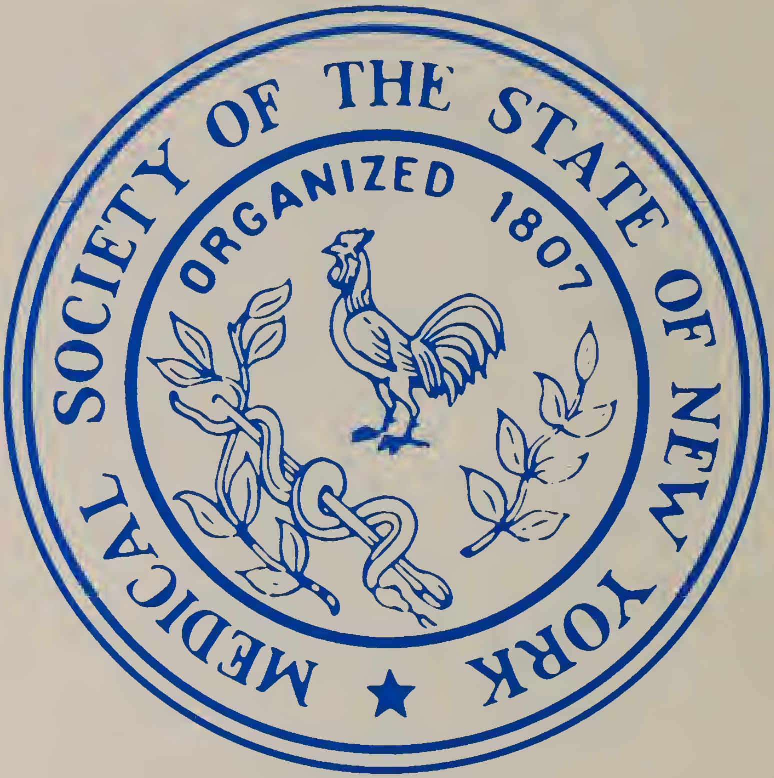
ORGANIZED 1807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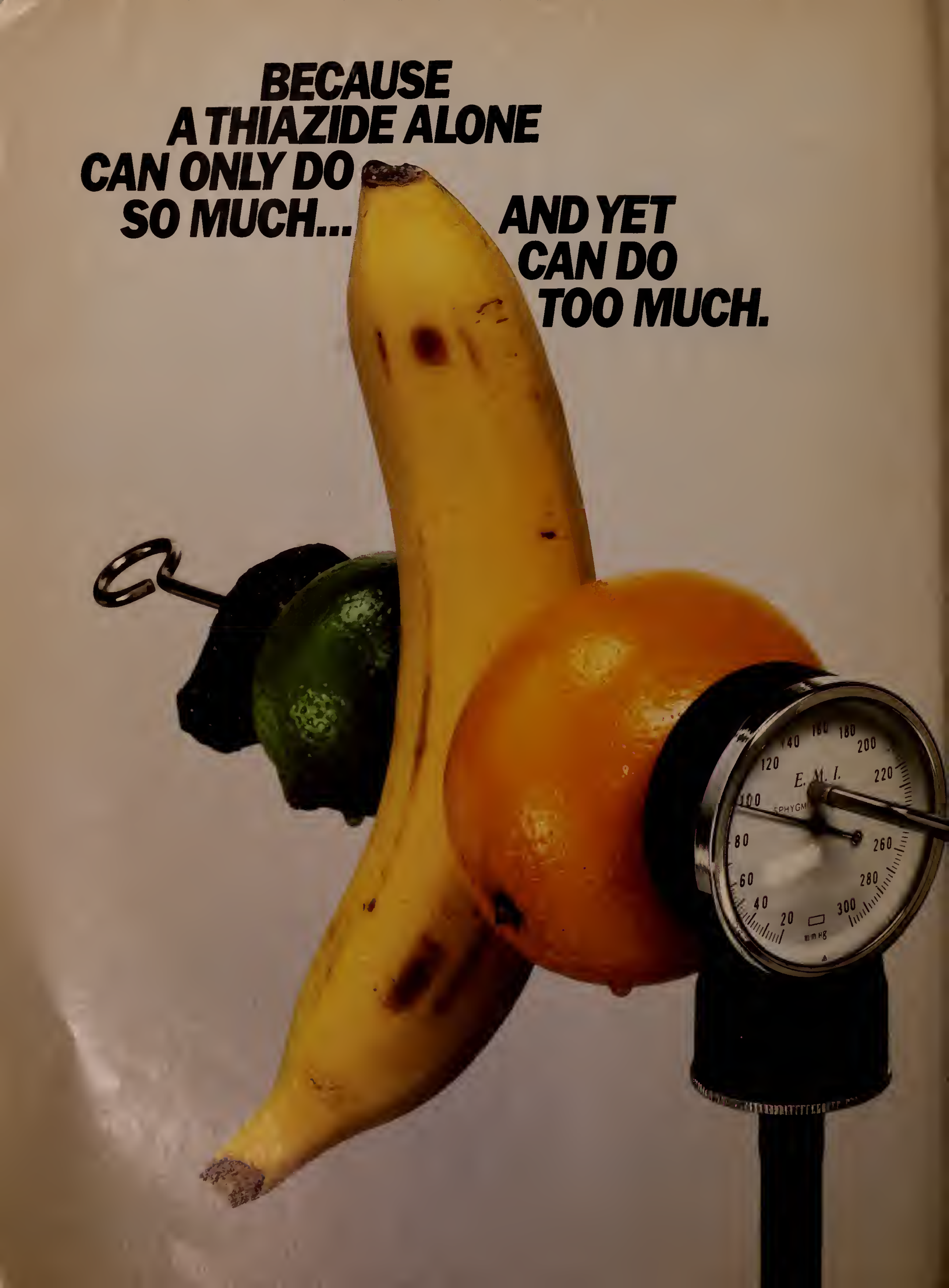
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INCREASE CONTROL WITHOUT INCREASING POTASSIUM PROBLEMS.

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Many times, a diuretic alone can't keep hypertension in check. INDERIDE, however, can pick up where thiazide therapy leaves off.

The combination of propranolol HCl, the world's most trusted beta blocker, and hydrochlorothiazide, the standard among diuretics, enables INDERIDE to exert an additive antihypertensive effect.[1,2] In fact, a propranolol/hydrochlorothiazide regimen maintained blood pressure below 90 mm Hg in 81.8% to 86.4% of patients followed for 6 to 18 months of therapy.[1]

Low thiazide dosage means reduced risk of hypokalemia.

When thiazides are prescribed in doses greater than 50 mg/day, the potential for hypokalemia increases substantially. What's more, the greater the fall in serum K^+, the greater the risk of hypokalemia-induced PVCs.[3,4]

With INDERIDE, the additive hypotensive effect of propranolol HCl allows the effective dose of hydrochlorothiazide to be kept low (25 mg b.i.d.). And by lowering the daily dose of diuretic, INDERIDE also lowers the potential for diuretic-induced side effects. Potassium problems are less likely to occur—yet blood pressure can be controlled consistently.

INDERIDE®

Each tablet contains INDERAL® (propranolol HCl) 40 mg or 80 mg, and hydrochlorothiazide 25 mg

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When you know you need more than a thiazide.

Please see Brief Summary of Prescribing Information on following page.

BRIEF SUMMARY
(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERIDE®

BRAND OF
propranolol hydrochloride
(INDERAL®)
and hydrochlorothiazide

No. 474—Each INDERIDE®-40/25 tablet contains	
Propranolol hydrochloride (INDERAL®)	40 mg
Hydrochlorothiazide	25 mg
No. 476—Each INDERIDE®-80/25 tablet contains:	
Propranolol hydrochloride (INDERAL®)	80 mg
Hydrochlorothiazide	25 mg

> **WARNING:** This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

DESCRIPTION: INDERIDE combines two antihypertensive agents: INDERAL (propranolol hydrochloride), a beta-adrenergic blocking agent, and hydrochlorothiazide, a thiazide diuretic-antihypertensive.

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning.)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in: 1) bronchial asthma, 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE. Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy. Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers: Thiazides appear in breast milk. If the use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (e.g., increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular:* bradycardia; congestive heart failure; intensification of AV block, hypotension, paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

Hydrochlorothiazide: *Gastrointestinal:* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System: dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular: orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions.

Other: hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION: The dosage must be determined by individual titration (see boxed warning).

Hydrochlorothiazide is usually given at a dose of 50 to 100 mg per day. The initial dose of propranolol is 40 mg twice daily and it may be increased gradually until optimum blood pressure control is achieved. The usual effective dose is 160 to 480 mg per day.

One to two INDERIDE tablets twice daily can be used to administer up to 320 mg of propranolol and 100 mg of hydrochlorothiazide. For doses of propranolol greater than 320 mg, the combination products are not appropriate because their use would lead to an excessive dose of the thiazide component.

When necessary, another antihypertensive agent may be added gradually beginning with 50 percent of the usual recommended starting dose to avoid an excessive fall in blood pressure.

OVERDOSAGE OR EXAGGERATED RESPONSE: The propranolol hydrochloride (INDERAL) component may cause bradycardia, cardiac failure, hypotension, or bronchospasm.

The hydrochlorothiazide component can be expected to cause diuresis. Lethargy of varying degree may appear and may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function, and in the absence of significant serum electrolyte changes or dehydration. The mechanism of central nervous system depression with thiazide overdosage is unknown. Gastrointestinal irritation and hypermotility can occur; temporary elevation of BUN has been reported, and serum electrolyte changes could occur, especially in patients with impairment of renal function.

TREATMENT: The following measures should be employed: GENERAL—If ingestion is, or may have been, recent, evacuate gastric contents taking care to prevent pulmonary aspiration. BRADYCARDIA—Administer atropine (0.25 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously. CARDIAC FAILURE—Digitalization and diuretics. HYPOTENSION—Vasopressors, e.g., levarterenol or epinephrine. BRONCHOSPASM—Administer isoproterenol and aminophylline. STUPOR OR COMA—Administer supportive therapy as clinically warranted. GASTROINTESTINAL EFFECTS—Though usually of short duration, these may require symptomatic treatment. ABNORMALITIES IN BUN AND/OR SERUM ELECTROLYTES—Monitor serum electrolyte levels and renal function, institute supportive measures as required individually to maintain hydration, electrolyte balance, respiration, and cardiovascular-renal function.

HOW SUPPLIED: *No. 474*—Each INDERIDE®-40/25 tablet contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000. Also in unit dose package of 100.

No. 476—Each INDERIDE®-80/25 tablet contains 80 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000. Also in unit dose package of 100.

References: 1. Veterans Administration Cooperative Study Group on Antihypertensive Agents: J A M A *237* 2303 (May 23) 1977 2. Bravo, E L., Tarazi, R C., and Dustan, H P. N Engl J Med *292* 66 (Jan 9) 1975 3. Hollifield, J W., and Slaton, P.E. Acta Med Scand. [Suppl.] *647* 67, 1981 4. Holland, O B., Nixon, J V., and Kuhnert, L. Am J. Med *70* 762 (Apr.) 1981.

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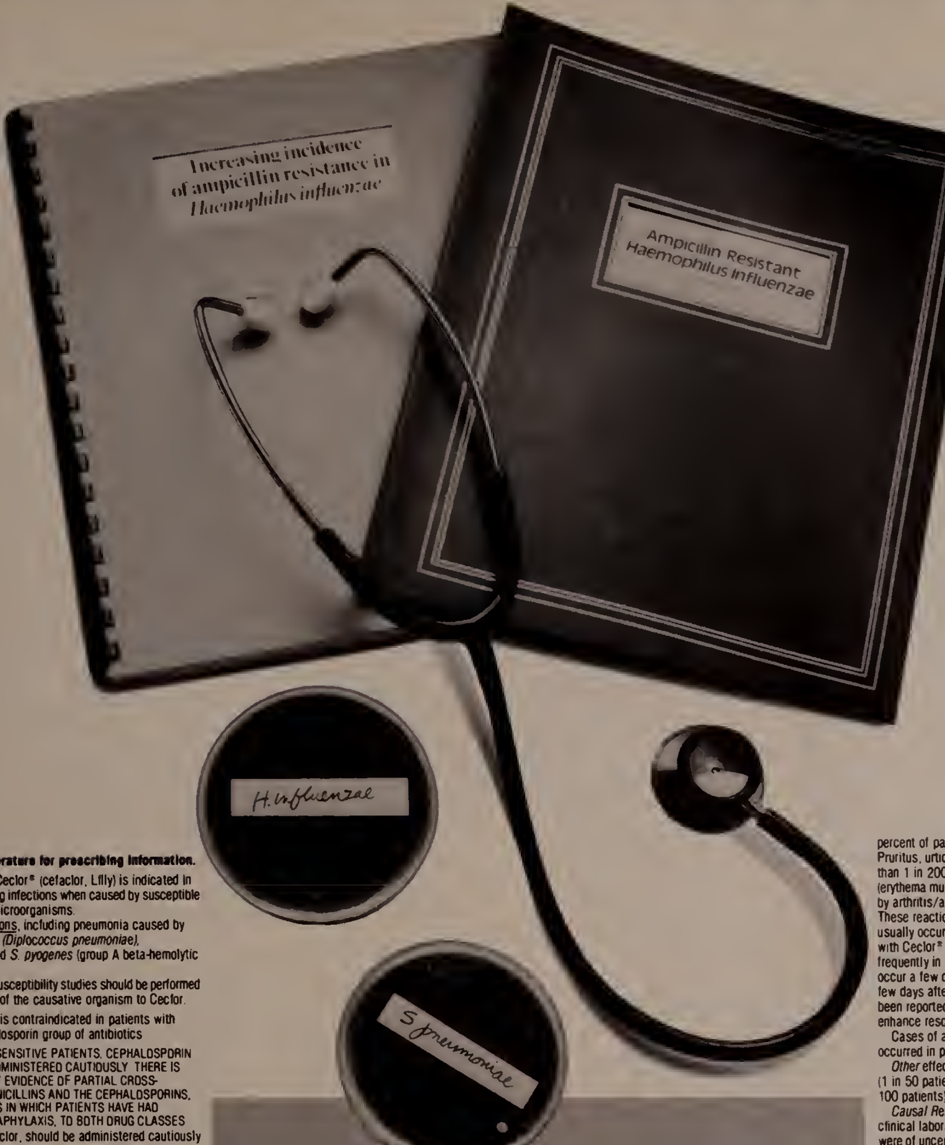
An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S pneumoniae

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms.

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established.

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90)

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae*[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

References

1 Antimicrob Agents Chemother, *8*:91, 1975.
2 Antimicrob Agents Chemother, *11*:470, 1977.
3. Antimicrob Agents Chemother, *13*:584, 1978.
4 Antimicrob. Agents Chemother, *12* 490, 1977
5 Current Chemotherapy (edited by W Siegenthaler and R. Luthy), II 880. Washington, D C.: American Society for Microbiology, 1978
6 Antimicrob Agents Chemother, *13*:861, 1978
7 Data on file, Eli Lilly and Company
8 Principles and Practice of Infectious Diseases (edited by G.L. Mandell, R.G Douglas, Jr, and J E Bennett), p 487. New York John Wiley & Sons, 1979.

Lilly

Additional information available to the profession on request from Eli Lilly and Company. Indianapolis, Indiana 46285.

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Abstracts

Preisler, H. D., and Higby, D. J.: Chronic myelocytic leukemia; treatment and biology, **New York State J. Med. 82:** 703 (Apr.) 1982.

Chronic myelocytic leukemia, although a relatively rare hematologic malignancy, is an intriguing disorder. Although the course of the generally benign chronic phase lasts for two and one-half to three and one-half years there is in fact significant variability in patient survival; 20 percent of patients expire within one and one-half years of diagnosis while another 20% are still in the chronic phase of the disease five years after diagnosis. Ultimately the majority of patients enter a universally fatal phase resembling acute leukemia. The presence of the Philadelphia chromosome can be used as a marker for evaluating and following the disease through its chronic and acute phases. Cell surface markers may provide additional diagnostic information. Therapy during the chronic phase is fairly standard with busulfan being almost universally used. Given the poor responsiveness of blast crisis and other transformation events to chemotherapy, attention has been turned to hematopoietic transplantation for the treatment of end-stage disease. For theoretical reasons transplantation prior to the clinical onset of blast crisis may be preferable.

Fulop, M.: Lactic acidosis, **New York State J. Med. 82:** 712 (Apr.) 1982.

The clinical problem of lactic acidosis is reviewed, with particular attention to its pathogenesis, classification, and treatment. Lactic acidosis is the commonest type of acute metabolic acidosis and is associated with an increased serum anion gap. In adults, apart from its occurrence during exercise, it is most commonly associated with disorders that cause, or are accompanied by, hypoperfusion and hypoxia. The most important considerations in treating the metabolic disorder in most patients are to recognize and treat the underlying clinical disorder that caused the lactic acidosis.

Gordon, W.: Carcinoma of the Esophagus: Life-long follow-up of 92 patients, **New York State J. Med. 82:** 720 (Apr.) 1982.

After diagnosis of carcinoma of the esophagus, 92 patients were followed for the remainder of their lives. The degree of dysphagia, esophageal fistula, esophagoscopy, and bronchoscopy are described. Choice of treatment is explained and the results of treatment are recorded and discussed. If a large dose was tolerated, radiation completely relieved dysphagia in many patients. For tumors situated more than 25 cm from the upper alveolar margin, excisional surgery, if survived, almost always eliminated dysphagia, produced a greater extension of life than did radiotherapy, and appeared to cure 3 patients who lived 11, 15, and 21 years, respectively, after esophagectomy.

Hartman, D. K.: CAM vision stimulator: a controlled study, **New York State J. Med. 82:** 723 (Mar.) 1982.

A controlled study of a new method of therapy for amblyopia, referred to as the CAM Vision Stimulator, was undertaken. The method used is discussed and the results evaluated. There was improvement in the visual acuity of some patients but this improvement was concluded to be due to the effect of detailed close work while using short-term occlusion.

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J-9043-4 July 1981

Abstracts in Interlingua

Preisler, H. D., e Highby, D. J.: Leucemia myelocytic chronic; tractamento e biologia, **New York State J. Med. 82:** (Martio) 1982.

Le leucemia myelocytic chronic, ben que es un morbo maligne relativemente rare, es un entitate intrigante. Ben que le curso del phase chronic es generalmente benigne e dura de 2½ a 3½ annos, le superviventia del patientes es significativemente variable. De omne patientes, 20 pro cento moreva intra le 2½ annos depost le diagnose; altere 20 pro cento superviveva 5 annos in phase chronic. Finalmente, le majoritate del patientes entra a un phase universalmente fatal similar al del leucemia acute. Le presentia del chromosoma Philadelphia pote esser usate como marcator pro evalutar e seguir le curso del morbo en su phase chronic e acute. Le marcator cellulari superficial pote proportionar un information diagnostic additive. Le therapia durante le phase chronic es regularmente standard, con busulfan usate quasi universalmente. Le responsa pauvre del crisis blastic e altere transformationes verso le chimotherapia dirige le attention al transplantation hemopoietic per le tractamento del stato final. Per rationes theoretic, le transplantation ante del principio clinic del crisis blastic es preferibile.

Fulop, M.: Acidosis lactic, **New York State J. Med. 82:** 712 (April) 1982.

Le problema clinic del acidosis lactic es revistite, con attention particulari a su pathogenesis, classification e tractamento. Le acidosis lactic es le typo plus commun de acidosis metabolic acute, e es associate con un augmento del absentia anionic seric. In adultos, independentemente de su disvelopamento durante le exercitios, es plus communmente associate con morbos causante o accompaniante le hypoperfusion e le hypoxia. Le consideration plus importante in le tractamento de iste morbo metabolic in le plus parte del patientes es le recognoscimento e tractamento del morbo clinic subjacente causante del acidosis lactic.

Gordon, W.: Carcinoma del esophagus; observation permanente de 92 patientes, **New York State J. Med. 82:** 720 (April) 1982.

Depost le diagnose de carcinoma del esophagus, 92 patientes esseva observate durante le vita restante. Le grado de dysphagia, le fistulas esophagic, le esophagoscopia e le bronchoscopia es describite. Le selection del tractamento es explicate e le resultatos therapeutic es registrate e commentate. Si un dose elevate es tolerate, le radiation meliora completemente le dysphagia in multe patientes. Per le tumores situate plus distante que 25 cm del margine alveolari superiori, le excision chirrurgic, si es tolerate, quasi sempre elimina le dysphagia e prolonga le vita plus que le radiotherapia. Etiam, pare haber curate 3 patientes que poteva vivir 11, 15 e 21 annos, respectivemente, depost le esophagectomia.

Hartman, D. K.: Stimulator CAM del Vision; studio controlate, **New York State J. Med. 82:** 000 (Martio) 1982.

Un studio controlate de un methodo therapeutic nove del ambliopia, denominate Stimulation CAM del Vision, ha essite facite. Le methodo usate es commentate e le resultatos evalutate. Esseva observate un melioramento del acutessa visual de certe patientes, mais iste melioramento, esseva concludite, esseva debite al effecto del travalio detaliate e proxime durante le occlusion breve que esseva usate.

Translated by Edwardo I. Juliet, M.D.

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Professor of Dermatology & Pathology, & Director, Department of Dermatopathology, New York University School of Medicine, New York City. *Diseases in Dermatology That Don't Exist.*

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Professor of Medicine & Pharmacology, Columbia University College of Physicians & Surgeons, New York City. *Prophylaxis & Medical Management of Life-Threatening Ventricular Arrhythmias.*

Robert E. Carroll, M.D.

Professor of Orthopedic Surgery, Columbia University College of Physicians & Surgeons; Director, Hand Surgery, Columbia-Presbyterian Medical Center, New York City. *Primary or Secondary Repair of Flexor Tendon Injuries in the Hand.*

Harold Carron, M.D.

Professor of Anesthesiology; Organizer, Director & Consultant of Pain Clinic, University of Virginia Medical Center, Charlottesville. President, American Society of Regional Anesthesia. *Outpatient Management of Pain: The Anesthesiologist's Holistic Viewpoint.*

Robert S. Litwak, M.D.

Governor, American College of Chest Physicians; Professor of Surgery & Chief, Division of Cardiothoracic Surgery, Mount Sinai Medical Center, New York City. *Howard M. Lilienthal, M.D.: A Vignette.*

Joseph Ransohoff, M.D.

Professor & Chairman, Department of Neurosurgery, New York University-Bellevue Medical Center, New York City. *Neurosurgical Indications for Surgery in Acute Lumbo-Spine Injuries.*

Guy F. Robbins, M.D.

Consultant to Breast Service, Department of Surgery, & Former Director of Cancer Control, Memorial Sloan-Kettering Cancer Center, New York City. *Rehabilitation in Breast Surgery.*

Richard Smith, M.D.

Professor & Chairman, Department of Ophthalmology, Albany Medical College, Albany. *Radial Keratotomy.*

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Nominations are invited from undergraduate and graduate medical students and faculty. Names of candidates, along with substantiating material should be sent to:

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Deadline for submitting nominations is May 15.

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Wyeth Laboratories 697, 698, 699, 700, 701, 702

Books Received*

CRITICAL CARE

Critical Care for Surgical Patients. Edited by John M. Beal, M.D. New York, Macmillan Publishing Co., Inc., 1982. Illustrated, 606 pages. Cloth, $45.00.

Basic principles in the management of the critically ill surgical patient.

NEUROANATOMY

Atlas of the Central Nervous System in Man. Third edition. By Richard A. Miller, Ph.D., and Ethel Burack, Ph.D., M.D. Baltimore, Md., Williams & Wilkins, 1982. Illustrated, 81 double pages. Cloth, $24.00.

An annotated text, as presented in the course in neuroanatomy at the Albany Medical College and dedicated to the memory of Robert Sidney Cunningham.

POISONING

Toxicologic Emergencies: A comprehensive handbook in problem solving. Second edition. Edited by Lewis R. Goldfrank, M.D. New York, Appleton-Century-Crofts, 1982. Hardcover, 432 pages. $34.50.

A series of articles reprinted from the journal, *Hospital Physician*, dealing with the diagnosis, treatment, and critical care management of the poisoned patient.

NEUROSURGERY

Clinical Neurosurgery. Volume 28. Edited by Peter W. Carmel, M.D. Baltimore, Md., William & Wilkins, 1981. Illustrated, 607 pages. Hardcover, $48.00.

Proceedings of the 30th Annual Congress of Neurological Surgeons, Houston, Texas, October, 1980.

PREGNANCY COMPLICATIONS

Urology in Pregnancy. Edited by Selwyn A. Freed, M.D., and Norman Herzig, M.D. Baltimore, Md., William & Wilkins, 1982. Illustrated, 255 pages. Cloth, $35.00.

An effort to integrate the understanding of the relationship of urologic disorders to pregnancy.

* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

New York State Journal of Medicine

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Letters to the Editor

Physician fee survey

To the Editor: Your "Current Opinion" on a 30-year comparison of physicians' fees (*Medical Tribune*, Dec. 10) was very interesting. I am glad Dr. Meymandi took the trouble and effort to look at fees and to clarify an issue which is of concern to all of us and to the American public.

In these days of concern about medical costs and inflation, it may be worthwhile to have those figures publicized to a broad audience outside the medical profession so consumers can have a more accurate idea of how much we really charge.

ROBERTO F. GLUCKMANN, M.D.
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Reprinted from *Medical Tribune*, February 4, 1981.

Dercum's syndrome

To the Editor: The suggestion is put forward that the designation Dercum's syndrome be used for the clinical condition at one time called Dercum's disease—adiposis dolorosa. Although Dercum's disease is no longer considered to be a disease entity with a specific etiology, pathology, and prognosis, the clinical picture continues to exist.

When Cushing's syndrome or Cushing's disease is suggested with reference to a patient, lines for investigation come to mind. Dercum means nothing to recent generations of physicians. To an older practitioner faced with tender fat, investigation of the thyroid status is almost second nature. For instance, in a recent situation thyroid radiation ten years before was disclosed, and TSH was elevated; TSH came down to normal and pain was decreased with synthroid.

The syndrome has an etiology: thyroid dysfunction; a pathology: thyroid sclerosis and pressure atrophy of nerves by fat deposition; and a treatment: thyroid substitution. Although "Dercum's Disease" (of 1897–1902) no longer is considered a disease as such, the condition continues and is entitled to syndrome characterization. Recently, in the November, 1981, edition of *American Family Physician*, p. 155, there was presented with pictures, "Dercum's Disease"—Adiposis Dolorosa, in a 42-year-old retired nurse weighing 360 pounds.

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Comment on CME

Confine me not to papers and books
Patient care—and Ethics—there too one looks.

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Is the cost of medical care too high?

To the Editor: I strongly support Dr. M. G. Jacoby's[1] intelligent response to Dr. John T. Prior's[2] comments on health care expenditures; but I believe that the issues deserve examination of the original premise, that is, that health care costs are too high. It seems to have occurred to no one, other than this author, that the enormity of our expenditures on biomedical research and health care may well be one of the brightest spots on the horizon of our civilization. Perhaps the first fact worthy of realization by both the socialist and the capitalist health planners is that our phenomenal biomedical technology, and its humanitarian applications, are, and indeed deserve to be, very costly. I claim no economic expertise, but I wonder about our annual expenditures on McDonald's hamburgers, Coca Cola, automobiles, armaments, and the various hardwares predestined to adorn tomorrow's junk yards. If medical and related expenditures, as measured against these segments of our economy, continue to appear proportionately high, perhaps we should congratulate ourselves. Unfortunately, I suspect that the disproportionately high death/life expenditure ratio detailed by Szent-Gyorgyi in *The Crazy Ape*,[3] and the junk/life ratio, which should seem all too obvious to everybody, remain with us, terrifyingly, worse than ever.

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1. Jacoby, M. G.: Dr. Frankenstein, I Presume?, New York State J. Med. 81: 1593 (Oct.) 1981.

2. Prior, J. T.: Dr. Frankenstein, I Presume? Who's To Kill, or Should We Kill The Monster We Have Created? ibid. 81: 1266 (July) 1981.

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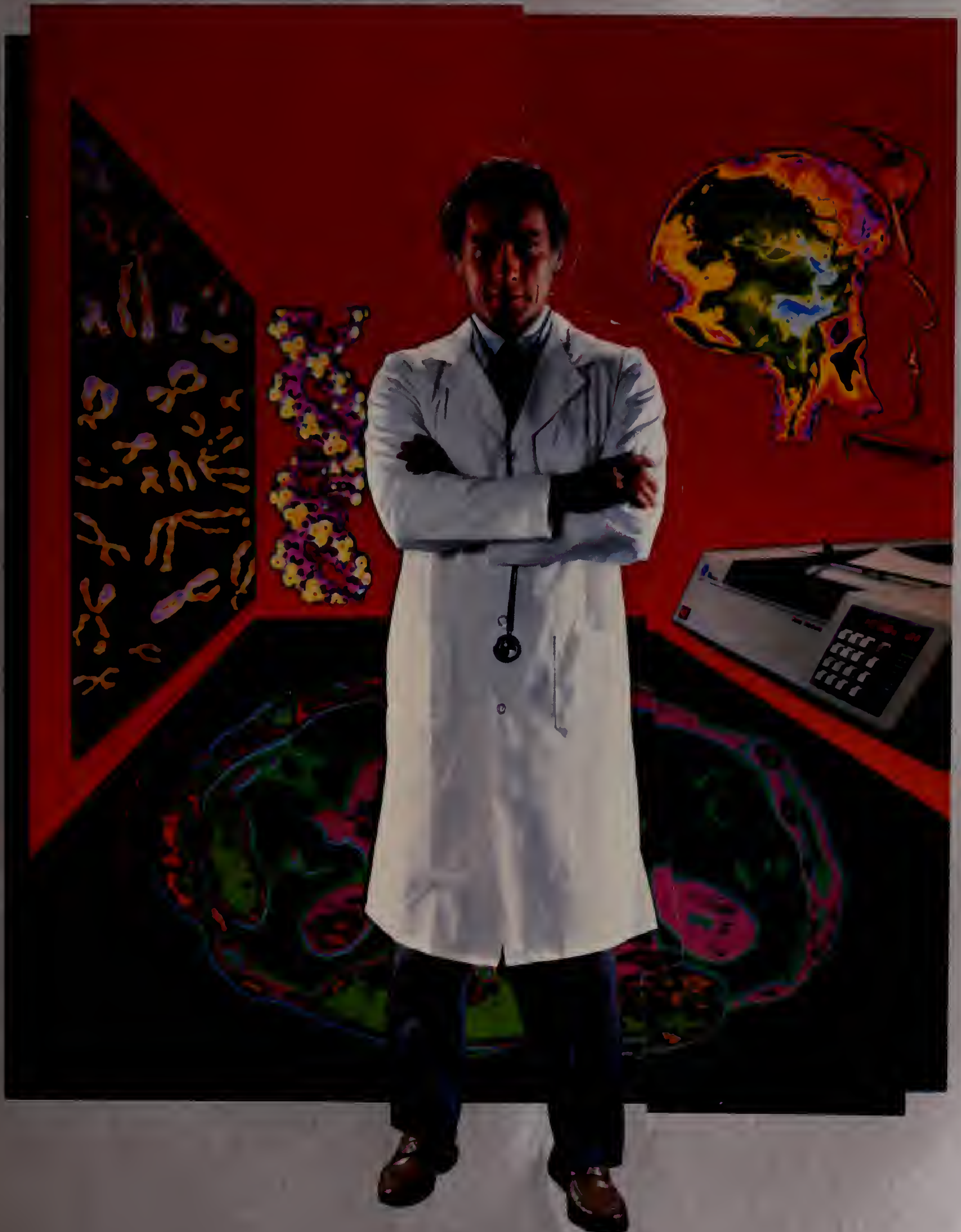
The truth about physician fees—a 30-year survey

To the Editor: For decades, American physicians have carried the burden of an ill-conceived and mythical notion that they are: (1) paid excessively and (2) are culprits for the high cost of medical care. In the service of consumers of the health-care delivery system—our patients—I have compiled, with the help of the U.S. Department of Labor, data and indices that are most revealing.

I have taken 18 randomly selected jobs, giving the average wage in 1950 and at the end of 1979. To calculate the figures, I have taken the number of working hours needed in each job category to purchase two randomly chosen

In an era of change,
An Agent of Change...



Your patients are changing

. . . the population is getting older, more people are holding a second job, patients are more concerned about the medications they take.

Medical knowledge is changing

. . . there are diagnostic resources and surgical techniques undreamed of only a few years ago, biomedical engineering, new insights also into the action of drugs.

In this changing environment, the way you are practicing medicine is changing too...

Twenty years ago, the benzodiazepines represented a real step forward in the management of anxiety and tension states. In recent years, however, concern about drug accumulation and clearance has led physicians to re-evaluate their use of these agents. In light of current knowledge, many clinicians are changing from multi-metabolite benzodiazepines to Ativan® (lorazepam)—a metabolically and pharmacokinetically distinctive agent that offers clinical advantages which more closely meet the expectations of a modern anxiolytic.

Ativan®: Agent of Change
(lorazepam)

Ativan: Accumulation to steady state
extends for only 2-3 days
No active metabolites
4
3
2
1

because...

it's shorter acting, with less accumulation*

In contrast to long-acting benzodiazepines, Ativan has a short, 12-hour half-life, and no active metabolites. In multiple-dose therapy, Ativan accumulates for only two to three days before reaching steady state; the long-acting benzodiazepines—diazepam CIV, chlordiazepoxide CIV, clorazepate CIV and prazepam CIV—with their active metabolites—accumulate for as long as 20 days, increasing the likelihood of excessive sedation.

it doesn't interact with drugs metabolized by P450 microsomal enzymes

Most benzodiazepines undergo oxidative metabolism and thus utilize the hepatic microsomal enzyme system. Ativan® (lorazepam), however, is metabolized by glucuronidation and does not compete with other drugs for cytochrome P450. Thus, when Ativan is given with Tagamet® (cimetidine), for example, clearance is not delayed, nor sedation increased†—unlike reported observations with patients on other benzodiazepines.[1-5]

it gives you greater control of therapy

The short half-life of Ativan® facilitates more rapid response to dosage adjustments, allowing you to titrate therapy to patients' changing needs. Also, once you decide to discontinue Ativan, it will be out of your patient's system four days after the final dose—in contrast to long-acting benzodiazepines and their active metabolites which take as long as two weeks to be totally eliminated.

Ativan™
for (lorazepam) Ⓒ IV
Anxiety

See important information on following page

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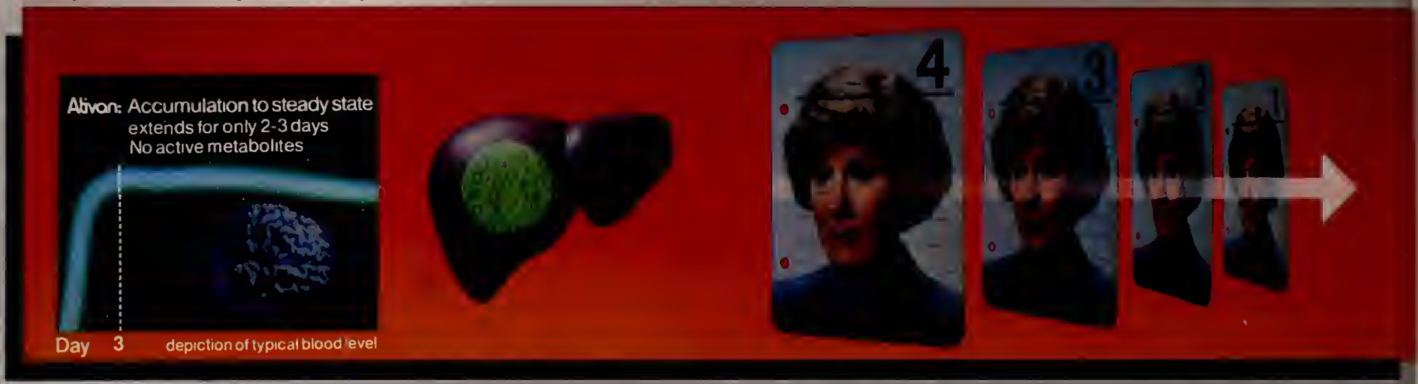
1 Klotz U, Reimann I: N Engl J Med 302:1012-1014, 1980
2 Desmond PV, Patwardhan RV, Schenker S, et al: Ann Intern Med 93:266-268, 1980
3 Patwardhan RV, Yarborough GW, Desmond PV, et al: Gastroenterology 79:912-916, 1980
4 Sellers EM, Naranjo CA, Peachey JE: N Engl J Med 305:1255-1262, 1981
5 Ruffalo RL, Thompson JF, Segal JL: South Med J 74:1075-1078, 1981

* Pharmacokinetics cannot as yet be directly related to efficacy.

† All benzodiazepines produce additive effects when given with CNS depressants such as barbiturates or alcohol.

Ativan®: Agent of Change

(lorazepam) Ⓒ


Ativan: Accumulation to steady state
extends for only 2-3 days
No active metabolites
Day 3
depiction of typical blood level
4
3
2
1

- Little accumulation lessens likelihood of excessive sedation
- Unlike most benzodiazepines, Ativan does not compete with other drugs, such as Tagamet® (cimetidine), for the microsomal enzyme system during biotransformation
- Metabolism not affected by age or liver dysfunction
- Short half-life provides greater control of therapy
- Promptly eliminated from patient's system after discontinuation
- Specifically evaluated and found effective for anxiety associated with cardiovascular and gastrointestinal disorders
- A distinctive change from long-acting benzodiazepines, all of which have active metabolites and are much the same

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and 2 strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatarsals, malrotated limbs, gastroschisis, malformed skull and microphthalmia) were seen in drug-treated rabbits without relationship to dosage. Although all these anomalies were not present in the concurrent control group, they have been reported to occur randomly in historical controls. At 40mg/kg and higher, there was evidence of fetal resorption and increased fetal loss in rabbits which was not seen at lower doses. Clinical significance of these findings is not known. However, increased risk of congenital malformations associated with use of minor tranquilizers (chlordiazepoxide, diazepam and meprobamate) during first trimester of pregnancy has been suggested in several studies. Because use of these drugs is rarely a matter of urgency, use of lorazepam during this period should almost always be avoided. Possibility that a woman of child-bearing potential may be pregnant at institution of therapy should be considered. Advise patients if they become pregnant to communicate with their physician about desirability of discontinuing the drug. In humans, blood levels from umbilical cord blood indicate placental transfer of lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in human milk like other benzodiazepines. As a general rule, nursing should not be undertaken while on a drug since many drugs are excreted in milk.

Adverse Reactions, if they occur, are usually observed at beginning of therapy and generally disappear on continued medication or on decreasing dose. In a sample of about 3,500 anxious patients, most frequent adverse reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4.2%) and unsteadiness (3.4%). Less frequent are disorientation, depression, nausea, change in appetite, headache, sleep disturbance, agitation, dermatological symptoms, eye function disturbance, various gastrointestinal symptoms and autonomic manifestations. Incidence of sedation and unsteadiness increased with age. Small decreases in blood pressure have been noted but are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in mind multiple agents may have been taken. Manifestations of overdosage include somnolence, confusion and coma. Induce vomiting and/or undertake gastric lavage followed by general supportive care, monitoring vital signs and close observation. Hypotension, though unlikely, usually may be controlled with Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not been determined.

Dosage: **Individualize for maximum beneficial effects. Increase dose gradually when needed, giving higher evening dose before increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. or t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. For elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety or transient situational stress, 2-4mg h.s.**

How Supplied: **0.5, 1.0 and 2.0mg tablets.**

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Chronic Myelocytic Leukemia

*Treatment and biology**

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Buffalo, New York

From the Department of Medical Oncology, Roswell Park Memorial Institute

Chronic myelocytic leukemia, although a relatively rare hematologic malignancy, is an intriguing disorder. Although the course of the generally benign chronic phase lasts for two and one-half to three and one-half years there is in fact significant variability in patient survival; 20% of patients expire within one and one-half years of diagnosis while another 20% are still in the chronic phase of the disease five years after diagnosis. Ultimately the majority of patients enter a universally fatal phase resembling acute leukemia. The presence of the Philadelphia chromosome can be used as a marker for evaluating and following the disease through its chronic and acute phases. Cell surface markers may provide additional diagnostic information. Therapy during the chronic phase is fairly standard with busulfan being almost universally used. Given the poor responsiveness of blast crisis and other transformation events to chemotherapy, attention has been turned to hematopoietic transplantation for the treatment of end-stage disease. For theoretical reasons transplantation prior to the clinical onset of blast crisis may be preferable.

CML (chronic myelocytic leukemia) is primarily a disease of adulthood. The incidence of the disease progressively increases from the age of 15 years onwards, peaks between the ages of 30 and 50, and then declines.[1–3] More than 90 percent of patients with CML are diagnosed while in the chronic phase of their disease. Twenty percent of these patients are essentially asymptomatic and need no therapy at the time of diagnosis. However, the remaining 80 percent of patients require treatment at the time of diagnosis to control the symptoms associated with splenomegaly and with the weight loss, fatigue, and hyperuricemia associated with elevated WBC (white blood-cell) counts. Current therapeutic approaches control the disease for a period of time ranging from 2 to 110 months.[4,5] In the majority of patients a point is reached when such conservative therapy is no longer effective, and anemia, thrombocytopenia, and progressive splenomegaly may then occur. This accelerated phase may last for three to six months and is usually followed by blast crisis. Occasionally, however, blast crisis may occur without a recognizable accelerated phase. The median survival from this point is brief, ranging from one to three months.[3,5–10] For a minority of patients the terminal phase of the disease is characterized by myelofibrosis, basophilia, or myeloblastoma formation.

The cells of 85 percent of patients with CML contain the Philadelphia chromosome, Ph^1. Those without the Philadelphia chromosome tend to have more aggressive disease than patients whose cells are Ph^1-positive; the median duration of the chronic phase of the disease is 18 months for the former as compared with 36 months for the latter.[11–13] Ph^1-negative patients tend to have lower WBC counts than patients whose cells contain the Ph^1 chromosome; they may not have splenomegaly and often tolerate busulfan poorly because of thrombocytopenia. Other adverse prognostic factors include the presence of thrombocytosis, thrombocytopenia, basophilia, or eosinophilia at the time the disease is first diagnosed.[14–16] While these prognostic factors are significant on a statistical basis, the course of the disease in an individual patient cannot be predicted.

Biology of the disease

The disease is a panmyelopathy. This fact was established by the demonstration that the Ph^1 chromosome is present in erythroid cells and in megakaryocytes as well as in the cells of the granulocytic series. Studies of patients whose cells are heterozygous for glucose-6-phosphate dehydrogenase have confirmed the monoclonal nature of this panmyelopathy.[17] Marrow stromal elements do not appear to be involved since marrow fibroblasts are not monoclonal in this disease. The recent recognition of lymphoid blast crisis has further empha-

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* This work was supported by National Cancer Institute grants CA-5834 and CA-29380.

sized the fact that the basic lesion in this disease involves the most primitive of hematopoietic stem cells, a cell which is the progenitor of the entire myeloid series as well as of cells which are morphologically and phenotypically indistinguishable from certain classes of lymphocytes.[18]

The evolution of karyotypes which often characterizes the blast phase of the disease is consistent with the clonal evolution of a transformed stem cell. Approximately 88 percent of the new cytogenetic abnormalities involve the appearance of a second Ph^1, the addition of a chromosome 8 and an isochromosome 17, or both.[19] The appearance of these additional karyotypic abnormalities may precede the clinical onset of blast crisis by as much as eight months.[10,20,21]

The survival curve of patients with CML has an initial shoulder of up to one year and thereafter declines exponentially.[4] The exponential decline has been interpreted as being evidence for a "distal random event" occurring during the course of the chronic phase of the disease, an event which leads to the appearance and outgrowth of the clone or clones responsible for blast crisis.[5,22] There is, in fact, little evidence to support this hypothesis. Other models which do not depend on a "distal random event" can also account for the exponential survival curve. For example, the same survival curve would occur if, at diagnosis, the aneuploid clones that are destined to produce blast crisis were already present in low numbers and their rate of increase was constant and varied randomly from patient to patient. Explanations other than the "distal random event" that could account for the survival curve in CML are significant in that if a "distal random event" were responsible for the onset of blast crisis, then at the time of diagnosis of the chronic phase one could not distinguish between patients who will rapidly enter a blast phase and those who will have a prolonged chronic phase. If it were possible to make such a distinction, however, then therapies of appropriate aggressiveness could be designed on an individual patient basis.

Treatment of chronic phase

Numerous methods of treatment have been tested in the therapy of chronic disease. Prior to the appearance of chemotherapeutic agents, splenic irradiation was the mainstay of therapy. Total doses of between 1,000 and 1,500 rads were effective in reducing both spleen size and WBC counts. However, responses persisted usually for only four to six months.[23] When trials of splenic radiation were used in conjunction with drug treatment or following unsuccessful control of the disease with chemotherapy, little benefit was produced and in some instances splenic irradiation was counter-productive due to added myelosuppression.[24]

Busulfan is the mainstay of therapy for the chronic phase of the disease. The duration of survival of patients treated with busulfan is greater than for patients who received either no therapy, therapy with ^{32}P (radioactive phosphorus), or splenic irradiation.[25] Clinical trials have shown that busulfan induces a complete or partial remission rate of 75 to 90 percent as compared with a rate of 50 percent for cyclophosphamide or 33 percent for 6-mercaptopurine.[26,27] Only dibromomannitol has shown a comparable response rate, but it was not effective in patients whose disease was refractory to busulfan.[28]

Busulfan may be administered in a continuous or intermittent schedule. With the continuous schedule, busulfan is given in daily doses between 4 and 6 mg. per day until the WBC count falls to between 10,000 and 15,000 per microliter, at which time the daily dose is reduced to 2 to 4 mg. per day and continued, with dose adjustments based on counts, until resistance occurs. With the intermittent method of administration busulfan is begun at 4 to 6 mg. per day but discontinued when the WBC count falls to 15,000 per microliter. The WBC count is allowed to slowly rise to approximately 50,000 per microliter at which time busulfan is again administered and the cycle repeated.[29] Occasionally thrombocytosis persists despite adequate control of the WBC count or vice versa. The addition of a second agent such as uracil mustard or 6-mercaptopurine usually resolves this problem. Hydroxyurea in doses of 0.5 to 2.0 Gm. per day can be added to the above regimens to control the WBC count in early accelerated disease and may be useful for a short time during the early part of resistant chronic phase disease.[30] With respect to patient survival and time to blast crisis, these two methods of busulfan administration are equivalent.

Within three to four months of the initiation of busulfan therapy the WBC count will fall to between 10,000 and 15,000 per microliter. Once this level is reached and busulfan therapy is discontinued the WBC count usually does not rise to 50,000 per microliter until six to eight months have elapsed. However, the duration of unmaintained "remission" is extremely variable ranging from several weeks to more than one year.[7] The time to blast crisis for patients receiving busulfan therapy is also quite variable. Approximately 20 percent of patients will have entered blast crisis by the twentieth month of therapy while another 20 percent of patients receiving busulfan therapy will still be in the chronic phase of the disease five years after diagnosis.[3,7] The reasons for these extreme differences in response are not known, but it would be clearly advantageous if in the early course of the disease the individual patient's prognosis could be assessed. Busulfan therapy could then be used for those patients who will respond well while other agents or therapeutic modalities could be given to those patients whose response was predicted to be poor.

Chemotherapeutic attempts to suppress Ph^1 clone. Busulfan-induced control of the chronic phase of the disease is characterized by a reduction in the peripheral WBC count to normal, a reduction in marrow cellularity, and the return of a normal myeloid-erythroid ratio. The persistence of the Ph[1] chromosome and an abnormality in the density distribution of the myeloid cells which clone in vitro[4] demonstrates that busulfan-induced control of the disease is not a "true" remission. There have been isolated reports of prolonged unmaintained remissions in the patients who were treated to aplasia with busulfan and in whom the Ph[1] chromosome disappeared.[31,32] These reports have led to attempts to deliberately ablate the Ph[1] cell line and thus induce a true remission in this disease.

This approach was first attempted by Smalley et al.[33] with only limited success. By contrast the group at Sloan Kettering Institute in New York City has approached this question much more aggressively. They are administering splenic radiation, followed by splenectomy, and intensive multiagent chemotherapy. Even using this approach only a minority of patients have entered an apparently true state of remission (ablation of Ph[1] chromosome-containing cells), and even in these patients the effect has only been transient.[34]

Given the present state of knowledge, attempts to render patients Ph[1]-negative have several inherent difficulties. First, it cannot be assumed that nonleukemic stem cells persist in every patient or even in most patients with CML. A rapid and efficient means must be developed for detecting and quantitating the number of normal metaphases present since very large numbers of metaphases must be characterized to determine whether or not mosaicism is present (see next section for a discussion of this problem). Second, even if normal metaphases are detected, there is essentially no information available regarding the comparative sensitivities of normal and chronic phase CML cells to the available chemotherapy agents. For these reasons early intensive chemotherapy for patients in the chronic phase of CML must remain a highly experimental procedure.

Preventing onset of blast crisis. Several approaches have been or are currently being employed in an attempt to prevent or delay the onset of blast crisis. The first of these involves elective splenectomy based on the assumption that the spleen was the site of blastic transformation. The results of well-controlled prospective trials have demonstrated that splenectomy does not delay the onset of blast crisis.[35]

Chemotherapeutic agents which are effective in the treatment of acute myelocytic leukemia have been administered during the chronic phase of CML in the hope of ablating or suppressing any blast cell clones which may be present but which are as yet not clinically apparent. Such "blind" treatment has not been beneficial.[35,36] A variant of this approach is based on the observation that aneuploid cells may be detected five to seven months prior to the onset of blast crisis. Brodsky et al.[37] have initiated intensive chemotherapy at this time and have reported evidence suggestive of a delay in the time of onset of blast crisis. Based on this the Cancer and Acute Leukemia Group B has initiated a prospective study in which, once aneuploidy is detected, patients will be assigned at random to receive or not to receive a course of cytosine arabinoside plus 6 thioguanine and a course of cytosine arabinoside plus daunorubicin. Patients will be considered to be treatment failures if aneuploid clones do not disappear after the two courses of therapy.

While this approach is logical it suffers from methodologic problems similar to those faced by the studies designed to suppress or ablate the Ph[1]-containing cell line. First, little is known about the relative drug sensitivities of the chronic phase clones and the aneuploid clones. To date comparative studies have not been carried out. Thus it is not possible to rationally design chemotherapeutic regimens which would be differentially more toxic to aneuploid clones than to the chronic phase clones. Second, there is the problem of the detection of aneuploid clones and the ability to measure their increase or decrease subsequent to therapy, since the intelligent administration of suppressive therapy requires recognition of changes in the proportion of chronic phase and aneuploid clones.

The detection of aneuploid clones during the chronic phase of the disease is hindered by the tediousness of chromosome characterization. If 25 metaphases are counted and no aneuploid cells are noted, one cannot assume that the patient is free of aneuploid cells. Yet this is the policy followed in most cytogenetic laboratories. If 10 metaphases are characterized the aneuploid clone could constitute as much as 25 percent of the cells present and be undetected at a 95 percent level of confidence.[38] To rule out the presence of 5 percent aneuploid cells with a confidence level of 95 percent, 60 metaphases would have to be examined. Hence, given the state of current technology, aneuploid cells must constitute a significant proportion of the cells present before they can be detected. Conversely, if 25 metaphases are counted and an aneuploid clone is detected (and hence constituted approximately 10 percent of the cells present) prior to treatment, and after treatment 25 metaphases were characterized as normal, is it certain that a therapeutic effect was obtained? If the aneuploid cells still constituted 10 percent of the cells present one would not detect them 7.18 percent of the time, and if they constituted 5 percent of the metaphases they would go undetected 27.7 percent of the time if only 25 metaphases were characterized. The actual situation is worse than that presented above, since those figures are based on the detection of only one aneuploid metaphase. In fact, the accepted criteria for the detection of aneuploid clones requires that two identical hyperdiploid or three identical hypodiploid clones be identified before one can definitely state that aneuploidy has appeared. Thus

TABLE I. Cell surface markers of patient's peripheral blood during blast crises

Date	Antigen (Percent Positive Cells)					
	E Rosettes	EA Rosettes	cALL	Ia-like	HL-60	Tdt
April, 1979	4.4	1.6	0	58.5	22.0	ND
April, 1980	2.9	9.5	84.5	91.2	ND	+

ND—not done

the number of metaphases which must be characterized to intelligently guide "suppressive therapy" is much greater than 25.

Finally, the Southeastern and the Southwestern Oncology Groups have initiated a study in which patients are assigned at random to be treated with busulfan alone or busulfan together with a retinoic acid derivative. This approach is based on the reported capacity of retinoic acid derivatives to suppress malignant change, and it is hoped that the addition of such an agent will delay the onset of blast crisis by suppressing a "second transformation event."

Treatment of blast crisis

Blast crisis is the terminal disease phase for the majority of patients with CML. For some patients a period of accelerated disease may commence as long as six months before the onset of blast crisis. During this phase increasing doses of busulfan are required to control the WBC count, and additional agents (such as 6-mercaptopurine and hydroxyurea) may be necessary to control the WBC counts. Drug-induced thrombocytopenia may make patient management increasingly difficult. Other patients enter blast crisis without an apparent prodromal accelerated phase. Occasionally a patient will rapidly develop high WBC counts (more than 75,000 per microliter) with an increasing proportion of blast cells (over 50 percent). Such patients are at high risk for intracerebral hemorrhage, and prompt control of the WBC count should be considered. Such therapy can consist of leukopheresis and/or the administration of large doses of hydroxyurea or cyclophosphamide together with cranial irradiation.

Once blast crisis occurs the patient only occasionally survives longer than four months. Attempts to treat this phase of the disease with regimens designed to induce remissions in patients with acute myelocytic leukemia have been relatively ineffective, producing only short-lived remissions in 20 to 30 percent of patients.[3,5] For the majority of patients, intensive therapy results in only a temporary reduction in blastic elements or may be followed by prolonged aplasia. Given the rapid reoccurrence of blast crisis in patients who receive intensive chemotherapy together with total body irradiation (see under autologous hematopoietic reconstitution), it seems likely that treatment failure for the majority of patients with myeloid crisis is the result of leukemic cell resistance to therapy. In approximately one third of cases the cells reponsible for blast crisis are lymphoid in nature. Therapy with prednisone and vincristine sulfate will produce remissions in 60 percent of these patients. Patients in blast crisis who enter complete remission are at high risk for developing CNS (central nervous system) leukemia.[9,10,39] Hence, CNS prophylaxis as is used in acute lymphocytic leukemia would be reasonable in these patients.

Case report. The following case report illustrates some of the points discussed above.

> The patient was diagnosed as having Ph^1-positive CML in July, 1973. Treatment with busulfan controlled the disease until April, 1979, when the patient's disease entered blast crisis. Cell morphology and surface markers of peripheral blood blastic leukemic cells revealed myeloid blast crisis. The patient was treated with adriamycin and cytosine arabinoside with return of chronic phase CML. He remained in a chronic disease state until April, 1980, when blast crisis once again supervened. At this time cell morphology and surface markers suggested lymphoid disease. Terminal transferase was detected in the leukemic cells. The patient was treated with vincristine and prednisone and reentered a third chronic phase of his disease. Table I provides the surface marker characteristics of his blast crisis cells carried out at the time of his two episodes of blast crisis. Note the appearance of cALL-positive cells at the time that lymphoid crisis was diagnosed.

Recent studies of acute myelocytic leukemia have suggested that the in vitro drug sensitivity of the leukemic cells reflects the likelihood of a patient responding to in vivo therapy with the agents tested.[40] If this were the case for patients in the blast phase of CML, it may be possible to tailor chemotherapy of blast crisis to the drug sensitivity of a patient's leukemic cells.

Transplantation in CML

The low remission induction rate and the short survival time of patients in blast crisis has led to experimental approaches to therapy.

Autologous hemopoietic reconstitution. An approach of great theoretic interest and potential practical benefit involves the restoration of chronic-phase hematopoiesis using hematologic stem cell replacement. Buckner[41] has described seven patients in whom bone marrow had been aspirated and cryogenically preserved during the chronic phase of the disease. At the time of blastic transformation, marrow-ablating therapy including total body irradiation was administered followed by autotransplantation with their own stored marrow. Two patients had reestablishment of the chronic phase of their disease and in three patients there was transient evidence of engraftment. Of the two in whom the chronic disease phase was reestablished, one died of fungal pneumonitis and one of recurrent blastic transformation.

Goldman, et al.[42,43] using peripheral blood buffy coats cryopreserved at the time of diagnosis of chronic phase CML, attempted to restore the chronic phase in 24 patients. Intensive cytotoxic therapy was administered followed by infusion of the patients own cryopreserved cells. Sixteen of these patients had successful engraftment with chronic phase cells. The median survival of these patients was 139 days with only two patients remaining in a second chronic phase beyond six months.[42,43] Robinson[44] has used bone marrow cryopreserved during controlled chronic phase in eight patients for the same purpose, and demonstrated engraftment of a second chronic phase in seven,[42,43]. The median duration of second chronic phase was almost identical to the study of Goldman et al., 124 days.

The reasons for the rapid recurrence of blast crisis are not known. It seems likely, however, that inadequate ablation of the blastic clone or clones by the transplant preparative regimen is responsible. If this is the case then either or both of two approaches are possible: (1) an increase in the intensity or specificity of the ablative regimen or (2) transplantation at an early phase of the disease when the number of blast crisis cells are less than are present at the time of clinical diagnosis of blast crisis. These approaches will be discussed.

Alternatively, it is possible that the hematopoetic microenvironment of the bone marrow at the time of blast crisis actually favors the proliferation of blastic clones. If this were the case then the early recurrence of blast crisis might be due to selective outgrowth of small numbers of blast cells present in the autograft or early recurrence might be the result of a second transformation of the chronic cells. Only very careful studies of the autograft and the second blastic phase employing cytogenetics and cell surface markers will distinguish between these possibilities.

Syngeneic and allogeneic marrow transplantation. The Seattle group has also recently reported their experience in syngeneic transplantation in patients with CML.[13] In this situation, patients who had identical twins were given marrow-ablating therapy consisting of a combination of chemotherapy and total body irradiation followed by a transplant from the identical twin during the chronic phase of the disease, a period in which the patient's condition would be more favorable to surviving the post-transplant period. In each of the four patients transplanted, serial chromosome studies have to date failed to detect the Philadelphia chromosome, and all patients remain alive with the longest survivor being in complete clinical and cytogenetic remission 300 days after the transplantation.

At the Princess Margaret Hospital in Toronto allogeneic bone marrow transplants have been performed on six patients during the chronic phase of their disease. All have survived, were engrafted, and remain cytogenetically and clinically free of CML for periods of up to eight months.[45]

Sporadic case reports exist in which patients with CML have undergone marrow transplantation from allogeneic donors at the time of blastic transformation; this approach has met with mixed success, possibly because such patients were usually entered on these studies after exhaustion of more conventional therapy, that is, at a time when the clinical condition of the patient may not favor post-transplant survival, and perhaps because of the large number of blast crisis cells present at the time of transplantation.

Future directions

One key to future progress is the development of the ability to distinguish between those patients for whom busulfan therapy will provide long-term disease control and those patients in whom blast crisis will occur early in the course of the disease. This distinction is quite important since all current forms of radical therapy (intensive chemotherapy, bone marrow transplantation) carry with them a significant level of risk and it would be inappropriate at the present time to subject individuals whose disease will be stable for five or more years with busulfan to such risk. Transplantation is worthy of consideration in younger patients, but for the conceivable future the majority of patients will not be candidates for such intensive therapy because of age limitations. (Older patients rarely survive transplantation procedures.) Hence, the development of methods that will permit reliable prognosis for the individual at the time of diagnosis is quite important.

Little is known about the relative drug sensitivity of normal, chronic myeloid leukemic and blastic-phase leukemic cells. This lack of knowledge greatly hampers the design of regimens intended to ablate the Ph^1 chronic-phase cells or the blast crisis clones which are detectable prior to the clinical onset of blast crisis, since successful ablation of the leukemic cell lines under attack would be disasterous if the clones that one wanted to preserve were ablated as well. Such information would also help in designing ablative regimens for use in transplantation. As in acute myelocytic leukemia, there will probably be significant differences between patients in the sensitivity of their leukemic cells to specific forms of therapeutic attack, and if this is the case it will be necessary to recognize significant patient differences in therapeutic sensitivity.

The development of methods which permit detection of aneuploid clones long before the clinical manifestation of blast crisis is another key to future progress in the treatment of this disease. While it may become possible to recognize, at the time of diagnosis, patients whose time to blast crisis will fall into the extremes described above, it is likely that for the forseeable future it will not be possible to precisely predict the time to crisis for an individual patient. Hence, in the short term the majority of patients probably will be classified as being neither in the high- nor in the low-risk groups. Given the ages of most of the patients, it would seem that busulfan therapy with close monitoring and watchful waiting is the most appropriate therapeutic approach for these individuals. The development of methods that could be used to detect the appearance of aneuploid clones a substantial time prior to the clinical appearance of blast crisis would significantly improve our ability to treat these patients. The use of periodic detailed cytogenetic studies may make this possible. Once it were known that blast crisis will occur in the near future, and given the lethality of blast crisis, it would be reasonable to attempt to suppress or ablate those clones which would otherwise grow out and kill the patient.

A collaborative effort has recently been initiated between investigators at Roswell Park, The University of Rochester, Upstate Medical Center, and the Ontario Cancer Foundation. It is designed to simultaneously deliver optimal care to patients while accumulating information that will be the basis for future approaches to the treatment of this disease. Figure 1 gives the schema for treating chronic phase patients with intermittent busulfan therapy. Therapy is halted when the peripheral WBC count reaches 15,000 per microliter. Therapy is resumed when the count increases to 50,000 per microliter. Prior to each course of therapy, the patient is clinically staged to derive an estimate of tumor cell mass, and the leukemic cells are studied to measure the sensitivity of the myeloid progenitor cells to busulfan and to determine their rate of proliferation. The duration of unmaintained remission should be a function of the sensitivity of the progenitor cells to busulfan and the rate of proliferation of the progenitor cells. By following and studying an initial cohort of patients through several remissions and relapses, information will be derived that will permit the recognition, prior to therapy, of those individuals for whom busulfan therapy will produce long or short remissions. In addition, in vitro tests will be developed that will permit recognition of the development of resistance to busulfan so that therapy can be altered prior to the development of the thrombocytopenia which is produced when progressively higher doses of busulfan are administered. Initial studies have revealed a wide range of in vitro sensitivities to both busulfan and hydroxyurea which may be a reflection of the wide range of clinical responses to these agents (Table II).

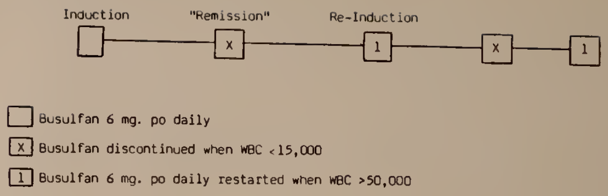
Induction
"Remission"
Re-Induction
X
1
X
1
Busulfan 6 mg. po daily
X Busulfan discontinued when WBC <15,000
1 Busulfan 6 mg. po daily restarted when WBC >50,000

FIGURE 1. Schema of chronic phase therapy.

As part of this collaborative effort, at the time of initial diagnosis all patients undergo leukopheresis and their peripheral blood cells are stored for future use. Serial cytogenetic studies are being performed so that once new clones are detected, and prior to the clinical onset of blast crisis, eligible patients can be treated with marrow ablation and autotransplantation. To prepare the patient for autologous transplant, busulfan, 4 mg. per kilogram body weight, is administered orally on the sixth through third pretransplant days. For patients in whom autologous transplantation is not possible, treatment will consist of either allogeneic marrow transplantation, when possible, or intensive chemotherapy directed by in vitro tests of drug sensitivity.

The use of ablative therapy together with hematopoietic reconstitution prior to the clinical onset of florid blast crisis is based on the initial allogeneic marrow transplantation studies during the chronic phase of the disease performed in Seattle and Toronto on which engraftment and disappearance of the Ph^1 clone has been accomplished. A further reason

TABLE II. Sensitivity of CFUc (colony-forming unit culture) of CML patients to busulfan and percent CFUc in S phase

Patient Number	Specimen[*]	Busulfan 5 µg	Busulfan 10 µg	Busulfan 20 µg	3 HTdR[**]
1	PB	10[†]	46	86	32
2	PB	0	21	99	16
3	PB	9	34	59	23
	BM	0	33	58	17

[*] PB—peripheral blood cells; BM—bone marrow cells.
[†] Percent CFUc killed.
[**] Suicide index—percent CFUc making DNA.

for carrying out transplantation while patients are still clinically in the chronic phase of the disease is the transplantation results reported for acute myelocytic leukemia, where the results of allogeneic marrow transplants of patients in complete remission far exceed those achieved when patients with active disease are transplanted.[46–49] Given the significant problems associated with transplantation, and given the fact that many patients experience long-term survival with chronic disease, this experimental approach will initially be restricted to patients in whom resistance to busulfan or aneuploid clones are detected.

If one could recognize at diagnosis or during the course of the disease patients who are at high risk for entering blast crisis, then the risk-benefit ratio for transplantation would be clearly in favor of potential benefit, given the results of current therapy for blast crisis. Hence, if the studies described earlier relating to identifying high-risk patients are successful, we will carry out a study of the role of transplantation in these patients even if early signs of blast crisis are not yet present.

A large number of patients must be studied if the program described above is to be successful. Because CML is an uncommon disease, many patients who live a great distance from one of the participating institutions must be studied. Participating patients will undergo an initial pretherapy evaluation at one of the participating institutions, including leukopheresis and storage of peripheral blood cells for possible use in autologous transplantation as well as tissue typing of the patient and of possible marrow donors. Drug sensitivity and cell cycle studies of the patients will be carried out. Patients will return to the participating centers every three to four months for follow-up studies. Follow-up drug sensitivity and cell cycle studies will be carried out on anticoagulated peripheral blood specimens sent to one of the centers. Through this type of effort, physicians in private practice and regional centers can cooperate to deliver optimal therapy to patients in the context of a program that will increase our understanding of this disease.

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ACP recommends prudent use of pneumococcal vaccine

Philadelphia—The American College of Physicians (ACP) recommends the use of pneumococcal vaccine in groups likely to develop pneumococcal pneumonia, but cautions against universal use of the vaccine in healthy persons, including those over 65.

Pneumonia is one of the leading causes of death in America and is a serious threat to health in the U.S., especially to many elderly persons. Pneumococcal pneumonia is one of the disease's most common forms.

The ACP recommendation is based on a study by the College's Clinical Efficacy Assessment Project, directed by J. Sanford Schwartz, MD, an assistant professor of medicine at the University of Pennsylvania School of Medicine. Both the College statement and Dr. Schwartz's paper appear in the February issue of the ACP's medical journal, *Annals of Internal Medicine.*

Patients with chronic ailments such as absence of a spleen, sickle cell anemia, diabetes, alcoholism, or lung, kidney, liver or heart disease are at increased risk of death if they develop pneumococcal pneumonia and should be vaccinated, according to the College statement.

Although Medicare covers the cost of the relatively safe and effective vaccine and its administration, the College maintains that current data on healthy elderly persons' sickness and death rates from pneumococcal pneumonia cannot support routine vaccination of all these persons. Physicians should evaluate the vaccine's potential benefit to each individual, the 54,000-member national medical specialty society states.

The ACP also calls for further studies of the benefit of pneumococcal vaccination in healthy elderly persons and high-risk patients and advises against revaccination within five years.

There are more than 80 different types of pneumococci; the vaccine helps protect against 14 of the most common forms but cannot eliminate all risk of contracting them.

The statement, endorsed by the Council of Medical Societies's Advisory Committee on Immunization Practices, is part of an ACP program that evaluates the effectiveness of nonsurgical medical tests, procedures and therapies and makes recommendations on their appropriate uses. The program, the Clinical Efficacy Assessment Project (CEAP), is intended to help physicians practice high quality, more efficient and cost-effective medicine; the CEAP team expects improved health care and significant dollar savings to result from use of their findings.

The three-year CEAP study is supported by a grant from The John A. Hartford Foundation of New York, NY.

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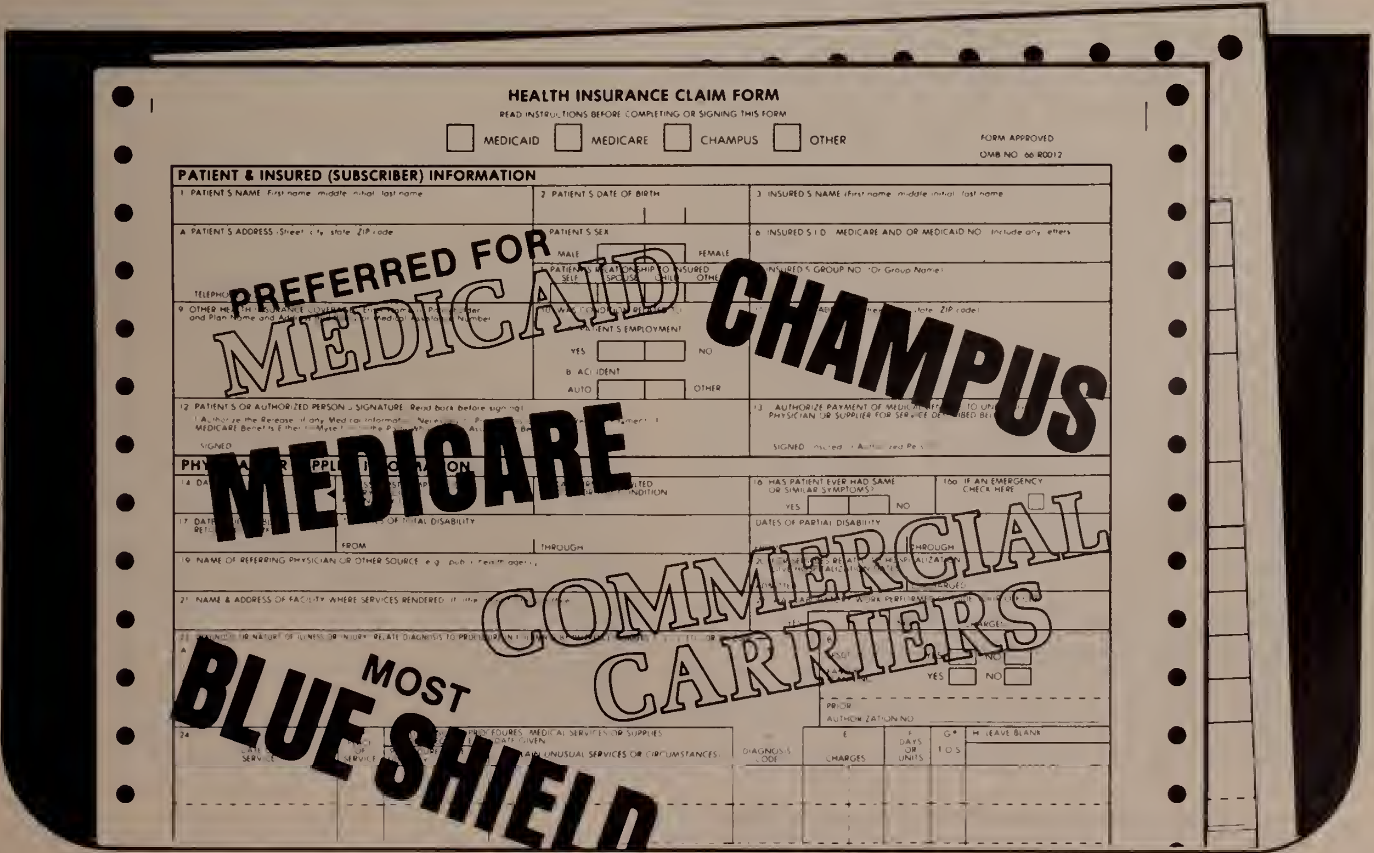

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Lactic Acidosis

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The clinical problem of lactic acidosis is reviewed, with particular attention to its pathogenesis, classification, and treatment. Lactic acidosis is the commonest type of acute metabolic acidosis and is associated with an increased serum anion gap. In adults, apart from its occurrence during exercise, it is most commonly associated with disorders that cause, or are accompanied by, hypoperfusion and hypoxia. The most important considerations in treating the metabolic disorder in most patients are to recognize and treat the underlying clinical disorder that caused the lactic acidosis.

The recent publication of several reviews of lactic acidosis[1–5] must raise the question of "why another?" This presentation is intended to provide practitioners with a clinically focused overview of the commonest type of acute metabolic acidosis.

To start, I would like to disagree with a message implicit in Park and Arieff's otherwise fine recent review.[5] They were gloomy about the poor prognosis of patients with lactic acidosis, a view that may imply to some that lactic acidosis is a disorder *sui generis*, one that "must be overcome." However, lactic acidosis is rarely a primary problem but rather a manifestation of various serious illnesses, and it is the latter that the physician must recognize and treat. Some of those disorders, such as pulmonary edema, are usually successfully treatable, and most such patients, despite their lactic acidosis, should survive the acute episode. Other disorders, such as cardiogenic shock due to myocardial infarction, still do have a dismal outlook. The basic problem in that disorder, however, is extensive necrosis of heart muscle, not the lactic acidosis that results from the low cardiac output. Our problem in most patients with lactic acidosis is to recognize and treat the underlying disease that has caused the biochemical disorder.

Incidentally, the commonest cause of acute lactic acidosis is not a disease, but rather vigorous exercise that causes an oxygen debt and increased anaerobic metabolism of carbohydrate. Intense exertion can cause lactic acidosis even in healthy, conditioned athletes. Blood lactate concentrations can rise to levels as high as 14 mmol. per liter in healthy young people exercising vigorously on a cycle ergometer, and they have an essentially equimolar fall in serum bicarbonate.[6] With intense exercise, lactic acidosis may be so severe that blood pH falls.[6]

Biochemistry and physiology of lactic acid formation and utilization

Merely for simplification, the following chemical reactions are written as if they were irreversible, and as if un-ionized acids rather than ions were the reactants, neither of which is the case in body fluids. Lactic acid can probably be formed in the cytosol of all cells, but its net production in large amounts is mainly from skeletal muscle, erythrocytes, the brain, and skin.[1–5] Lactic acid is formed from the reduction of pyruvic acid, a reaction catalyzed by LDH (lactic dehydrogenase) in the presence of NADH (reduced nicotinamide adenine dinucleotide) and H^+ (protons):

$$\text{Reaction 1:}\quad \underset{\text{(glucose)}}{C_6H_{12}O_6} + O_2 \rightarrow \underset{\text{(pyruvic acid)}}{2\,CH_3COCOOH} + 2\,H_2O$$

$$\text{Reaction 2:}\quad 2\,CH_3COCOOH + 2\,H^+ + 2\,NADH \xrightarrow{\text{LDH}} \underset{\text{(lactic acid)}}{2\,CH_3CHOHCOOH} + 2\,NAD^+$$

The two foregoing reactions together result in:

$$\text{Reaction 3:}\quad C_6H_{12}O_6 \rightarrow 2\,CH_3CHOHCOOH$$

Lactic acid formation (or, more properly, the formation of lactate$^-$ + H^+) is a "metabolic dead-end." Lactate can only be reoxidized to pyruvate, or, if its blood level is high, be excreted in the urine. Pyruvate can either (1) re-form glucose (and glycogen), gluconeogenesis that takes place mainly in the liver; or (2) be oxidized, which results in its net consumption, mainly in the heart:

$$\text{Reaction 4:}\quad CH_3COCOOH + 2\tfrac{1}{2}\,O_2 \rightarrow 3\,CO_2 + 2\,H_2O$$

The organs mainly responsible for the net removal, consumption, or utilization of lactate are the liver, heart, and kidneys. The kidneys dispose of lactate in several ways: oxidation to pyruvate; gluconeogenesis; and if the plasma level is high enough (approximately 7 mmol. per liter), excretion into the urine.

Under aerobic conditions, pyruvate can be further metabolized in mitochondria by either the addition or removal of CO_2. Carboxylation, the addition of CO_2, is catalyzed by PCase (pyruvate carboxylase) and results in formation of oxaloacetate:

Reaction 5: $$CH_3COCOOH + CO_2 \xrightarrow{\text{PCase}} COOHCH_2COCOOH$$
(oxaloacetic acid)

Decarboxylation, the removal of CO_2, is catalyzed by PDH (pyruvate dehydrogenase) and results in formation of acetyl CoA:

Reaction 6: $$CH_3COCOOH + CoA + \frac{1}{2}\,O_2 \xrightarrow{\text{PDH}} CH_3COOCoA + CO_2 + H^+$$

From acetyl CoA, either acetoacetate or oxaloacetate can be formed. Under anaerobic conditions, owing to either decreased blood flow or severe hypoxia, pyruvate is not oxidized but is reduced to lactate (reaction 2). If the hypoxia is severe and prolonged, lactic acidosis ensues. Besides decreased blood flow and severe hypoxia, the other situations in which pyruvate may be reduced rather than oxidized (as is its normal fate) involve deficiencies of the enzymes pyruvate carboxylase (reaction 5) or pyruvate dehydrogenase (reaction 6), or deficiency of NAD (reaction 2). All the foregoing deficiencies cause accumulation of pyruvate and, consequently, increased formation of lactate. Thus, lactic acidosis might theoretically occur if pyruvate dehydrogenase activity is decreased (as apparently occurs in diabetes); when the liver's capacity for gluconeogenesis is decreased (as in acute fulminant hepatitis); or when the NADH:NAD equilibrium is shifted toward NADH (as occurs during ethanol intoxication) (see reaction 2).

Much has been written about whether lactic acidosis is due mainly to overproduction or to underutilization of lactate but the matter is unresolved.[1–5] Both factors are probably involved, and their relative importance may vary in different disorders.

Definitions and classification

What are reasonable criteria for diagnosing lactic acidosis? A compromise between various authors' suggestions might be to say that significant lactic acidosis is present when the plasma lactate concentration is greater than 5 mmol. per liter (the upper limit of normal is 1.6 mmol. per liter for plasma and 1.4 mmol. per liter for whole blood). Some authors also insist that the patients have a low blood pH. However, some patients with elevated plasma lactate concentrations may have a coexisting alkalosis, and so not be acidemic. That could occur, for example, in a patient with circulatory failure secondary to major pulmonary embolism. The latter can cause severe hyperventilation with a primary respiratory alkalosis, and the blood pH will depend on whether respiratory alkalosis or lactic acidosis predominates.

"Idiopathic" lactic acidosis. In the late 1950s Huckabee[7,8] reported that patients with circulatory failure developed lactic acidosis and acidemia. He and others also described some patients with acute lactic acidosis who did not have circulatory failure when first seen, but who subsequently developed shock.[9,10] They termed that syndrome "idiopathic" or "spontaneous" lactic acidosis. However, we now encounter few if any adults in whom the cause of lactic acidosis is obscure. Some of the patients earlier described as having "spontaneous" lactic acidosis may have been taking phenformin, which then had not yet been recognized to cause lactic acidosis. In some of the other patients, as Huckabee himself originally suggested, lactic acidosis may have been caused by incipient cardiocirculatory insufficiency.[9] That is, those patients presumably had significant decreases of regional blood flow, with consequent regional hypoxia and lactic acidosis even though the patients did not have such typical signs of shock as pallor or low blood pressure.

In 1966 Tranquada, Grant, and Peterson[11] reported 45 cases of lactic acidosis seen during a three-year period and classified 14 as "idiopathic." Our experience at Jacobi Hospital was quite different.[12] During a three-year period the house officers gave us plasma specimens for lactate measurements from 180 newly admitted patients. We discouraged the house officers from collecting blood for lactate measurements from patients with cardiogenic shock or pulmonary edema, because by then it was well known that such patients characteristically have lactic acidosis. Nevertheless, some cases of cardiogenic shock or pulmonary edema were included among the 180, but far fewer than if all patients suspected of having lactic acidosis had been studied. Fifty-three of the 180 patients had plasma lactate concentrations greater than 7 mmol. per liter.[12] All of those 53 patients, including all who had clinical diabetes, had at least one known cause or association of lactic acidosis that was obvious, or strongly suspected, even when the blood specimen was originally obtained. That is, the patients were suspected of having lactic acidosis, and the probable cause was surmised. We did not find any cases of "spontaneous" lactic acidosis in that survey and other authors have recently reached similar conclusions. Relman wrote that "in many cases (labeled "spontaneous lactic acidosis") . . . (lactic acidosis) was simply a premonitory sign of impending vascular collapse . . . virtually all of the adequately described patients . . . had clinical or autopsy evidence of some major underlying disease that could have caused their death . . . and a critical examination of the cases in the literature . . . raises serious doubt about the validity of the concept (of "spontaneous lactic acidosis")."[3] Many of the originally reported patients in whom a cause was not recognized may have been treated with phenformin before it was realized that the biguanide drugs can cause lactic acidosis.

Lactic acidosis and diabetes. A recurring question has been "how is acute lactic acidosis related to diabetes mellitus?" Some early surveys of patients with lactic acidosis included many with diabetes, and it was thought that they might be uniquely predisposed to develop lactic acidosis.[11] That is theoretically possible because PDH activity is decreased in diabetics.[5] However, there is little convincing evidence of a direct causal relation between diabetes mellitus and lactic acidosis that depends uniquely on an abnormality of diabetics' metabolism. Lactic acidosis is not characteristic of severely uncontrolled diabetes mellitus except in patients with vascular collapse or other coexisting clinical disorders that themselves can cause lactic acidosis.[13] Lactic acidosis does seem to be associated with diabetes mellitus, however, and several factors may be responsible. At least in the past, one was the use of phenformin; a second factor may be unrecognized "β-hydroxybutyric-acidosis," misinterpreted as being lactic acidosis because of a negative Acetest reaction[13] (as will be discussed); a third factor, perhaps the most important, is that diabetics are particularly likely to develop some serious diseases and complications that themselves cause lactic acidosis—myocardial infarction, urosepsis, peripheral vascular disease with gangrene, and so forth.

Cohen and Woods's classification. Cohen and Woods[1] recently proposed a helpful classification of lactic acidosis that I will follow here. They classified cases into types A and B, and further divided the latter into three subgroups. Type A patients have obvious tissue anoxia associated with either cardiocirculatory failure or severe acute hypoxia. This group includes patients with existing or impending shock due to heart disease, hemorrhage, hypovolemia, or sepsis. Type A also includes patients with acute asphyxia (such as those with carbon monoxide poisoning), and patients with acute pulmonary edema or severe chronic congestive heart failure.

Type B patients lack clinical signs of tissue hypoxia. They may, however, have incipient circulatory failure, with abnormal regional perfusion, and a few have a biochemical cause of cellular hypoxia. Cohen and Woods divided their type B patients into three groups. The first are patients with disorders such as diabetes, liver disease, and kidney disease; the second, patients whose lactic acidosis was caused by various drugs or poisons; and the third, patients with various rare hereditary enzyme defects that distort normal metabolism.

The type B1 patients include those with diabetes mellitus, renal failure, liver disease, infections, certain malignant conditions, and convulsions. Of those, liver disease, severe infections, malignant conditions, and convulsive seizures are authenticated causes of acute lactic acidosis. However, the association with diabetes mellitus may not be causal (as previously discussed). Also, it is difficult to find verified cases in which renal failure has caused lactic acidosis. Patients with severe liver disease, especially fulminant hepatitis, can develop severe lactic acidosis,[14] presumably because they do not have enough liver tissue to form glucose from the lactate produced during normal metabolism. It is unclear why some patients with severe infections, especially those with bacteremia, develop lactic acidosis. In some the cause is existing or incipient circulatory failure, but in others the cause is uncertain. The explanation is presumably not excessive formation of lactate by either bacteria or leukocytes. Certain leukemias and other malignant conditions can be associated with excessive lactate production.[4,15] Some of those patients have chronic lactic acidosis that regresses when cytolytic therapy causes regression of the neoplastic process.[15] Grand mal seizures cause lactic acidosis,[16] presumably owing to the acute asphyxia caused by laryngospasm and the severe muscular hyperactivity of the seizure. The condition is therefore similar to intense exercise with an oxygen debt.

Cohen and Woods' group B2 includes intoxications with various drugs or poisons, the most common being the biguanides and ethanol, and the (normal) foodstuff fructose. The biguanides inhibit oxidation of lactate and also inhibit hepatic and renal gluconeogenesis, but it is uncertain whether those effects fully explain the genesis of lactic acidosis. At least in the United States, the problem is now moot because phenformin was removed from the market in 1977. In countries where biguanides are still prescribed to control diabetes, lactic acidosis may continue to be a problem, especially in patients with renal or hepatic insufficiency. Excessive ingestion of ethanol does not cause significant lactic acidosis in most patients. However, some alcohol abusers do develop lactate elevations greater than a few millimoles per liter. Why only some drinkers do is not clear; perhaps they have had unwitnessed ethanol-related seizures. In any case, their lactic acidosis is presumably related to a heightened "reducing environment," with an increased ratio of NADH to NAD. Oxidation of ethanol to acetaldehyde increases NADH levels, which fosters reduction of pyruvate to lactate (cf. reaction 2). When fructose is given, pyruvate formation increases and that causes increased lactate formation. That was a problem when intravenous fructose administration was a fashionable part of the regimen for treating diabetic ketoacidosis. Another interesting cause of lactic acidosis in group B2 is that due to overdosage with epinephrine or other catecholamines. It is not entirely clear how these agents foster lactic acidosis, but increased glycogenolysis is probably one factor, and changes of regional blood flow may be another.

Cohen and Woods's[1] category B3 includes various rare hereditary enzyme defects that are problems mainly in infancy and early childhood and will not be discussed here. The enzyme defects are associated mainly with impaired mitochondrial oxidation of pyruvate.

Diagnosis of lactic acidosis

There are three key elements to making a presumptive diagnosis of lactic acidosis. First, the physician must recognize that the patient has a clinical disorder in which lactic acidosis can occur. Second, the patient must be shown to have a metabolic acidosis with an increased serum anion gap (that is, a gap greater than 15 mmol. per liter if calculated as serum $[Na^+ - (Cl^- + HCO_3^-)]$). Third, other causes of "increased anion gap metabolic acidosis" must be excluded, especially uremia and ketoacidosis, and also methanol or ethylene glycol intoxication. (Of course, some patients may have lactic acidosis coexisting with one of the foregoing.) To prove that lactic acidosis exists, plasma lactate concentration must be shown to be elevated.

Without measuring the appropriate plasma concentrations in a patient with "increased anion gap metabolic acidosis," it may not be possible to exclude the presence of β-hydroxybutyric acidosis, with which lactic acidosis may coexist. That possible confusion was more of a problem when phenformin was commonly used. Phenformin-treated diabetics who developed lactic acidosis often had associated ketosis that was unrecognized because almost all the "ketone" was β-hydroxybutyrate.[17] The nitroprusside reagent, the basis of the Acetest reaction, is most sensitive to acetoacetate, much less so to acetone, and not at all to β-hydroxybutyrate. However, β-hydroxybutyrate is the predominant "ketone body" in most ketotic states, its ratio to acetoacetate ranging from 2:1 to 4:1. Even the consequent low concentration of acetoacetate usually suffices to yield a positive nitroprusside test. However, the ratio of β-hydroxybutyrate to acetoacetate can be much higher than 4:1, especially in phenformin-associated acidosis,[17] and often in alcoholic ketosis.[18] Then, despite moderate ketosis, acetoacetate concentrations may be so low that Acetest reactions in blood and urine may be only mildly positive or even negative. To be certain that a patient with an "increased anion gap metabolic acidosis" has lactic acidosis, plasma lactate must be measured and found to be high. This measurement is not readily available "on line" in most clinical laboratories, but is probably not essential for making a diagnosis of lactic acidosis with a high likelihood of being correct.

To recapitulate, the diagnosis of lactic acidosis is most simply made by recognizing that a patient with a known possible cause of lactic acidosis has a metabolic acidosis with an increased anion gap and by excluding other known causes of the metabolic acidosis. In diabetic and alcoholic persons, it is important not to overlook the possibility that a patient may have ketosis, even without a strongly positive serum Acetest reaction.

Special features

Serum potassium. Acute acidemia, especially of metabolic origin, has long been believed to cause hyperkalemia. That was elegantly shown by Swan and Pitts[19] in experiments in which hydrochloric acid was infused into nephrectomized dogs. The dogs' blood pH and bicarbonate levels fell, and serum K^+ rose. The explanation suggested for the rise of serum K^+ was that infused H^+ entered cells and exchanged for intracellular Na^+ and K^+; when Na^+ and K^+ exited the cells, serum K^+ rose. In 1977, Orringer and his colleagues[16] reported eight patients with acute lactic acidosis caused by grand mal seizures. Despite their patients' moderately severe acidemia and intense muscular hyperactivity, their serum K^+ values did not rise. Subsequently, Oster, Perez, and Vaamonde[20] studied this in dogs and confirmed Pitts's finding that infusing mineral acids such as hydrochloric acid into dogs caused hyperkalemia. However, when they infused organic acids such as lactic or β-hydroxybutyric acid, hyperkalemia did not ensue. They suggested that when HCl was infused, Cl^- was partially or wholly excluded, and H^+ entered cells and exchanged for Na^+ and K^+ to maintain electroneutrality. They further suggested that when the organic acids were infused, lactate and β-hydroxybutyrate did enter the cells with H^+ so there was little or no exchange of H^+ for intracellular K^+. In 1958, Rogers and Wachenfeld[21] performed in vitro studies with results that anticipated and fit the foregoing infusion experiments and interpretation. They incubated rat diaphragms in Krebs-Ringer medium at pH 7.4, and then added various acids to lower the medium pH to 6.8. When HCl was added, K^+ and Na^+ were lost from the diaphragms to the bath solutions. In contrast, when lactic or β-hydroxybutyric acids were added, there were no significant changes in the diaphragms' contents of K^+ or Na^+.

However, infusing such organic acids, or incubating rat diaphragms in those acids, may not be appropriate experimental models for what occurs in disease. In clinical disorders the acids are not formed in the extracellular fluid and then enter cells, but rather are formed within the cells. Therefore, to assess what happens clinically, I analyzed our data in a large series of patients with various types of acute lactic acidosis (and ketoacidosis).[22] Many of our patients did have hyperkalemia—but not all did. Serum K^+ concentrations did not corrrelate well with the severity of acidemia, but were better correlated with the patients' state of renal function and with the nature of the underlying disorder. The patients most likely to have hyperkalemia were those who had renal insufficiency and hypercatabolism. Our present information suggests that organic acidoses such as lactic acidosis may not be associated with hyperkalemia despite the development of acidemia, unless renal insufficiency or tissue destruction are present.

Serum phosphate. Patients with acute lactic acidosis may develop marked hyperphosphatemia.[23] This was also studied by Oster, Perez, and Vaamonde[20] in dogs and their experimental findings paralleled the clinical observations. It is unclear why patients with acute lactic acidosis seem to develop marked elevations of serum inorganic P. It has been suggested that cell metabolism is so disrupted in situations that cause lactic acidosis that ATP (adenosine triphosphate) formation may be decreased, resulting in less utilization of inorganic phosphate to form ATP. That explanation may be superfluous, however, because merely infusing lactic acid causes hyperphosphatemia.[20] Another possibility, for which there is no evidence, is that when lactate enters cells, P might exit; that is, an anion exchange occurs. Whatever the explanation may be, if hyperphosphatemia is a general feature of lactic acidosis, and does not occur in other "organic acidoses," this may be diagnostically useful. I pointed out previously that patients with diabetic ketoacidosis who have mainly "β-hydroxybutyric acidosis" have only weakly positive, or even negative, serum nitroprusside reactions. Therefore, without rapid specific measurement of plasma lactate and β-hydroxybutyrate concentrations, it may be difficult to distinguish lactic acidosis from ketoacidosis in acidemic diabetics who have an increased serum anion gap. The information thus far available suggests that a marked elevation of serum phosphate would point to lactic acidosis as at least being a major component of such metabolic acidosis.[23]

Ventilatory response. Compensatory hyperventilation is a characteristic response to metabolic acidemia. Several years ago, Relman[24] reported that patients with lactic acidosis seemed to hyperventilate more profoundly than did patients with other types of acute and subacute metabolic acidosis. More recently, he suggested that such "excessive hyperventilation" was especially characteristic of patients whose lactic acidosis was not associated with phenformin use.[3] To evaluate that suggestion, I analyzed data from our patients with lactic acidosis and compared their ventilatory responses to those in patients with uncomplicated diabetic ketoacidosis unassociated with lactic acidosis.[25] Ventilation was judged by $PaCO_2$, (arterial CO_2 tension). There were two groups of patients with lactic acidosis, one associated with phenformin use and the other not. No patient had chronic lung disease, pulmonary edema, or ketosis. The $PaCO_2$ values in most of the patients in both lactic acidosis groups fell within the 95 percent confidence band for the $PaCO_2$-bicarbonate relation we had found in patients with uncomplicated diabetic ketoacidosis. Thus, in contrast to Relman's[24] suggestion, our patients with lactic acidosis did not hyperventilate excessively. A few of our patients had somewhat higher $PaCO_2$ levels than expected; that is, their ventilation was suboptimal in relation to the severity of their acidemia. The common denominator in those lactic acidosis patients who did not hyperventilate optimally seemed to be the presence of shock. The lactic acidosis in those patients may have been so acute and severe that they lacked time to achieve maximal hyperventilation in response to their acidemia.

Treatment

The most important consideration in treatment is to identify the disorder that caused the lactic acidosis and treat that. The patient's survival depends mainly on whether or not the cause of the lactic acidosis can be recognized and treated effectively. In treating shock, one should try to minimize using catecholamines because they may worsen lactic acidosis (as has been discussed), mainly by diverting blood flow from critical tissues, and perhaps by increasing glycogenolysis.

Should alkali be used? Administering sodium bicarbonate ($NaHCO_3$) solutions can be useful for treating profound metabolic acidemia because patients do, after all, die of severe acidemia. There is some evidence that severe acidemia, especially with blood pH below about 7.1, causes progressive deterioration of cardiac function.[26,27] One can imagine a vicious cycle of consequent worsening lactic acidosis, further falling cardiac output, and increasing lactic acidemia. Giving intravenous sodium bicarbonate solution may interrupt that cycle. However, giving bicarbonate may have some undesirable effects. One is hyperosmolarity, because the usual solutions of $NaHCO_3$ are very hyperosmolar (44 mmol. per 50-ml. ampule, with an osmolarity of 1,760 mOsm. per liter). That can be avoided by diluting 3 to 3½ ampules of hypertonic $NaHCO_3$ in a liter of 5 percent glucose/water (giving $NaHCO_3$ concentrations of 132 or 154 mmol. per liter respectively), and administering the appropriate volumes of those solutions. A second possible adverse effect is hypokalemia. If a patient with acute lactic acidosis is not hyperkalemic, bicarbonate administration might lower serum K^+ markedly, which could impair cardiac function, and, if the patient is receiving digitalis, precipitate digitalis toxicity. A third potentially undesirable effect of bicarbonate administration, at least if blood pH is raised too much, is to increase the activity of phosphofructokinase, which would increase formation of pyruvate, and hence lactate.

A fourth possible undesirable effect of bicarbonate administration arises from reversing the effect of acidemia on the oxyhemoglobin dissociation curve. Acidemia shifts the curve to the right, so O_2 is released more easily from hemoglobin because hemoglobin is less saturated with O_2 at lower blood pH at any given arterial O_2 tension. Reversing acidemia shifts the curve to the left and tends to make hemoglobin bind O_2 more avidly, and so release less O_2 to the tissues at any given arterial O_2 tension. That could worsen hypoxia and may be why Arieff, Leach, and Lazarowitz[28] found that when they infused $NaHCO_3$ into pancreatectomized diabetic dogs that had been given phenformin to induce lactic acidosis, bicarbonate seemed to worsen the lactic acidosis.

Despite the foregoing problems, many physicians will choose to treat patients with severe lactic acidemia (with blood pH less than 7.0 to 7.1) with $NaHCO_3$. In some patients, the amount of sodium bicarbonate needed to lessen acidemia is so large that they cannot tolerate the Na^+ and fluid load; they "require space" for the $NaHCO_3$ solution lest they become fluid-overloaded. In patients with an adequate urinary output, giving a potent loop diuretic will cause a NaCl diuresis; then, after administration of $NaHCO_3$, there will be left a net addition of bicarbonate. Oliguric patients require hemodialysis (unless they are in shock) or peritoneal dialysis to permit administration of large volumes of $NaHCO_3$ solutions.

Is insulin useful for treating lactic acidosis? There is no convincing evidence favoring its use. However, especially in a diabetic with an otherwise unexplained increased anion-gap metabolic acidosis, although a negative Acetest reaction is compatible with lactic acidosis, it is also compatible with β-hydroxybutyric acidosis, or both. Therefore, if one is uncertain about which disorder is present, it may be prudent to administer insulin, sometimes with glucose.

Recently, DCA (dichloroacetate), an agent that increases the activity of PDH, has been suggested as a possible useful adjunct for treating lactic acidosis.[29] By enhancing PDH activity, DCA increases the formation of acetyl CoA (reaction 6), and thereby the metabolic disposition of pyruvate, so lactate formation decreases. However, some experiments[29] have suggested that the price that may have to be paid to decrease lactic acidosis by giving DCA is to increase ketosis, owing to increased formation of CoA. Also, questions have been raised about the safety of DCA in other respects,[30] and the agent is not available for clinical use.

Summary

In summary, lactic acidosis should be suspected in patients with metabolic acidosis who have an increased serum anion gap that is not attributable to such causes as uremia or ketosis, and who have a clinical disorder capable of causing lactic acidosis. Lactic acidosis is probably the commonest type of acute metabolic acidosis encountered by physicians. Its recognition should not divert attention from the disorder that has caused it, especially because successful treatment of the underlying disorder—most commonly cardiocirculatory failure—will usually alleviate the lactic acidosis and is usually the essential feature of treatment.

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73,750-105,750	56.3%	1,126	2,252	3,378
105,750 & over	57.1%	1,142	2,284	3,426

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Tax savings are based on marginal tax rates shown. Savings would be somewhat less if the IRA deduction results in a lower marginal tax rate

THE CHASE IS ON™

Carcinoma of Esophagus

Life-long follow-up of 92 patients

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After diagnosis of carcinoma of the esophagus, 92 patients were followed for the remainder of their lives. The degree of dysphagia, esophageal fistula, esophagoscopy, and bronchoscopy are described. Choice of treatment is explained and the results of treatment are recorded and discussed. If a large dose was tolerated, radiation completely relieved dysphagia in many patients. For tumors situated more than 25 cm. from the upper alveolar margin, excisional surgery, if survived, almost always eliminated dysphagia, produced a greater extension of life than did radiotherapy, and appeared to cure 3 patients who lived 11, 15, and 21 years, respectively, after esophagectomy.

Long-term survivors after treatment of esophageal carcinoma are rare. This is because current techniques often fail to reveal, and are unable to treat, metastases present at the time of treatment of the primary tumor, or because this treatment fails to eradicate the primary tumor. Improvement in long-term results must await improved methods of diagnosis and treatment of metastases. This report concerns supportive procedures, treatment of the primary tumor, the relief of dysphagia, and survival times in 92 patients who were followed from the time of diagnosis of esophageal carcinoma at Roswell Park Memorial Institute between 1957 and 1961 to the end of their lives.

In this series there were 72 white males, 17 white females, 2 black males, and 1 black female. Their ages ranged from 46 to 96 years, average 66 years. Seven patients were able to swallow solids with some difficulty, 75 patients could swallow liquids only, and 10 patients were unable to swallow their saliva. The average duration of dysphagia on admission to hospital was four months.

As measured through the esophagoscope, the upper border of the tumor lay between 15 cm. and 20 cm. from the upper alveolar margin in 15 patients, between 21 cm. and 30 cm. in 52 patients, and beyond 30 cm. in 25 patients, a mean level of 27 cm. In each patient, biopsy showed squamous epithelioma, considered to be a primary esophageal tumor. Secondary deposits of carcinoma that had skipped areas of normal tissue were not seen either at esophagoscopy or on pathologic examination of operation or postmortem specimens. This differs from the experience of others to be mentioned later.

Bronchoscopy showed normal anatomy in 40 patients, showed the esophageal tumor to be deforming the trachea or left main bronchus in 24 patients, and was not performed in 28 patients.

Treatment

Treatment, and the reasons for choosing it, is shown in Table I. The esophageal tumor was not treated in 24 patients of whom 8 were found to have nonresectable tumors at exploratory thoracotomy. Fifteen patients received nasogastric tubes or gastrostomies. Of these 24 patients none lived longer than three months.

Fifty-six patients were not explored because of severe respiratory or circulatory disease, metastases, or distortion of the tracheobronchial tree by the tumor. Metastases or an unresectable carcinoma were found in 16 of 36 patients who underwent exploratory thoracic or abdominal operations. The tumor was radiated in 48 patients and excised in 20 patients.

Since carcinoma, invisible on either the inner or

TABLE I. Carcinoma of esophagus: types of treatment

Number of Patients	Reason for Treatment	Treatment
1	Metastases No bronchoscopy	None
1	Cardiopulmonary disease No bronchoscopy	Radiation Gastrostomy
9	Cardiopulmonary disease No bronchoscopy	Radiation
2	Tracheobronchial fistula	Gastrostomy Radiation
15	Metastases No bronchoscopy	Nasogastric tube or gastrostomy
3	Bronchoscopic deformity	Radiation Gastrostomy
3	Bronchoscopic deformity	Colon bypass Radiation
18	Bronchoscopic deformity	Radiation
4	Bronchoscopy normal Cardiopulmonary disease	Radiation Gastrostomy
8	Bronchoscopy normal Not resectable	None after exploration
8	Bronchoscopy normal Not resectable	Radiation Gastrostomy
20	Bronchoscopy normal	Esophagectomy

TABLE II. Carcinoma of esophagus: results of treatment

Site	Treatment	Number of Patients	Percent Swallowing Solids	Average Survival in months
15 to 25 cm.	Radiation	23	26	7
	Excision	6	0	5
26 to 40 cm.	Radiation	22	41	5
	Excision	14	43	40

TABLE III. Carcinoma of esophagus: effect of increasing the dose of radiation

Rads	Number of Patients	Percent Swallowing Solids	Average Survival in Months
Less than 3,000	6	0	2
3,000 to 4,000	7	29	3
4,000 to 5,000	6	17	5
More than 5,000	26	46	8

TABLE IV. Carcinoma of esophagus: results after prolonged radiotherapy and after surviving esophagectomy

Site	Treatment	Number of Patients	Percent Swallowing Solids	Average Survival in Months
15 to 25 cm.	5,000 to 7,000 rads	14	36	9
	Excision	2	0	14
26 to 40 cm.	5,000 to 7,000 rads	12	58	6
	Excision	7	86	79

outer surfaces, may be present in the esophageal wall several centimeters above the tumor seen through the esophagoscope,[1,2] it is advisable to transect the removable esophagus at a level not less than 10 cm. above the upper border of visible cancer. When this border is 25 cm. or less from the upper alveolar margin, either the length of upper esophagus excised must be reduced to make an esophagogastric junction or a pharyngogastric junction or some other type of reconstruction must be considered. Because a level of 25 cm. seems to separate the less difficult cases from the more difficult cases, the sites of the tumors recorded in Table II, III, and IV are divided into those above and those below the 25-cm. level.

Table II shows the results of radiation of the carcinoma and the results of excision of the carcinoma. It does not include three patients with colon bypass. Of the 48 patients radiated, 40 lived less than one year, 5 lived one to two years, 2 lived two to three years, and 1 patient who received 5,875 rads to a carcinoma at the 17-cm. level deforming the trachea lived five years and four months. The average period of survival after esophagectomy was 29 months.

Some patients could not tolerate prolonged radiotherapy or expired from metastases before completion of the intended course of treatment. Table III shows that the number of patients able to swallow solids and the survival time increase as the radiation dose increases.

Table IV shows the result in patients who tolerated more than 5,000 rads and the result in those patients who survived esophagectomy. Five patients make up the 36 percent of patients with high tumors who were able to swallow solids after prolonged radiotherapy. These five patients survived an average period of 18 months compared with 9 months for the whole group. Twelve patients with low tumors survived an average period of only six months whether they could (seven patients) or could not swallow solids. Dysphagia did not recur after the ability to swallow solids was regained. Patients who survived esophagectomy lived an average period of 65 months. Those patients with tumors beyond the 25-cm. level survived an average of 79 months. One of these patients lived 11 years, one lived 15 years, and one died at age 89, 21 years after esophagectomy.

Postmortem examinations were not made in the 35 patients who left hospital after prolonged radiotherapy or esophagectomy. Of 26 patients receiving at least 5,000 rads, only 1 survived more than three years. Since he lived more than five years he may have been the only patient to be cured by radiotherapy. Of seven patients surviving esophagectomy, three lived more than 11 years after the operation and could be considered as cured by surgery.

Lethal complications of esophagectomy

Most of the operations were performed by trainee surgeons. Eleven fatalities followed esophagectomy and esophagogastrostomy in 20 patients. One death was due to uncontrollable atrial fibrillation, one to coronary occlusion, one to anastomotic leak, and two deaths were due to necrosis of the stomach. The remaining six deaths were due to infection of the respiratory tract. Two patients who died were unable to swallow their saliva before surgery. Gordon[3] observed that heroic attempts at excision, bypass, or radiation for complete obstruction is likely to be fatal. Since the operations were performed more than 20 years ago, it is probable that modern preventive and antibiotic therapy of bronchopulmonary infection and the improved management of malnutrition and critical illness in general would reduce the mortality rate of 55 percent in these patients. Since current reports of a mortality rate of less than 20 percent[4] make this assumption reasonable, it is encouraging to know that of seven patients surviving esophagectomy for carcinoma beyond the 25-cm. level, six were able to swallow solids for the many years of life that remained.

Fistula

Seven patients developed esophageal fistulas before beginning treatment of the primary tumor. Three fistulas were esophagotracheal and one was esophagobronchial. Two esophagopleural fistulas and one esophagomediastinal fistula which followed exploratory thoracotomy may have been due to manipulation of the esophagus.

An esophagotracheal fistula developed after radiotherapy in a patient who had not been bronchoscoped. Two tracheal fistulas and one bronchial fistula developed in 18 patients who received radiotherapy after bronchoscopy revealed tracheobronchial deformities. Fistula did not develop when gastrostomy (15 patients) and colon bypass (3 patients) preceded radiotherapy in 18 patients with tracheobronchial deformities. Bypass or gastrostomy before radiation of an esophageal carcinoma involving the tracheobronchial tree may reduce the incidence of fistula, but none of the six patients with that combination of treatment lived longer than eight months, no longer than the average survival period of all the radiotherapy patients. Fistula did not develop in 12 patients with normal bronchoscopic appearances who were radiated.

Comment

Schuchmann et al.[4] feel that the results of esophagectomy are better than those of radiotherapy except in carcinoma of the upper one third of the esophagus. Goodner[5] and Parker and Gregorie[6] believe that preoperative radiation followed by esophagectomy is better than either radiotherapy or surgery alone. The improved results of esophagectomy recorded by Parker and Gregorie may be due to factors other than preoperative radiation. Pearson[7] feels that the combination of surgical excision and radiation does not necessarily improve the outlook for the patient and, with his position supported by a very large experience, strongly advises radical megavoltage radiotherapy for apparently localized carcinomas.

In this series, 36 of 92 patients appeared to have localized tumors but 16 of these 36 patients were found to have nonresectable lesions at exploratory operation. The choice between radiation and excision of the tumor could be made only in the 20 patients who had esophagectomies. Since no tumor shown to be resectable at operation was treated by radiation only, the lesions treated were not proved similar. Therefore, the results of radiotherapy and those of surgery are not comparable because, as in other reports, they do not refer to treatment of similar lesions. They show that a radiation dose of not less than 5,000 rads delivered to a nonresectable carcinoma prolongs life for a few months and produces the ability to swallow solids in one third to two thirds of the patients depending on the site of the tumor. The results show also that a comfortable, long life may follow excision of the carcinoma when it lies below 25 cm. from the upper alveolar margin. For esophageal carcinoma above the 25-cm. level radiotherapy appears to be advisable.

Summary

After diagnosis of squamous cell carcinoma of the esophagus, 92 patients were followed for the remainder of their lives. The patients received supportive treatment, radiotherapy with and without supportive procedures, or excisional surgery. The results of treatment are recorded. In 24 patients the disease was so advanced that no treatment of the primary tumor was advised. For unresectable tumors radiotherapy extended life for a short period in a few patients and relieved dysphagia completely in many patients. Patients who survived esophagectomy were free of dysphagia for the remainder of their long lives, and some patients appeared to be cured.

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CAM Vision Stimulator

A controlled study

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A controlled study of a new method of therapy for amblyopia, referred to as the CAM Vision Stimulator, was undertaken. The method used is discussed and the results evaluated. There was improvement in the visual acuity of some patients but this improvement was concluded to be due to the effect of detailed close work while using short-term occlusion.

For the past few years there has been much controversy over a new method of treatment for amblyopia formulated at Cambridge University in England.[1] The treatment utilizes a unit called the CAM Vision Stimulator.[2] Cambridge had reported excellent initial results with this method of therapy; others, however, reported it to be of no assistance in improving the visual acuity of amblyopic patients.[3–7] It appeared necessary to thoroughly investigate this treatment, under controlled conditions, in an effort to evaluate its possible merit. Last year a study was organized and coordinated by the department of ophthalmology at the University of Wisconsin at Madison. Several institutions across the country participated and contributed data for analysis. Our department of ophthalmology at the University of Rochester became a part of this study.

Treatment with the CVS (CAM Vision Stimulator) is based on the results of research carried out by Hubel and Weisel[8] that states that cells in the visual areas of the brain respond to stimuli of gratings of a specific size, at certain orientations. Spatial frequency is the term used in reference to the various sized gratings. Orientation is the term used in reference to the alignment or direction of these gratings. Therefore, disks were devised that have one light and one dark bar of varying widths and each disk is then rotated at one revolution per minute to provide different orientations to stimulate the variety of cells in the brain.

Methods

Seven disks of different spatial frequencies are used in this treatment. Prior to the commencement of treatment these disks are used to assess the patient's contrast threshold, his ability to discern the gratings and to identify the correct orientation. The disks are presented to the patient, with the preferred eye occluded, beginning with the thickest or coarsest grating, progressing to the finest. Note is made, by number, of the finest grating discernible by the amblyopic eye. Number one disk is the thickest grating and number seven is the finest. Since our study was a controlled one, we used not only the specially devised disks described, but also a control disk. The control disk had a uniform gray color and was designed at the University of Wisconsin to simulate the background perceived by a patient with amblyopia when the gratings were not discernible.

There were no established age limits for patients included in our study. The patient had to be old enough to cooperate, of course, and also had to be able to discern at least the thickest grating. However, there was no specific minimum or maximum age. There did have to be at least two lines difference in the visual acuity between the two eyes for a patient to be diagnosed as amblyopic and accepted into the study. Patients were referred into the study by local ophthalmologists throughout the community. We requested that we be provided with the patient's ocular history, refractive error, and the prescription given.

The University of Wisconsin prepared specific forms to be used by all participating institutions to collect data in a uniform fashion. An intake form was designed to record the information from the referring ophthalmologist as well as additional information collected on the patient's initial visit. Measurements by Alternate Cover Test with Prisms were obtained and recorded for fixation at 20 feet and at 13 inches. The patient's responses to the Worth Four Dot Test at 20 feet and at 13 inches were also included. The results of a stereopsis test (Titmus Test) were recorded and also included, as was a test for central or eccentric fixation. Each intake form had an assigned number and also indicated whether the patient was to be treated by the grating method or by the control method.

All testing and treatment was done with the patient's prescription in place and no occlusion of the preferred eye was used between therapy sessions. The same two individuals were involved during every session; a visual acuity evaluator and a therapist, who was an orthoptist. The evaluator was not informed which method of treatment was being used, and the therapist was not advised of the status of the visual acuity.

To assess the visual acuity in a consistent and uniform manner, a specific "E" was used which had bars on all four sides to simulate linear acuity. The visual acuity was evaluated in this manner before and after each session of therapy. The contrast threshold of the patient was also determined prior to each session of therapy, whether the patient was treated by the grating method or by the control method. These findings were recorded on each visit on the treatment form.

Patients treated by the CVS method viewed the lined, rotating disk for a total of seven minutes; one minute on each disk if the patient correctly identified the spatial frequency and orientation of all seven disks. If, however, all seven disks were not discernible, the number of disks identified were divided into the seven-minute session. For example, if only the first four disks were correctly identified, the thickest disk was viewed for one minute, and disks two, three, and four were viewed for two minutes each, for a total of seven minutes. While the gratings were rotating at one revolution per minute, the patient traced single line drawings on a plastic sheet placed directly over the disks. Drawings of different size and difficulty were prepared for the various levels of visual acuity.

Patients treated by the control method viewed only the plain, gray disk for a period of seven minutes while tracing the single line drawings.

Following each session, the treatment form was completed noting the patient's contrast threshold and the manner in which the treatment was administered. This form was mailed to the coordinating center immediately following each session.

All patients were scheduled for 10 sessions of therapy at approximately one-week intervals. A final session, to reevaluate the status of the visual acuity, was scheduled following a one-month interval of no treatment. At the time of the posttreatment visit, the sensory tests were repeated in addition to the Alternate Cover Test with Prisms.

Results

Twenty-five patients participated in this study at our institute. The patients ranged in age from 6 to 17 years. Fourteen patients (age 6 to 16 years) received the CVS therapy and 11 (age 6 to 17 years) received treatment by the control method. As previously stated, patients were selected for each type of therapy at random.

Of the total of 25 patients, 6 had no change in their visual acuity, 4 patients in the control group and 2 in CVS treatment group.

The remaining 19 patients (12 CVS-treated and 7 controls) demonstrated varying amounts of improvement, from one to five lines, (Table I). One 16-year-old patient improved from finger counting at four feet to 8/100 on the CVS method and one 12-year-old patient on control therapy improved from 1/100 to 6/100.

Eleven of the 25 patients had one diopter or more difference in the refractive error between the two eyes; 8 of these 11 patients had a combination of this refractive error difference and strabismus. Three patients of the 11 had the refractive error difference only and there was anisometropia of one to two and one-quarter diopters.

TABLE I. Results of amblyopia therapy in 25 patients

Improvement	CAM Therapy	Control Therapy
None	2	4
1 line	4	2
2 lines	4	0
3 lines	1	0
4 lines	2	2
5 lines	0	2
Other	1(FC 4′ to 8/100)	1(1/100 to 6/100)
TOTALS	14	11

Summary

The purpose of our study was to evaluate the CAM Vision Stimulator method of therapy for amblyopia. A total of 25 patients participated. Fourteen patients, ages 6 to 16, were treated on the CAM unit and 11 patients, ages 6 to 17, were treated by the control method. Of the 14 patients treated on the CAM unit, 12 patients improved to some degree, with up to four lines of improvement. Of the 11 patients treated by the control method, 7 patients had some improvement, with up to five lines of improvement.

In a Cambridge report,[9] it was stated that anisometropic amblyopia generally responded well. Our purely anisometropic patients made very little or no improvement.

It is our assumption that the reason for improvement in the control group was probably due to the effect of short-term occlusion with detailed close work.

We continue to offer this method of therapy to the community for those physicians and patients who desire it. However, it is with a clear understanding that it is likely that there will be no improvement in the visual acuity of the amblyopic eye.

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Scientific Sessions held at
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New York City
May 21, 1981

ABSTRACTS AND REPORTS OF PROCEEDINGS

New York Society for Thoracic Surgery

ALLAN ELLIA BLOOMBERG, M.D., Editor

Spring Meeting, 1981

The spring meeting of the New York Society for Thoracic Surgery was held on May 21, 1981, at Memorial Hospital for Cancer and Allied Diseases, New York City. George Holswade, M.D., President, was in the chair.

The following article appears in its entirety.

Mobile Cardiac Shock Van

An 18-month experience

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The development of cardiogenic shock in the perimyocardial infarction period is associated with a mortality rate of 80 to 90 percent.[1] Medical intervention, consisting of fluid loading monitored by measurement of PCWP (pulmonary capillary wedge pressure), the use of vasopressors such as dopamine and dobutamine, and afterload reduction, is thought to salvage jeopardized myocardium and improve the prognosis.[2] These modalities can be employed in community hospitals that have facilities for continuous monitoring of PCWP and arterial pressure.

The great majority of patients in cardiogenic shock, however, die despite aggressive medical intervention.[3] The use of intra-aortic counterpulsation and, in some instances, coronary artery bypass, either alone or associated with the repair of a mechanical intracardiac defect, has been shown to improve chances of survival to 40 to 50 percent.[4,5] Most patients who suffer an acute myocardial infarction and develop cardiogenic shock are first seen in hospitals without facilities for either counterpulsation or open heart surgery. Physicians are reluctant to transfer these patients to another hospital with facilities for counterpulsation because of the risks involved in transporting critically ill patients.

Eighteen months ago we initiated a transport service with a portable IABP (intra-aortic balloon pump). The balloon was inserted in the community hospital and the patient was transported to Nassau Hospital with the balloon in situ.

Methods and materials

Sixteen patients in cardiogenic shock underwent interhospital transport between November, 1978, and June, 1980. There were 11 males and 5 females. Nine patients were over 60 years of age, five were between 40 and 60, and two were less than 40 years of age. Myocardial infarction was documented in all patients by appearance of new Q waves and elevation of cardiac enzymes. Cardiogenic shock, for purposes of this study, was defined as systolic pressure below 80 mm. Hg in the presence of an adequate preload (a PCWP of more than 18 mm. Hg). All patients were oliguric (less than 15 cc. urine per hour for three hours).

The response time of the shock van was between two and three hours, depending on the distance to the referring hospital. No patient expired while awaiting balloon insertion. The balloon was inserted in the referring hospital in 14 patients. Patient 10 underwent transport without a balloon because of administrative difficulties, and balloon insertion was not technically possible in patient 12. No patient died in transport. The same console (Avco model #7) was used in all patients.

The mean systolic arterial pressure measured by way of an indwelling radial artery cannula prior to IABP insertion was 69 mm. Hg (Table I). All patients were on dopamine, 20 to 40 micrograms per kilogram body weight per minute, at the time of the pressure measurement. Systolic blood pressure was above 80 mm. Hg in 2 patients, between 60 and 80 mm. Hg in 12 patients, and below 60 mm. Hg in 2 patients.

TABLE I. Blood pressures in 16 patients prior to balloon pump insertion

Patient	Sex	Age (Years)	Systemic Systolic Blood Pressure (mm. Hg)	Pulmonary Capillary Wedge Pressure (mm. Hg)
1	M	45	60	22
2	M	50	90	20
3	F	68	40	35
4	F	70	60	28
5	M	64	60	30
6	M	38	60	28
7	M	56	70	24
8	M	35	80	21
9	M	49	90	21
10	F	69	50	21
11	M	63	40	28
12	M	67	70	30
13	F	50	70	19
14	F	55	80	. . .
15	M	62	70	21
16	M	52	70	26

TABLE II. Angiographic findings and results in 16 patients

Patient	Angiographic Findings	Results
1	Single LAD obstruction	Alive & well—16 months
2	Single LAD obstruction	Alive & well—12 months
3	Total left main coronary obstruction; moderate right coronary obstruction	Hospital death—unable to wean
4	Not performed	Hospital death—cardiac & renal failures, unable to wean
5	Complete LAD obstruction; 80% proximal circumflex obstruction; 80% proximal right coronary obstruction	Triple CABG to be weaned, alive & well—6 months
6	Not performed	Died suddenly while on balloon; (?) cardiac rupture
7	Total obstruction LAD; 90% obstructed RCA, diffuse circumflex disease, anterior apical aneurysm	Weaned; moderate CHF—2 months; underwent vent. aneurysmectomy & single CABG (RCA)
8	Complete LAD obstruction; complete obstruction of dominant RCA; obtuse marginal patient	Weaned; died after hospital discharge
9	Not performed	Alive & well—3 months
10	Not performed	Unable to insert balloon; died
11	Severe triple vessel disease	Underwent triple CABG to be weaned, developed infected balloon graft, extraanatomical bypass performed; NYHA class III—6 months
12	Severe triple vessel disease; diffusely hypokinetic ventricle	Died following coronary artery bypass 6 weeks post infarct
13	Total LAD obstruction, 30% obstruction RCA	NYHA class II—4 months
14	Not performed	NYHA class II—3 months
15	Total and anterior wall hypokinesia	NYHA class II—2 months
16	Total LAD obstruction; total RCA obstruction, severe proximal circumflex obstruction (80%), hypokinetic ventricle	Underwent CABG to attempt to wean; died

LAD: left anterior descending; RCA: right coronary artery; CABG: coronary artery bypass graft; NYHA: New York Heart Association.

PCWP was measured in 15 patients. The mean value was 25 mm. Hg. The PCWP was between 30 and 40 mm. Hg in 3 patients, between 20 and 30 mm. Hg in 11 patients, and 19 mm. Hg in 1 patient.

In addition to evidence of cardiogenic shock, two patients had recurrent episodes of ventricular tachycardia requiring defibrillation and one patient had recurring episodes of supraventricular tachycardia requiring multiple cardioversions.

Results

The intra-aortic balloon was successfully inserted by way of a standard femoral arteriotomy in the 14 patients. It was not possible to insert the balloon in patients 10 and 12 because of severe obstructive peripheral vascular disease. The immediate hemodynamic response demonstrated an increase in mean blood pressure to 80 mm. Hg and a decrease of PCWP to a mean of 18 mm. Hg. No patient died during transportation, although one patient required defibrillation in the transport van.

Eleven patients underwent coronary angiography prior to either removal of the IABP, operative intervention, or death (Table II). The findings in these patients included single left anterior descending obstruction in four patients, left main coronary artery obstruction in one patient, and triple vessel disease in the remaining six patients (Table II).

Nine patients were successfully weaned from counterpulsation without operative intervention. One of these patients, number 8, expired shortly after hospital discharge. He had undergone coronary angiography and had been thought to be inoperable. Patient 7 developed recurrent episodes of congestive heart failure after balloon removal. Coronary angiography demonstrated an anterior wall aneurysm with total obstruction of the left anterior descending artery, diffuse disease of the circumflex coronary artery, and a high-grade stenotic lesion of the right coronary artery at its bifurcation. He underwent ventricular aneurysmectomy and bypass to his right coronary artery six weeks after his infarction. He is now NYHA (New York Heart Association) class II three months after surgery. Patient 12, in whom balloon insertion had not been technically possible, underwent a triple coronary artery bypass for persistent angina and congestive heart failure and expired. The other six patients are alive and well from 4 to 17 months after hospital discharge.

Three patients underwent CABG (coronary artery bypass graft) because attempts at weaning were unsuccessful. Patients 5 and 11 survived surgery and are now NYHA class III, 10 and 6 months postoperatively. Patient 16 was unable to be weaned, underwent CABG, but died in the operating room.

Three patients were unable to be weaned, and expired. Surgery was contemplated in patient 3, but the patient suddenly expired on the evening prior to the day of proposed surgery. Patient 6 suddenly expired after doing well on counterpulsation for several days and prior to undergoing angiography. Although an autopsy was not obtained, it was thought he expired from myocardial rupture because of his extremely rapid clinical deterioration and eventual death over a 10 to 15 minute period.

Comment

The purpose of this study was to determine if patients in cardiogenic shock could safely undergo interhospital transport with an IABP in situ. The assumption was made, based on our past experience and other reports in the literature, that once such a transfer was successfully completed, the patient's prognosis would be improved because of the continuation of counterpulsation and surgical intervention when necessary.

There are many aspects to interhospital transfer that make this extremely hazardous in patients in cardiogenic shock and there are several theoretic reasons why pretransport insertion of an IABP should decrease the danger. The apprehension and fear caused by the prospect of being transferred and the expectation of a surgical procedure to be performed at another hospital cause an increase in catecholamine secretion with subsequent tachycardia and increase in peripheral resistance. This may cause an increase in myocardial oxygen requirements which the patient is unable to meet. Second, the process of moving a hemodynamically unstable patient may, in itself, increase the instability. The more hemodynamically stable the patient is prior to transport, the better he will be able to tolerate the move. Third, the lack of availability of equipment on most standard ambulances and the difficulty of gaining access to a patient involved in transport make it imperative that maximum stabilization takes place prior to transport to help avoid complications occurring during the move. Finally, it is reasonable to assume that the earlier the balloon is inserted, the more it will benefit the patient. Inasmuch as counterpulsation will eventually be employed in these patients, it is probably better to begin it earlier rather than later.

All the patients in this group showed hemodynamic improvement after balloon insertion. No patient expired or experienced deterioration in cardiovascular status before, during, or immediately after transport. Since this was not a controlled, matched study, there is obviously no control group with which to compare our patients. However, it had been our previous experience that patients undergoing transport without balloon support experienced a high incidence of both mortality and hemodynamic deterioration during transport. It was our impression based on these 16 patients that balloon support increased the safety of interhospital transport.

Survival of patients in cardiogenic shock, not successful transport alone, is the endpoint of treatment. Friedberg[1] reported an 85- to 90-percent mortality rate in medically treated patients in cardiogenic shock. Scheidt, Ascheim, and Killip[2] reported similar results in a later study. Although intra-aortic balloon counterpulsation alone has been demonstrated to improve survival in patients with postmyocardial infarction cardiogenic shock, recent results have not been as good as the results originally reported by Kantrowitz et al.,[8] and Krakauer et al.[9] A national cooperative clinical trial on intra-aortic counterpulsation found that only 15 of 87 patients undergoing balloon pumping actually survived hospitalization.

Myocardial revascularization performed on patients undergoing counterpulsation for cardiogenic shock was shown by Dunkman et al.[5] and Mundth et al.[10] to improve survival from 15 percent to 40 or 45 percent. They attributed the improvement in survival to improved myocardial oxygen supply and subsequently to improved ventricular function. Similar results have been obtained in patients undergoing repair of postinfarction mechanical intracardiac defects (that is, ventricular septal defect or ruptured papillary muscle). Satisfactory long-term results have now been demonstrated by Subramanian et al.[11] in patients who have undergone coronary revascularization for cardiogenic shock and it is now believed that operative intervention offers the best chance for survival in this group of patients.

Our results with transported patients confirmed our previous experience with patients in cardiogenic shock.[12] In this group of 16 patients there were no complications directly attributable to the balloon itself or balloon insertion. Nine patients were weaned without operation and six of these patients are still alive from 4 to 17 months. Two patients survived after a triple CABG and are now classified NYHA class III. Thus, in the total group, eight patients, or 50 percent, are now alive.

The expense of a balloon pump console, the specialized nursing requirements involved in caring for a patient on the IABP, and the infrequency of cardiogenic shock as a complication of acute myocardial infarction have made the acquisition of a balloon pump impractical for the average community hospital. Previously, interhospital transport of these patients has been thought to be exceedingly dangerous. Our experience with this group of 16 patients demonstrates the feasibility and relative safety of transporting a critically ill patient with a balloon in place.

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Discussion

Dr. John C. McCabe: We initiated a similar program of transporting cardiogenic shock patients on counterpulsation in 1975 at the New York Hospital. At that time we were encouraging the community hospitals to insert the balloon at their hospital at the time the consideration was made for transfer to a tertiary care center, because it had become apparent that results in this group of patients correlated with how long they were allowed to remain in cardiogenic shock. Most of the patients in this series had the balloon inserted locally and were then transferred to New York Hospital. Although a few had cardiac catheterization locally, the procedure was usually done at our center. The actual transport vehicle was a 27-foot mobile home which had been converted into an ambulance by the Avco Company and lent to us specifically for moving patients on counterpulsation. It is equipped with an electric ramp in the rear, monitoring devices capable of demonstrating three transducers and an EKG, and a refrigerator. It has a 7.5-kv power generator to provide alternating current and room for the patient, a respirator, and a balloon console.

Eighteen patients were transported in our series with nine survivors. Thirteen of the group underwent cardiac catheterization. The hemodynamics were similar to Dr. Hines's patients, demonstrating a mean systolic blood pressure of 72, ejection fractions in the range of 26 percent, elevated end diastolic pressures, and high creatinine phosphokinase levels. Four patients had a cardiac arrest within an hour of arriving in the intensive care unit; all of these died. There were two patients who had isolated left anterior descending occlusions who survived without surgery. Three patients who had late insertion of the balloon, by surgeons accompanying the van rather than by local surgeons, underwent bypass surgery, but all died. In a subgroup of nine patients who had immediate balloon insertion locally, six survived after having cardiac surgery. This seemingly real difference seems to be related to the duration of the low output state.

Of the 18 patients, 13 arrived with acute renal failure and 4 of them survived. This was felt to represent a contraindication to surgical intervention in the past. Late follow-up of our nine survivors, including exercise tolerance testing and radionuclide ventricular imaging, demonstrated all were NYHA class II and eight were gainfully employed. There has been one late death due to myocardial infarction.

We have since terminated our balloon transport system for several reasons, but primarily because of the tremendous effort required by physicians, nurses, paramedics, and hospital administrators to coordinate this type of operation. I would be interested to know what has followed Dr. Hine's original 16 patients. Additionally, I think it is important to define cardiogenic shock very specifically, and I noted from

Dr. Hine's manuscript that some of his patients had systolic pressures greater than 80, which would exclude them from this category.

Dr. Hines is to be congratulated for achieving exceptional results with a very difficult group of patients.

Dr. Ronald M. Abel: I have two comments, both in the way of being historical, and one question for the author. It always amazed me that since the advent of balloon pumping in the mid-1960s the idea didn't catch on earlier. As many of you know, the first attempt to benefit patients from community hospitals by counterpulsation occurred during a residency rotation with Massachusetts General Hospital and the Salem Hospital on the north shore of Boston. Around 1972, patients were transported in a similar system, but, again, as Dr. Hines indicated, only because they were all dead on arrival if transported by conventional ambulance. The situation at the New York Hospital with the van that Dr. McCabe reviewed worked very well, and I think we were able to demonstrate five years ago the feasibility of enabling patients out in the hinterlands to be afforded the benefit of mechanical circulatory support. In fact, our standard "line" was, "Just because you are unfortunate enough to live in the suburbs doesn't mean that you have to die of a heart attack from cardiogenic shock." The trouble is, it didn't work; and it didn't work for financial and logistic reasons. It didn't work, I believe, because it was worked through a hospital setting rather than using volunteers through the private sector. With many other cities in the country—Pittsburgh and Denver—it has worked better through private volunteer ambulance services.

The situation in Newark is quite different. At the Newark Beth Israel Medical Center, for the past eight years patients have been transported during balloon pumping. The program is now self-sufficient. I just looked up our figures this afternoon, and in the past 30 months we have transported 29 patients on intra-aortic balloon pumps. This excludes about 15 other calls, so it is about two calls a month where our team would proceed out by volunteer ambulance to local communities and perform the same function. Our results are about the same. Our results in profound cardiogenic shock show the ultimate salvage is less than 40 percent. If you deal with patients with severe ventricular ischemia, primarily postinfarction angina requiring balloon pumping for survival, the rate is almost uniform.

The question I would like to ask Dr. Hines is basically the same question Dr. McCabe asked: Who pays for it? Does the patient pay for it; do you pay for it as a way of getting the patients to your hospital? Who actually drives the van? Is it a volunteer, or is it the policeman who is paid? I believe that this is a major question.

If the idea works, we should be able to have regional networks to do this, but I have been frustrated using anything other than volunteer groups.

Thank you.

Dr. Hines: First, I would like to thank both Dr. McCabe and Dr. Abel. As to Dr. McCabe's question, there were two patients with blood pressure above 80. Both of these patients were on maximum dopamine drips at the time that blood pressure was measured. Without dopamine all blood pressures were below 80 mm. Hg. As for the weaning process, once the patient was transported, we would first try to decrease the amount of vasopressor that the patient was on. Before weaning from the balloon we try to get the patient almost completely off dopamine or any other vasopressor. Then we would decrease the frequency of counterpulsation to every second beat, to every fourth beat. If the patient remained hemodynamically stable on that, we would try to study the patient first and then remove the balloon pump. In regards to the question as to the organization of the balloon pump van, as both Dr. McCabe and Dr. Abel alluded to, we have difficulties also. The ambulance, as I said, was contributed by the Nassau County Police Department as was the labor for renovating the van. The van is driven by Nassau County Police ambulance drivers and they are all advanced medical technicians. The hospital usually supplies an intensive care unit nurse and one of the surgical house staff. One of the attending physicians always accompanies the van. We do occasionally have problems with the nursing service at the hospital in regard to adequately staffing the van. As a matter of fact right now we are in the middle of the discussion about the feasibility of continuing the balloon pump van. I would like to thank the society for giving me the privilege of presenting this paper.

The following article is abstracted.

Transseptal Approach for Mitral Surgery

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We have used the transatrial septal (Dubost) approach to the mitral valve exclusively. The records of 151 consecutive operations over the past three years were reviewed. There were no significant intraoperative complications related to the TS (transseptal) approach. One patient developed a late atrial septal defect. Since this approach is said to cause a high incidence of arrhythmia, the records of 50 consecutive patients were closely reviewed and compared with 50 consecutive patients operated on at another hospital using the S ("superior") approach. Half the patients in each group had atrial fibrillation preoperatively and 90 percent of these patients were discharged with the same rhythm. With the S approach, 90 percent of patients with NSR (nodal sinus rhythms) preoperatively had NSR postoperatively. With the TS approach in patients with NSR preoperatively, 75 percent had nodal rhythms in the early postoperative period and half of these required atrial pacing, but again 90 percent had NSR at discharge. In our experience the TS approach provides excellent exposure of the mitral valve without the potential of disastrous tears behind the cavae or aorta. There is a high incidence of nodal rhythms in the early postoperative period but these are easily controlled with atrial pacing, and permanent serious arrhythmia is rare.

Discussion

Dr. Robert S. Litwak: I am not convinced that the routine use of the transseptal approach to the mitral valve is desirable. Certainly the transseptal approach is helpful during reoperation where extensive adhesions exist and exposure is limited. Additionally, the approach is obviously useful in the individual who requires both mitral valve repair or replacement and tricuspid annuloplasty. However, when compared with the conventional direct left atrial approach, I believe that the transseptal approach has a higher incidence of dysrhythmias, particularly in patients who are in sinus rhythm. Presumably this is related to either interruption of one of more internodal pathways and/or to traction trauma on the bundle of His. Summarizing, there are certainly specific circumstances in which the transseptal approach is advantageous but it seems inadvisable to employ it routinely in mitral valve surgery.

Thank you very much.

Dr. David Bregman: Unfortunately, Fred Bowman could not be here tonight, but when I saw this paper on the program today I had a nice chat with him this afternoon and, as you will recall, in the mid-1960s both he and Jim Malm published a paper on this approach more or less at the same time as the Dubost publication. The transseptal approach is a rather popular approach at our institution for several reasons. First, given the instance of dealing with a patient with an acute rupture of the mitral papillary muscle apparatus with a small left atrium, it is ideal rather than working behind the heart. I agree with Dr. Litwak that certainly when you have the combined problem of dealing with the tricuspid valve in one way or another, it is also ideal. In patients with severe pulmonary hypertension with a very thin left atrium, it also eliminates that problem of closure of the left atrium. At our institution we have not seen the 5-percent incidence of complete heart block or the high incidence of other arrhythmias that you mentioned. Dr. Bowman did say to me that the incidence of heart block was higher before the era of cardioplegia, but now this seems to be a problem of the past. The one question I would have for the authors is that I notice you were using a vent in the superior pulmonary vein at the same time that you opened the septum. Why not just open the septum and vent right through it?

Dr. John E. Hutchinson III: I would simply like to say that I agree with Dr. Litwak's comments relative to exposure of the mitral valve. With most of the approaches surgeons tend to be exponents of one versus the other or they have fairly strong feelings about what is easier for them. With the advent of cardioplegia, where the heart is totally relaxed, any standard approach becomes simpler. It would seem that the shortest and most direct route would be the one to follow. I have tried the transseptal approach and found it to be cumbersome and longer to repair than the other more commonly used approaches. Also, I have the clinical impression that postoperative supraventricular rhythm disturbances occur less frequently when the transseptal approach is avoided. As Dr. Litwak emphasized, in reoperations where the heart is bound down in adhesions, when one is combining a tricuspid with a mitral valve procedure, the transseptal approach seems to offer some advantages. I congratulate the authors for again emphasizing the transseptal approach which in specific circumstances may be of value.

Dr. Becker: I thank the discussants for their remarks. I am pleased that the group at Columbia has continued to favor this approach. In response to Dr. Bregman's comments, I would agree that a 4-percent incidence of heart block may be excessive, and I believe that more recently, with the use of cardioplegic solution, the incidence has been lower. Dr. Bregman is correct that venting is not necessary for the usual mitral valve surgery, but, in the patient illustrated, the vent had been placed because aortic insufficiency was an additional lesion.

In closing, I would remark that we continue to be pleased with the transseptal approach to the mitral valve for patients with small left atria who need concomitant tricuspid valve surgery or who have had prior mitral valve surgery. Its major disadvantage has been correctly perceived as a propensity to produce heart block.

The following article appears in its entirety.

Vagal Dysfunction and Sudden Infant Death Syndrome

One possible cause and its management

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In 1975 we reported doing selective thoracic vagectomy to relieve progressive bradycardia in a four-year-old girl. Since that time we have operated on three more children. They were all treated with atropine until tachyphylaxis made the required dose impractical and the side-effects untenable. There has been objective cessation of the bradycardia and marked clinical improvement in all four patients.

Two years ago we became involved in the SIDS (sudden infant death syndrome) program at Mercy Hospital and soon realized the close parallel in at least one half of these children with our "vagal" children. We started these SIDS patients on atropine, with a good response in most cases. The majority needed only temporary treatment with atropine but our last operative patient was one who continued to require increasing amounts of atropine and had to undergo surgical intervention, again with a good clinical and objective result.

It is because of our experience with these four children with bradycardia and those with SIDS that we are making this second presentation on childhood vagal bradycardia, its role as an etiologic factor in SIDS (sudden infant death syndrome), and its management. The relationship between intrinsic and extrinsic (vagal) "sick-sinus syndrome," which we believe to be a related condition, is also being investigated by our group.

For many years it has been known that stimulation of the left vagus predominantly affects the A-V (atrioventricular) node, depressing conduction and leading to ventricular standstill, and that stimulation of the right vagus suppresses impulse formation at the S-A (sino-atrial) node with ventricular standstill due to failure of impulse production (Fig. 1).

In the right side of the thorax, cardiac vagal innervation has no single major route but courses in several fibers. These fibers have been generally grouped into cranio- and caudovagal fibers, the former arising from the right recurrent laryngeal nerve and the latter from the vagus just distal to the right recurrent laryngeal.

The greatest effects of right cervical vagal nerve stimulation are on heart rate. These effects are both direct and reflex mediated. The reflex effects on the S-A node are ipsilateral; that is, both afferent and efferent pathways are in the right vagus.

The study done in Canada by Thomas and Celaresu support the theory of the central origin of some vagal cardio-inhibitory reflexes, that is, in the vagal nuclei in the hypothalamus and brain stem.

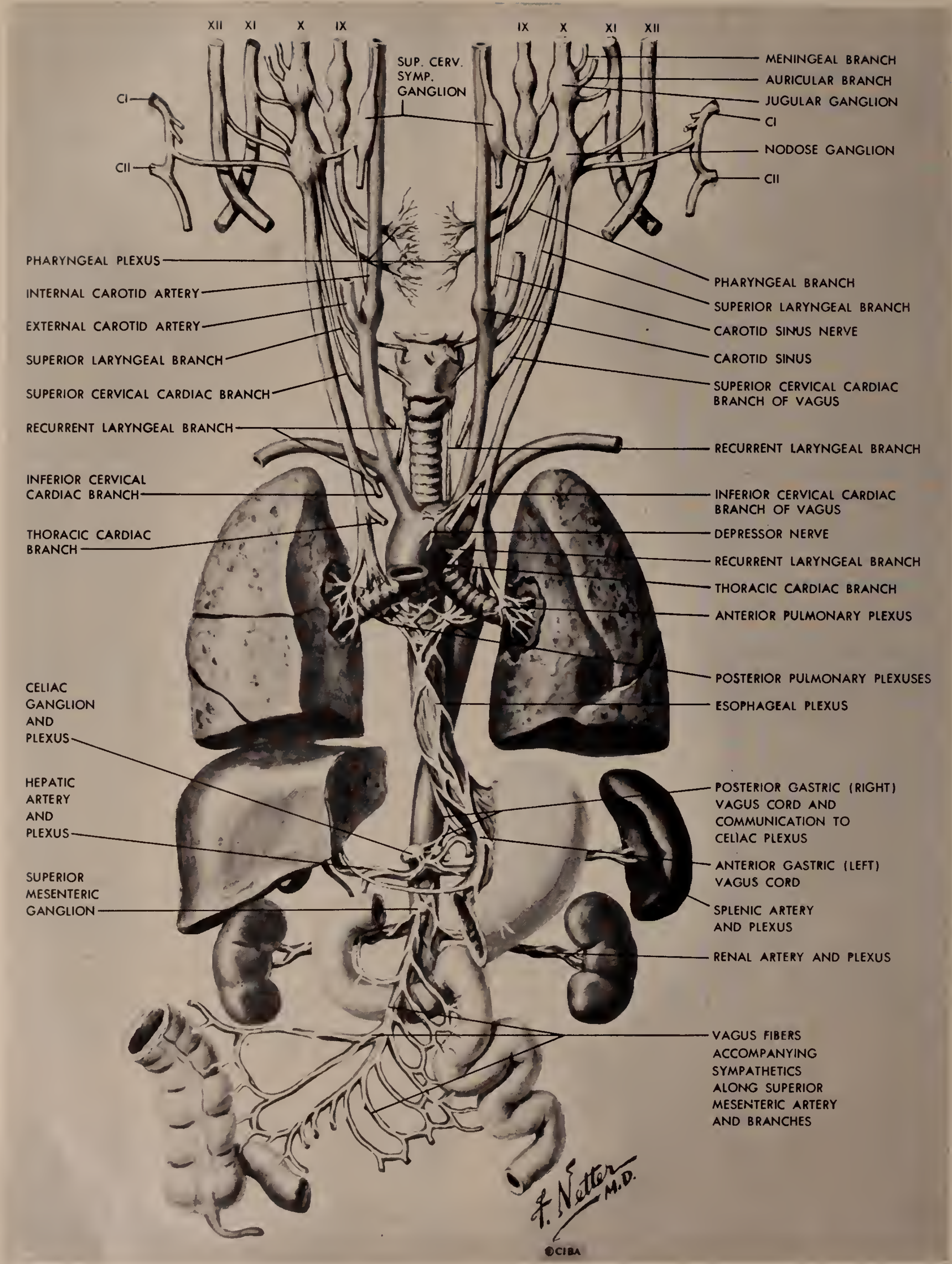
The findings in the S-A node, A-V node, and His bundle together suggest that the structures responsible for impulse formation and conduction in the normal infant may be intrinsically unstable. This work was done by Thomas James. With maturation and growth, the morphologic factors which produce this instability are gradually eliminated, although the speed at which stabilization occurs not only varies from one child to another but is probably episodic in the single child. In the majority of the hearts that have been studied, the resorptive degeneration by itself seemed to be an improbable single cause of death. What is more important is the possibility that a terminal arrhythmia or conduction disturbance either may have developed in this unstable system spontaneously, or may have been triggered by an otherwise innocuous viral infection, or by milk allergy, or by the powerful autonomic responses produced in babies by many daily events (including sudden fright). In this context, crib deaths may result from a coincidence of events, any of which alone may not have been fatal. The specific electrical events that may develop include sinus arrest or any atrial arrhythmia, various degress of S-A or A-V block with or without escape rhythms, and reciprocating tachycardia beginning in or recycling through parts of the A-V node or bundle of His.

The purpose of this presentation is not to give a definitive answer to this puzzling and often catastrophic condition known as SIDS, but to present some clinical findings that strongly suggest that in many cases the primary problem has not been in the infant's immature respiratory center but in the immature or abnormal central vagal nuclei. We suspect that the sympathetic nervous system may also in some way be involved.

I will discuss the etiology, diagnosis, and treatment of this form of SIDS, both medical and surgical.

Etiology

Autonomic or central vagal nuclei dysfunction appears to have multiple manifestations. The two systems where the effects are most dramatically seen are the cardiac and the gastrointestinal (which both show some degree of improvement when atropine is given). When related to SIDS, vagal dysfunction seems to occur in two forms: transient, due to immaturity of the vagal and/or cardiac conduction systems (bundle of His), and permanent and pro-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ANTERIOR PULMONARY PLEXUS
POSTERIOR PULMONARY PLEXUSES
ESOPHAGEAL PLEXUS
CELIAC GANGLION AND PLEXUS
HEPATIC ARTERY AND PLEXUS
SUPERIOR MESENTERIC GANGLION
POSTERIOR GASTRIC (RIGHT) VAGUS CORD AND COMMUNICATION TO CELIAC PLEXUS
ANTERIOR GASTRIC (LEFT) VAGUS CORD
SPLENIC ARTERY AND PLEXUS
RENAL ARTERY AND PLEXUS
VAGUS FIBERS ACCOMPANYING SYMPATHETICS ALONG SUPERIOR MESENTERIC ARTERY AND BRANCHES
F. Netter M.D.
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FIGURE 1. Route of vagus nerve and its target organs. It journeys from head to toe, effecting deglutition, heart rate, breathing, and gastrointestinal tract function.

gressive, presumably due to a structural or biochemical defect in vagal function. It may be this latter type that is hereditary and repeats in siblings.

As we know, maturation of the autonomic system occurs between the third and twelfth months of life, and it is during this time that SIDS peaks. It is also during this first year of life that the bundle of His is remolding. The transient form is most common in premature infants but can occur in any infant. The permanent form can also be found in any baby, but is more commonly seen in mongolians, with other central nervous system defects, multiple-system birth defects (that is, VATER), and in the infants of high-risk mothers, especially heavy smokers, alcohol users, and other substance abusers (most marked when infants demonstrate the stigma of the fetal alcohol syndrome).

Diagnosis

A common finding in SIDS near-miss babies, and therefore we suspect in potential SIDS, is a relative resistance to atropine; that is, it takes a higher dose per kilogram body weight to cause flushing and tachycardia than would be expected. We are now working on a way to safely and easily test newborns, based on the preceding observation. This is a prospective study being done at the Mercy Hospital SIDS Center. The babies who do not flush at the usual premedication doses (0.1 mg. in the 7-pound infant) are being followed as potential SIDS.

The near-miss infants with what we are calling vagal type of SIDS have exhibited a rather predictable prodromal picture. The mothers report that periodically the infant's color becomes poor (poor perfusion due to bradycardia), the infant becomes irritable (a reflex attempt at self-stimulation to increase the heart rate), and the cry changes, becoming more high-pitched and distressed (a cerebral cry due to transient hypoxia), and there often are intermittent sucking, swallowing, and regurgitation problems. The sleep-breathing rhythm is often described by the mothers as being noisy or erratic. The mother picks up the infant, pats it and stimulates it; the bradycardia ceases due to the stimulation, and the color and respirations improve.

When this prodrome is missed, we feel that the bradycardia often progresses to standstill (as seen in our older patients with chronic vagal dysfunction), respiratory center perfusion becomes inadequate, respiratory arrest occurs, and then irreversibility and death rapidly ensue. This is a hypoxic situation due to poor cardiac output with poor perfusion rather than a primary respiratory arrest with intact cardiac function.

To determine whether or not we have primary vagal or cardiogenic near-miss SIDS, rather than respiratory, we give 0.1 mg. of atropine intramuscularly. The "vagal" children respond almost immediately and the response is dramatic. The other group shows no change and, of course, no antecedent bradycardia on the monitor. The rate increases, the child becomes alert, and the breathing normal and regular. We start at the atropine dose used for premedication and increase it until there is flushing. If, at this point, there is no real symptomatic change, we feel that this child cannot be included in the vagal group.

Most groups, as the Boston Children's SIDS Center, have been working on the respiratory etiology of SIDS, with their criteria of a potential SIDS being apneic episodes of 15 to 20 seconds or greater as seen on a 12- to 24-hour pneumogram. They are then treating these, as needed, with respiratory-center stimulants such as caffeine and theophylline. We have noticed on our monitors at Mercy, where we run simultaneous EKG and pneumograms, that in a certain percentage, about one-half, there is a transient bradycardia before the apnea. The significant cardiac rate seems to be 80, even in the older (over 4 to 6 months) child, and 70 when sleeping. Below this we notice color change, increased irritability, opisthotonic posturing, and an almost cerebral cry. On casual observation, the child appears to be having a seizure. Feeding also becomes poor. (The child seems to be staying awake and restless as if trying to stimulate itself to produce an adequate cardiac rate.) Both fatigue and the overactivity of the vagus at this time seem to interfere with the infant's suck-and-swallow mechanism which may indeed be involved in the etiology of the GE (gastroesophageal) reflux seen in many of these infants where the SIDS situation does not start to improve after one to two months.

The respiratory stimulants, caffeine and theophylline, pharmacologically also have an inhibitory effect on the central vagal nuclei, caffeine more than theophylline, so that, in fact, it may be both respiratory center stimulation and vagal inhibition that is produced by these drugs.

When atropine alone is given to many to these infants who show transient or progressive bradycardia, the results as stated are dramatic; there is rapid improvement in heart rate, breathing, color, and blood gases. The irritability and cry disappear and the child rests and feeds more normally and calmly, and GE reflux, when present, is decreased.

One of the problems in documenting this phenomenon has been the fact that as soon as you touch these infants with the "maturational or self-limited vagal SIDS," the stimulation is often enough to inhibit the vagus and the cardiac rate returns to normal before or as soon as you place the stethoscope on the chest. Simultaneous monitoring has allowed this to be documented.

In the "chronic" type, the child has to be vigorously shaken to break the bradycardia and the bradycardia is not so transient and evanescent. The chronic type closely resembles the periodic Wolfe-Parkinson-White syndrome seen in adults and also "sick sinus" syndrome. In the older child, it seems as if the respiratory center has matured while the vagotonic problem has increased.

Conclusion

In conclusion, we have to date treated four children who exhibited progressive bradycardia responding to atropine with selective surgical vagectomy with good long-term results. We have now been treating certain SIDS infants with atropine and believe that one cause of SIDS is transient, or permanent, central vagal dysfunction.

Selective vagectomy seems to offer a practical alternative to pacemakers, especially in small children, if they are atropine-sensitive.

We hope that this report will stimulate more investigation into the vagal and cardiac etiology of SIDS, and more extensive investigation of selective vagectomy as a treatment for progressive childhood bradycardia. The latter seems to be most frequently seen in those children with CNS pathology, such as Down's syndrome.

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Discussion

Dr. Frank Redo: I am pleased to again discuss a paper based on Dr. Coryllos' interest in hypervagism. As many of you recall, about five years ago, as she mentioned, she presented before this Society a case report of a four-year-old girl who underwent successful treatment of vagal bradycardia by thoracic cardiac vagectomy. Tonight she has indicated that some patients with SIDS may be helped or cured by this procedure.

The incidence of SIDS occurs at about roughly two to three per 1,000 live births and it is interesting that a group studying this condition in North Carolina found an incidence in American Indians of somewhere between six and seven per 1,000 live births—a much higher incidence than in the white and even in the black community. Most of these babies are less than three months of age when they die, and 90 percent of them die within the first six months of life. Usually they die in a sleeping state somewhere between midnight and 6:00 A.M., and the condition is apt to occur less often in summer than throughout the rest of the year. It is interesting that the incidence of SIDS is highest in the low-income groups. I do not know what kind of an inference one can get from that but these are the figures based on several series. The males predominate 60 to 40 percent, and 20 percent of these babies are premature. Although siblings may have the same problem, it is not a mendelian hereditary trait and it is obvious, as Dr. Coryllos has indicated, that mothers who are drug addicts or alcohol abusers have increased numbers of infants with this problem. There seems to be no clear relationship to the parental age, to whether the babies are breast fed or formula fed, or to whether they are multiple births or single infants.

The anatomic causes are very important; prolonged Q-T time has been emphasized by some groups, but that has been completely derided by others. There is a group that feels that there is an unstable glottis situation with airway obstruction in sleeping, with the base of the tongue falling forward and the glottis coming anterior. There are many other factors postulated, and it is not a simple problem. Obviously these patients die basically because of physiologic aberrations of either respiratory or cardiac origin. Most of the investigators in this field have ascribed the problem essentially to apnea. Dr. Coryllos and her group have introduced the concept that hypervagism, due to structural or biochemical defects in vagal function, may be the precipitating factor in some forms of SIDS. The old cliché about which came first, the chicken or the egg, may be applicable in this situation. However, if indeed there is dominance of parasympathetic over sympathetic activity at the cardiac plexus, interruption of the vagal contribution to this plexus will abolish the bradycardia. In our own group, monitoring a number of these babies, the findings have been not necessarily those of apnea alone or bradycardia alone but very often a combined situation, and it is difficult to sort out one from the other.

I would like to ask Dr. Coryllos whether or not she has any data referable to cardiac as well as apnea monitoring in these children when they are at home, how many of these children are started on atropine, and what are the indications for the use of atropine. I would like to conclude by saying that this is an interesting approach that may well have wider application if those patients who might benefit from this type of surgery could be identified early. Thank you.

Dr. Michael Rohman: Does Dr. Coryllos have any thoughts on the role of smoking by the mother in this condition?

Dr. Holswade: I remember reading recently that the incidence of SIDS in subsequent children born is relatively high—about 2 percent. Dr. Coryllos, do you take any special precautions with subsequent children?

Dr. Coryllos: I will start with the easiest question first, which is Dr. Holswade's. Whenever we have a family where there has been a SIDS, we routinely put the subsequent infants on monitors for three to six months because, as Dr. Redo brought out, there is a definite familial incidence and the peak appears to be between two and six months of age. However, the sibling of one of our near-miss SID's died at 18 months of age, making the answer to the question "at what age can you safely stop monitoring?" a very difficult one.

On the question of the effect of smoking: exactly what the smoking does is not definite, but appears to be due to the vascular insufficiency produced in the placenta, which makes the newborn more prone to neurologic deficits.

All SIDS "misses" are sent home on monitors, and the families instructed both in the use of the monitor and in cardiopulmonary resuscitation. Those who have been given atropine in the hospital are continued on it at home. Boston has been putting some of their patients on belladonna. We are putting them directly on atropine, intramuscular or oral, depending on individual response.

Another group that we have put on atropine are the ones who have gone home with apnea monitors alone and then have been brought back to the hospital because the mothers have noted that they periodically "look funny"—the "hypoxic prodrome" that we discussed earlier. They complain that the baby is pale and "gray," irritable, has a funny high-pitched cry, and is not responding in his or her usual manner to "social" stimuli. These youngsters have been readmitted to the hospital and then, after EKG and cardiac reevaluation, have been put on our atropine regime. Then, when stable and "normal" neurologically and socially, they are again sent home, on atropine and again on the monitor.

In some of them we have had to temporarily increase the dose of atropine, before they could finally be weaned off. Most of the youngsters have been off atropine by 4 to 5 months of age, a few not until 10 to 12 months, and a very few, like our four patients, could not be weaned and kept requiring higher and higher doses at more frequent intervals, even though the apneic episodes had virtually ceased.

It is in this last group that selective vagectomy has proved so effective. There appear to be two types of vagal bradycardia: localized (as in my associate's and Dr. Redo's cases) due to tumor, goiter, distended viscus, postoperative adhesions, and so forth, and central due to immaturity (possible cause of one form of SIDS), or abnormality of the central vagal nuclei with generalized hypervagism (as in our four cases). Both types produce hypervagism at the level of the cardiac plexus; the latter is accompanied by additional symptoms involving the gastrointestinal and respiratory systems.

The cardiac response to atropine indicates that the bradycardia is due to vagal inhibition of impulses that originate in the sino-auricular node.

Our selective vagectomy has thus far been simpler, more dependable, and better tolerated for a longer period of time than a pacemaker, especially in the very small child (13 pounds). Our oldest patient is now a teenager, and the most recent a four-year-old Down's syndrome case.

Admittedly, a series of four is not large, but our results have been predictable and consistently good. I want to thank the Society for giving me the opportunity to present this paper tonight, and I request everyone's help, because I think that we have found a valuable clue as to the etiology of at least one form of SIDS.

The following article appears in its entirety.

Fine Needle Aspiration Biopsy of Intrathoracic Lesions

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Although needle biopsy of the lung was first performed almost 100 years ago,[1,2] the procedure has only recently gained widespread acceptance. The development and utilization of fine (23- to 25-gauge) needles has markedly reduced the incidence of the serious complications (pneumothorax, major hemoptysis, and hemothorax) which were previously responsible for the limited popularity of the technique.[3,4] Along with increased safety, it is important to note that diagnostic yield has not been compromised by the reduction in needle diameter, nor by the transition from histopathologic evaluation of tissue cores to the use of cytologic criteria.

Data obtained from fine needle aspiration biopsy of intrathoracic lesions at a large urban teaching hospital are the subject of this report.

Materials and methods

Eighty-five patients underwent TTNA (transthoracic needle aspiration biopsy) at our institution between March, 1978, and April, 1981. Criteria for performing TTNA included one or more of the following: (1) the presence of parenchymal, pleural, or mediastinal lesion; (2) lesion not suitable for fiberoptic bronchoscopy; (3) lesion with previous nondiagnostic fiberoptic bronchoscopy; and (4) patient unable to tolerate bronchoscopy.

All aspirates were performed using 23-gauge, 18-cm. needles under monoplane image-intensification fluoroscopic guidance. Posteroanterior and lateral chest roentgenograms (and when available, conventional chest tomograms or computed tomography scans) were reviewed prior to TTNA, to facilitate placement of the patient in the supine, prone, or lateral recumbent position on the fluoroscopy table prior to the biopsy. We selected the position that would permit our aspirating needle to traverse the minimum perpendicular distance from the skin to the target lesion. A small radiopaque marker was taped to the chest wall over the proposed site of entry, the patient was rotated along the craniocaudal axis under fluoroscopic monitoring, and the position of the marker was adjusted (as necessary) until it remained closely associated with the target lesion during rotation.

The skin surrounding and underlying the marker was then prepped with betadine (or iodine tincture) and draped with sterile disposable paper towels. Skin, subcutaneous tissues, intercostal muscle, and parietal pleura were infiltrated with 1-percent lidocaine. A 19-gauge, one and one-half inch (3.8 cm.) needle was inserted in the intercostal space perpendicular to the chest wall, at the proposed site of entry for aspiration, and proper localization was reconfirmed fluoroscopically. The aspirating needle with stylet was then inserted through the lumen of the 19-gauge guide needle.

The patient was instructed to hold his breath for a brief period at FRC (functional residual capacity), at which time the aspirating needle was passed through the pleura and up to the target lesion. After the needle position was confirmed fluoroscopically, the stylet was removed, and a 20-ml. plastic syringe was attached to the aspirating needle. Aspirates were obtained during breath-holding at FRC, with the application of negative pressure by withdrawal of the syringe plunger, as the aspirating needle was advanced and withdrawn (2- to 3-cm. excursion) several times. Negative pressure on the syringe was released prior to withdrawal of the needle from the thoracic cavity, at which time the patient was instructed to resume normal breathing. Two smears from material within the needle lumen were immediately prepared by a cytotechnologist. One slide was fixed for permanent Papanicolaou staining, and the second slide underwent rapid fixing/staining with Diff-Quick stain (Harleco, Inc.). The syringe barrel and needle were rinsed with 2-percent carbowax in 50-percent alcohol solution and this material was used to prepare cytocentrifuge and cell block specimens. When inflammatory disease was a diagnostic consideration, aspirates were expelled into sterile culture tubes for microbiologic testing, and slides were prepared for direct Gram's and acid-fast staining.

The rapidly stained slide was immediately reviewed microscopically for the presence of adequate material for cytodiagnosis. In this fashion, we performed only the minimal number of aspirates necessary to establish a specific diagnosis (most often one to three separate aspirations). On completion of the procedure, an anteroposterior supine expira-

TABLE I. TTNA in patients with primary intrathoracic tumors

Cell Type	Number of Patients	Correct Diagnosis
Epidermoid carcinoma	15	15
Adenocarcinoma	16	13
Oat cell carcinoma	3	3
Undifferentiated carcinoma	8	7
Spindle and giant cell carcinoma	1	1
Malignant mesothelioma	1	1
TOTALS	44	40 (90.9%)

TABLE II. TTNA in patients with metastatic tumors

Cell Type (Site of Origin)	Number of patients	Correct Diagnosis
Renal cell carcinoma	2	2
Colonic carcinoma	3	2
Adenocarcinoma (breast)	1	1
Squamous (base of tongue)	1	1
Prostatic carcinoma	1	1
Sarcoma (breast)	1	1
Squamous (larynx)	1	1
Transitional (bladder)	1	0
TOTALS	11	9 (81.8%)

tory chest roentgenogram was obtained to ascertain the presence of pneumothorax. In instances where pneumothorax was detected, repeat roentgenograms were obtained as clinically indicated. No delayed pneumothoraces were encountered in this series.

Results

Complete diagnostic data and adequate follow-up are available in 76 of 85 patients. In seven of the remaining nine patients, nonmalignant diagnoses cannot be substantiated because patients have been lost to follow-up. In two of nine, nonmalignant diagnoses are compatible with the presence of solitary coin lesions, but the period of follow-up is insufficient to confirm roentgenographic stability of the lesions. Fifty-two of 58 patients with proved malignant conditions had the diagnosis established by TTNA. The procedure was diagnostic in 90.9 percent of patients with primary malignant intrathoracic tumors and in 81.8 percent of patients with intrathoracic metastatic disease (Tables I, II). Four patients with benign intrathoracic tumors (ultimately proved at thoracotomy) underwent TTNA. Aspirates in two patients with hamartomas revealed bronchial cell hyperplasia or cartilaginous elements. Benign mesothelial cells were obtained by TTNA in two patients with fibrous pleural mesotheliomas.

In three instances, aspirates showing one type of malignant cells were subsequently proved to be of a different malignant cell type after surgical removal of the lesion or on postmortem examination (Table III). Inflammatory disease, including granulomatous processes, necrotizing pneumonia, and lung abscesses, was diagnosed with a high degree of accuracy (100 percent) by TTNA (Table IV). False-negative aspirates were obtained in six patients with malignant tumors (Table V). Necrotic debris without identifiable tumor cells was obtained in two patients with large mass lesions (over 5 cm. diameter), which were ultimately proved to contain large areas of central necrosis on resected specimens.

The complication rate of TTNA was low (Table VI). We have not encountered hemothorax, clinically significant hemoptysis, or tumor implantation along the needle tract in this series. The overall diagnostic yield in the 76 patients with follow-up was 92.1 percent; other summary data are presented in tabular form (Table VII).

Comment

TTNA has been extremely useful in the diagnosis of benign and malignant intrathoracic lesions. In 25 patients, a diagnosis of malignant tumor was confirmed by TTNA after an initial nondiagnostic fiberoptic bronchoscopy. In 13 of our 18 patients with inflammatory lesions (or benign neoplasm), the results of TTNA confirmed the nonmalignant nature of the lesion that had been suggested by the previous fiberoptic bronchoscopy.

TTNA is relatively simple to perform utilizing standard monoplane image-intensification fluoroscopic equipment (available in most hospitals). Immediate and proper cytopathologic processing of the specimen is of critical importance. Air drying and other artifacts are thus avoided and subsequent interpretation of permanently stained slides and cytospin preparations is facilitated. A rapidly stained smear of each aspirate is reviewed in the fluoroscopy suite by the cytotechnologist to confirm the presence of adequate diagnostic material. We

TABLE III. Cell type by TTNA and final diagnosis in three patients

Lesion	TTNA Diagnosis	Definitive Diagnosis (Method)
Anterior mediastinal mass with bilateral pulmonary nodules	Seminoma or mixed embryonal tumor	Adenocarcinoma (postmortem)
Extrapleural mass with rib destruction	Spindle cell sarcoma	*Metastatic hypernephroma with spindle cell component (*chest wall resection)
Anterior and mid mediastinal mass	A single cluster of suspicious cells which cannot be classified further	Hodgkin's disease, nodular sclerosis (mediastinoscopy)

* Preoperative intravenous pyelogram originally interpreted as negative.

have thus been able to minimize the number of needle passes per patient.

This approach, along with the use of 23-gauge needles, accounts for the low (9.4 percent) incidence of pneumothorax (and other complications) in this series. In a recent review[3] of 1,562 lung aspiration biopsies ("small" needle used, gauge not specified) the overall incidence of pneumothorax was 23.1 percent, with 7 percent requiring chest tube insertion. Aspiration biopsy at the Mayo Clinic, where 18-gauge needles were utilized, was complicated by pneumothorax in 49 percent of patients.[5] Our pneumothorax rate is quite similar to that reported for aspiration biopsy utilizing smaller bore (24- to 25-gauge) ultrathin needles (8 percent).[4]

The overall diagnostic yield in this series (92.1 percent) and the true positive rate in malignant tumors (89.6 percent) compare very favorably with data in six previously published series (true positive rate for malignant tumors by needle biopsy, 83 percent) recently summarized by Poe and Tobin.[6] The true positive rate for inflammatory lesions and benign tumors was 100 percent. Ten of 14 patients with inflammatory disease proved by TTNA were spared thoracotomy. Four patients with benign neoplasia diagnosed by TTNA did undergo confirmatory thoracotomy; however, data obtained by TTNA in similar future cases may permit conservative nonoperative management. Although Zavala and Schoell[4] have suggested that prior antibiotic therapy interferes with the ability to make a specific microbiologic diagnosis by TTNA of infected cavitary lesions, cultures were positive in two of three patients of this type in our series.

We believe that TTNA is an easily performed, safe, and clinically important diagnostic procedure applicable to the evaluation of a wide variety of intrathoracic lesions.

TABLE IV. TTNA in patients with inflammatory disease

Diagnosis on TTNA	Number of Patients
Granulomatous lesions—TB	5*
Resolving pneumonia	3†
Spherical pneumonia	1†
Streptococcus mitis pneumonia	1†
Aspiration lung abscess	1†
Multiple anaerobic streptococcal abscesses	1**
RUL mass 2^0 to bronchiectasis	1††
Pericardial cyst	1††
TOTAL	14

* Two proved at thoracotomy; 3 stable or improved after 1- to 2-year follow-up.
† Cleared with antibiotic therapy.
** Cleared with antibiotic therapy and direct tube drainage.
†† Proved at thoracotomy.

Summary

Fine needle aspiration biopsy was utilized to diagnose a variety of intrathoracic lesions. During a three-year period, 85 patients underwent fluoroscopically guided aspiration utilizing 23-gauge, 18-cm. needles. High diagnostic rates were achieved: overall 92.1 percent; intrathoracic malignant conditions 89.6 percent, and inflammatory lesions and benign neoplasia 100 percent. The complication rate was quite low: eight patients (9.4 percent) sustained pneumothorax and only three patients (3.5 percent) required chest tube insertion. This technique permits a simple, safe, and rapid diagnostic approach to benign and malignant intrathoracic lesions.

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TABLE V. Patients with false-negative TTNA

TTNA diagnosis	Final Diagnosis	Method of Diagnosis
Inflammatory debris	Necrotic carcinosarcoma of lung	Thoracotomy
Lipoid pneumonia*	Metastatic transitional carcinoma of bladder	Repeat fiberoptic bronchoscopy
Necrotic debris	Metastatic colon carcinoma	Thoracotomy
Pulmonary adenoma	Primary adenocarcinoma	Thoracotomy
Squamous metaplasia	Primary adenocarcinoma	Thoracotomy
Normal parenchyma	Mediastinal bronchogenic carcinoma (adenocarcinoma)	Mediastinoscopy

* Lipoid pneumonia also present on initial transbronchial biopsy.

TABLE VI. Complications of TTNA

Complications	Number of Patients	Percent Total Patients
Pneumothorax	8	9.4
Pneumothorax requiring chest tube	3	3.5
Minimal hemoptysis	1	1.1
All complications	9	10.5

TABLE VII. Summary of 85 patients undergoing TTNA

Data	Percent
Diagnostic yield for all patients	82.3
Diagnostic yield in 76 patients with follow-up	92.1
Yield in 58 patients with malignant conditions	89.6
Yield in 14 patients with inflammatory lesions	100
Complication rate	10.5

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Discussion

Dr. James Caravelli: I share Dr. Kamholz's enthusiasm for percutaneous lung aspiration biopsies. I am one of four radiologists at Memorial Hospital who performs this procedure, and during the past three years I have done nearly 160 cases.

Most patients are quite apprehensive prior to the procedure, although in general it is a simple and easily tolerated study. Primarily I have used 20-gauge needles and biplane fluoroscopy. Proper selection of patients is critical to determine the relative benefit-to-risk rate for an individual patient. For example, the yield of aspirations of interstitial infiltrates is poor and generally does not warrant the risks of the procedure. The location of the lesion is not the most important criterion for attempting an aspiration although it is critical to know the exact location to plan a proper approach. I have aspirated parenchymal, pleural, mediastinal, and hilar lesions. Size of the lesion and general clinical status are other important considerations.

Reported complication rates vary widely in the literature. For example, the pneumothorax rate ranges from 14 to 50 percent (in my own series, approximately 35 percent). Much of the variation I believe to be related to the effort taken to detect a pneumothorax. At Memorial Hospital we take expiratory upright chest films immediately following the procedure and again three hours later. Nearly 40 percent of the pneumothoraces in my series are first detected on the three-hour delay film. Placement of a chest tube usually is reported in 5 percent of patients, and that has been my experience also.

The results on the first 100 of my 160 cases have yielded about 85 percent positive aspiration for malignant tumors; usually these are read with a specific histologic diagnosis. Ten percent of cases are negative for malignant conditions on aspiration and subsequently confirmed by either thoracotomy or other diagnostic evaluation. Five percent of cases were negative on aspiration, but were found to be malignant. Of course, a great deal of the credit for the good results is attributable to the cytologist. The results of aspirations for infection are less successful, perhaps because many patients previously have received antibiotics.

In conclusion, I would agree with Dr. Kamholz that aspiration lung biopsy is an extremely useful procedure. After sufficient experience has been acquired, the technique and type of needle used probably are less important considerations. If experienced cytologists are available, the results are likely to be excellent. I would like to ask Dr. Kamholz several questions regarding his material. First, in how many patients with infection was the organism identified or grown from the aspirate. Second, is the low pneumothorax complication rate reported here related to the location of the lesion, or perhaps to other factors such as age. Also, I would be interested to know whether or not delay films were obtained.

Thank you.

Dr. Holswade: What percentage of your patients were so frightened that they could not cooperate?

Dr. Kamholz: We usually spend a good deal of time talking to candidates in advance and have declined to do the procedure on people who will not be able to cooperate, or on those who cannot follow simple breathing commands. We have generally not done the procedure on patients who were obtunded or who have other alterations in mental status. On at least two occasions we have had patients come down for the procedure and decline to have it done after they were placed on the table. In the 85 patients on whom the procedure was begun, it was completed without a major problem. Two of six patients who developed pneumothoraces (during the first six months of the series) "cooperated fully" by taking a nice deep breath just as we were passing the cannula through the visceral pleura. I guess that contributed to the morbidity in those cases.

In response to Dr. Caravelli's question about specific bacterial culture data, I remember that a patient with a persistent cavitary lesion in the left upper lobe unresponsive to antibiotic therapy had a needle aspirate culture which grew *Streptococcus mitis*. The patient subsequently responded to a combination of penicillin in high doses and aminoglycoside therapy. This was a previously unrecognized pulmonary pathogen. In another patient with multiple cavitary lesions after previous tricuspid valve removal, the persistent septic course led to the performance of a transthoracic needle aspiration. Cultures yielded anaerobic streptocci despite ongoing triple antibiotic therapy.

In two of the five patients with tuberculosis (two of three who did not undergo thoracotomy), cultures of the aspirate did grow *Mycobacterium tuberculosis*.

In answer to the question about immediate or delayed films, all the eight pneumothoraces that we know about were picked up on immediate expiratory AP (anteroposterior) supine films done in the fluoroscopy suite. As far as we know, none of the patients deteriorated clinically after the procedure. We are not aware of any late pneumothoraces. It has not been our custom to obtain a delayed film. I suspect that we might have discovered a few small, asymptomatic late pneumothoraces if we had repeated films in all patients. Thank you again.

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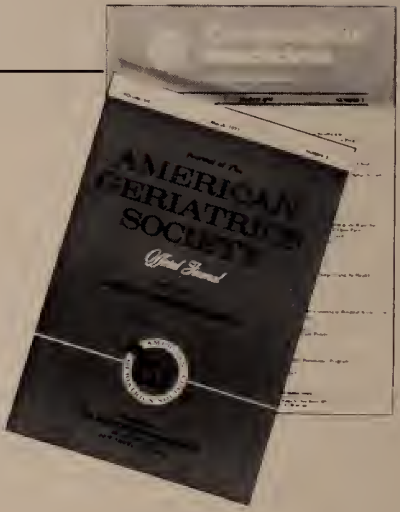

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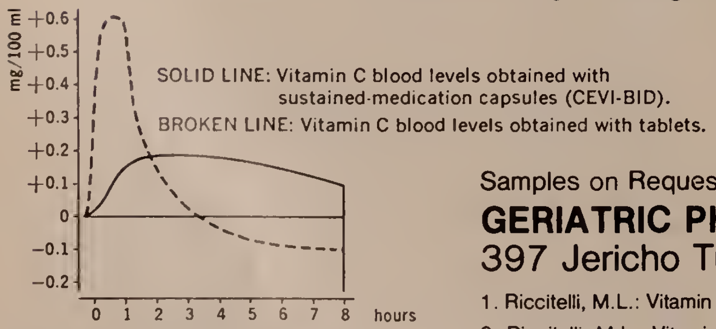

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Radiologic Problem of the Month

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The Bronx, New York

Editor

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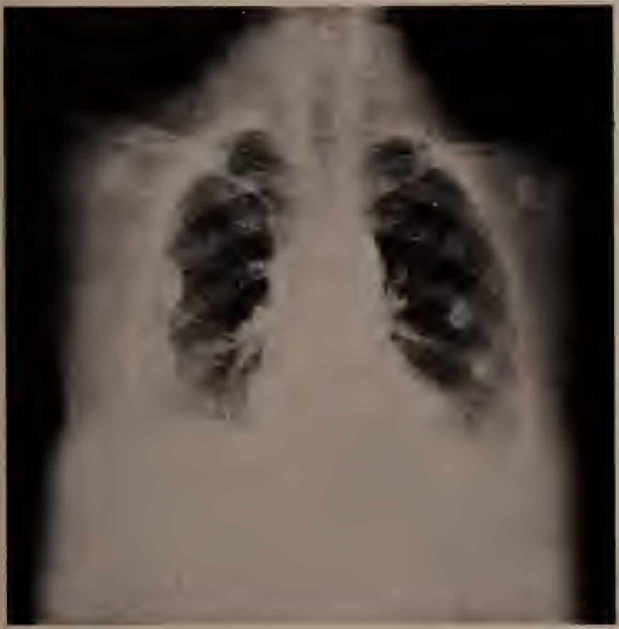
Multiple Nodules in Chest



A 48-year-old woman appeared with pain in the chest. She has been under treatment for a chronic disorder.

Elucidation

The posteroanterior view of the chest reveals multiple nodules overlying both lungs. These nodules are dense. Some of them are round and a few are oval in shape. The first impression that one gets from this radiologic appearance is lung metastases. However, further close inspection reveals that these nodules are located in a longitudinal fashion and overlie the anterior ends of ribs. The ovoid or lenticular shape of these opacities, particularly the nodules on the right side, suggest that these must be either pleural or extrapleural in origin. Parenchymal nodules in general appear as circumscribed coin lesions. Since these nodules are in line with anterior ends of ribs, these should be osseous and thus suggest the diagnosis of healing fractures. The multiplicity, the symmetrical distribution, and the location alert one to think in terms of healing fractures. However, there is no history of trauma; instead, history of treatment for a chronic disorder is given. The increased density should suggest hypercallosis, which is often observed in pathologic fractures subsequent to steroid therapy.[1] Traumatic fractures are generally located in the axillary line and not in the anterior ends of ribs.

Steroid preparations are being administered abundantly for therapeutic purposes, much more so in collagen vascular disorders. Consequently, a number of iatrogenic findings are encountered.[1] The major iatrogenic findings in the skeleton are generalized osteopenia, pathologic fractures, osteonecrosis, bone infarcts, and joint infections. Pathologic fractures do occur in the osteopenic and weakened bones, particularly of the vertebral column and ribs. Often, the history of trauma is either slight or entirely absent. Fractures may occur at any point along the ribs, but, with steroid therapy, fractures of the anterior ends of ribs are more common. During the process of healing abundant callus is formed with osteoid excess. Sometimes, this process is referred to as "pseudo callus" with "cotton wool" appearance. This is due to absence of trabecular bone. "Pseudo callus" represents an incomplete attempt at healing of fracture associated with inhibition of osteoblastic function. The latter is attributed to excess of steroid hormone. A contributing factor to this hypercallosis is the suppression of pain sense from steroid preparations leading to lack of improper immobilization, which favors formation of abundant callus.

In the differential diagnosis of multiple nodules in the chest[2] of an adult woman, metastases to the lungs or pleura should be considered. However, metastatic nodules are generally well circumscribed when they are in the lung. When the nodules are of pleural origin, they take a lenticular shape and the long axis is based along the pleura. Old healed granulomatous disease may appear as multiple nodules with or without presence of calcium. Rheumatoid nodules are often well circumscribed and when associated with pneumoconiosis of lungs may show central cavitation. Multiple septic emboli may manifest as nodules in the chest, but, in this instance, the patient is very sick. Rarely, lymphoma, Wegener's granulomatosis, and sarcoidosis may appear as nodules.

This patient had moderately advanced rheumatoid arthritis of hands and feet and she was on steroid therapy.

Diagnosis

Steroid-induced rib fractures with pseudo callus

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Physician sees medical chaos after nuclear holocaust

The relatively rapid recovery of Hiroshima and Nagasaki after the U.S. atomic bombing in 1945 has resulted in a belief that the consequences of a nuclear war could be overcome.

But in a world where nuclear weapons are now measured in megatons instead of kilotons, the Japanese experience has limited validity in predicting the human outcome of an all-out nuclear war.

Writing in the November 20 Journal of the American Medical Association, Bernard Lown, M.D., from the Harvard School of Public Health, presents a picture of the medical chaos likely to follow a nuclear holocaust. According to one estimate, he says, a nuclear world war fought with today's weapons would result in instant death for more than 200 million men, women, and children. More than 60 million people would be seriously injured, half with radiation sickness and the remainder with various combinations of internal injuries, burns, radiation effects, and psychiatric derangements.

Present-day health care systems could not cope with such widespread and severe human misery, Lown states, especially given the concurrent disruption of transportation, communications, and electric power, and the destruction of hospitals, medical equipment, and blood and drug supplies.

For example, a one-megaton explosion above a city of 1 million people would produce at least ten times more burn victims than could be accommodated by all burn treatment facilities in the United States.

These illustrations do not even take into account long-range consequences such as degradation of the stratospheric ozone layer, climatic changes, radioisotope contamination of the food chain, crop failures, and additional unpredictable consequences, says Lown.

Electrocardiograms of the Month

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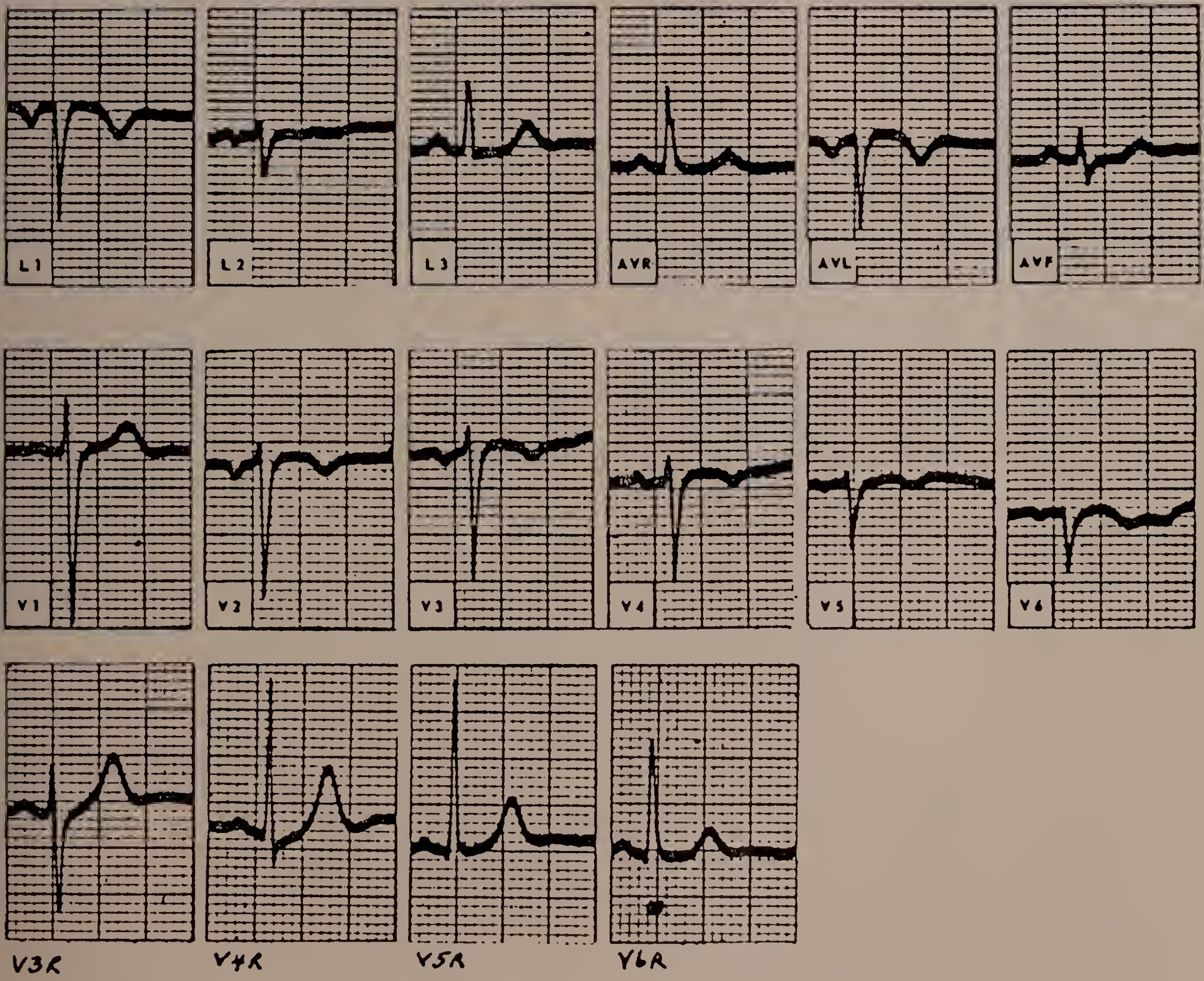
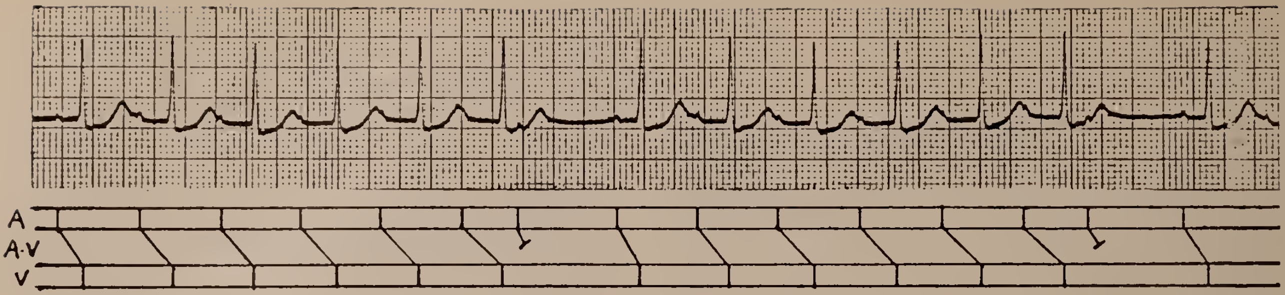


QUESTION 335. The patient was a healthy 40-year-old man whose routine pre-employment electrocardiogram was reported as abnormal. What is the correct interpretation of this tracing?



QUESTION 336. Lead 2. What is the rhythm?

Electrocardiograms of the Month

ELUCIDATION

Answer 335. The rhythm is regular sinus with a normal P-R interval of 0.16 sec. and a normal QRS duration of 0.08 sec. In lead 1 and aVL and V_6, P and T waves are inverted and the QRS is a dominant S wave. The R wave remains small from V_1-V_6. Exploring the right precordial leads reveal tall R waves in V_4R-V_6R with upright P waves and T waves. The electrocardiographic interpretation of this tracing is dextrocardia. Dextrocardia may occur in the absence of congenital heart disease and the patient would, of course, be asymptomatic.

The same limb lead pattern can be seen when the right and left arm wires are switched. In this situation, the left precordial leads would be normal.

Answer 336. Sinus rhythm is present at a rate of approximately 110 beats per minute. The P-R interval of beat 1 measures 0.15 sec. The P-R interval of beat 2 measures 0.20, sec., beat 3 measures 0.23 sec., and each succeeding P-R interval becomes slightly longer. Beat 6 is followed by a P wave which is premature and superimposed on the S-T segment. The sequence then resumes. Progressive prolongation of the P-R interval followed by a nonconducted P wave is a form of second degree heart block (Wenckebach periodicity). This tracing is not characteristic of Wenckebach periodicity as the nonconducted P wave is a premature beat.

Gastric Cancer With Chemotherapy-Induced Clinical Remission and Meningeal Relapse

*More familiar in acute leukemia**

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Although gastric carcinomas formerly were recognized as the leading cause of metastasis to the leptomeninges from systemic solid tumors,[1,2] in the United States they have been supplanted by carcinomas of the breast and lung,[3,4] due, perhaps, to the steadily decreasing incidence of gastric cancer in this country. In a retrospective analysis of 46 cases of meningeal carcinomatosis at our hospital, we found no case of gastric cancer (Cameron et al., in preparation). By contrast, in Japan, where cancer of the stomach remains the leading cause of cancer mortality in both sexes,[5] this neoplasm accounts for over half the cases of meningeal carcinomatosis.[6] Although isolated cases of long survival are reported, meningeal carcinomatosis usually is highly aggressive. Early clinical suspicion and prompt diagnosis are necessary if palliation or prolonged survival are to be achieved.

We report a patient with diffusely infiltrating, poorly differentiated gastric cancer, in whom widespread systemic metastases, appearing before any evidence of leptomeningeal involvement, were effectively arrested by chemotherapy. Meningeal carcinomatosis developed during a clinical remission of the systemic metastases. The case was unusual in that the characteristic presentation and course of meningeal carcinomatosis, with signs and symptoms of widespread involvement of the neuraxis, were absent. To our knowledge this is the first such case of meningeal carcinomatosis in a patient whose gastric cancer had been arrested outside the nervous system. This clinical problem is likely to become more common, just as it has in the acute leukemias.

Case report

A 41-year-old white woman was hospitalized in December, 1978, with a 12-month history of epigastric pain and weight loss for 2 months. Physical examination, including neurologic analysis, disclosed no abnormalities. Following a carcinoma-positive gastroscopy, she underwent esophagogastrectomy, splenectomy, and omentectomy. The stomach was diffusely infiltrated with poorly differentiated adenocarcinoma (linitis plastica)—24 of 26 nodes were histologically positive for cancer—as was the resection margin in the esophagus. For seven months she was well despite weight loss and diarrhea with malabsorption, but then developed supraclavicular lymphadenopathy on the left side; biopsy showed adenocarcinoma. There was no clinical, biochemical, or radionuclide scan evidence of liver involvement. In October, 1979, she developed occipital and left axillary lymphadenopathy, large bilateral breast masses, and multiple large nodules in her abdominal scar, without evidence of liver or lung involvement.

In November, 1979, she began treatment with the FAM regimen, incorporating 5-fluorouracil, adriamycin (doxorubicin) and mitomycin C[7]. There was an immediate and marked response in all areas of palpable disease and by February, 1980, all known lesions disappeared. Progressive weight loss, disproportionate to the vomiting occasioned by her continuing FAM therapy, remained a problem. Anemia attributed to chemotherapy was complicated by claudication which responded to transfusion. Neurologic examination findings remained normal.

In July, 1980, she underwent extensive investigation because of her severe nutritional problems. Findings of neurologic examination, thyroid function,

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endoscopy with biopsy, liver scan, and barium meal with follow-through were all normal. Her cancer appeared to be in complete remission and her cachexia was attributed to early satiety due to postgastrectomy, and inability to retain solid foods, coupled with an active life (including full-time work), leading to normal energy output in the presence of deficient intake. By August, 1980, she had gained three pounds in weight but had pains in both legs, no longer claudicant in nature and unrelieved by blood transfusion.

In September she was admitted following a tonic seizure with postictal confusion. Neurologic examination findings were normal apart from absent ankle jerks; in particular, the cranial nerves were intact and there was no papilledema or neck stiffness. Radiographic findings of skull and cervical spine were normal, and computed tomography of the brain, without contrast, showed normal ventricles and cerebral parenchyma. Lumbar puncture showed a pressure of 180 mm. The cerebrospinal fluid was clear, protein 267 mg. and glucose 40 mg. per 1 deciliter, and contained Class IV malignant cells consistent with adenocarcinoma.

Treatment was begun on September 10 with dexamethasone, 4 mg. every six hours, and drugs were given intrathecally as follows:

Day 1: Cytosine arabinoside, 100 mg. per square meter body surface area.

Day 2: Triethylenethiophosphoramide, 15 mg. (total dose).

Day 3: Methotrexate, 7.5 mg. per square meter.

This cycle was to be repeated on day 8. Radiotherapy to the whole intracranial contents was begun on September 12 (planned dose 3,000 rads in 10 fractions over 14 days). Despite the absence of evidence of active cancer outside the nervous system, including further normal liver scan findings, there was progressive deterioration of renal and hepatic function.

After treatment began, the patient related for the first time that she had suffered episodic pains in the neck and occiput for six weeks; these disappeared four days before beginning therapy. Because intrathecal triethylenethiophosphoramide caused very severe vomiting, further intrathecal therapy was with cytosine arabinoside and methotrexate on alternate days. All specimens of cerebrospinal fluid were cytologically cancer positive, although the pleocytosis was decreased at the last examination on September 20.

On September 21, she fell out of bed, striking her nose, with resulting epistaxis, but not losing consciousness. Immediate consultant neurologic assessment was normal. Cardiac arrest occurred while she was being assessed by the otolaryngologist. A coroner's autopsy was performed.

Postmortem findings

The emaciated body weighed 67 pounds. The proximate cause of death was contusion of the nose, with splintering of the nasal bones into the nasal cavity, hemorrhage, and aspiration of blood into the lungs.

Gross examination and histologic sections demonstrated extensive involvement of both ovaries with anaplastic carcinoma. Tumor was not detected at any other site outside the nervous system; in particular, findings on examination of the lungs, liver, kidneys, pancreas, peritoneum, and fibrous adhesions in the area of the stomach were negative.

The only macroscopically visible lesion within the skull was an 0.5-cm. nodule in the dura mater of the right lateral wall of the posterior fossa. The meninges appeared normal, and the brain showed neither hemorrhage nor tumor in multiple coronal sections. Microscopically, the meninges were extensively infiltrated with adenocarcinoma cells, with focal deposits in some parts of the arachnoid, and diffuse infiltration in others (Fig. 1A). Characteristic signet ring cells, with large cytoplasmic vacuoles of pale mucin and displacement of the nucleus to the periphery, were readily identified. Both cerebral and cerebellar meninges were affected, and arachnoid trabeculae with focal accumulations of adenocarcinoma cells filled some of the cerebral sulci (Fig. 1B). Invasion of the perivascular spaces of the penetrating arteries was evident (Fig. 1C), but the brain parenchyma was not involved.

Comment

MC (meningeal carcinomatosis) is habitually underdiagnosed. Failure to make the antemortem diagnosis[1,8,9] and the fact that the brain and leptomeninges may appear grossly normal at autopsy[1,4] account for this. Clinical diagnosis is based on the presence of malignant cells in the CSF (cerebrospinal fluid).[1,4] Despite severe neurologic manifestations of MC, a single specimen may be cytologically negative, and multiple samples may be required to make the diagnosis.[4] Protean symptoms and signs indicating involvement of multiple sites in the central nervous system have made the diagnosis of MC difficult,[2–4] but this pattern, ascribed to disease of the brain, cranial nerves, and spinal nerve roots, should in fact suggest the diagnosis. Signs usually are more prominent than are symptoms,[3,4] but, as the present case shows quite clearly, this cannot be applied to the individual patient.

Progressive headache, becoming intractable, is the most frequent cerebral symptom and is not always related to intracranial hypertension.[3,4,6] Seizures of many types are reported in MC, and usually have not complicated management.[4] Cranial nerve involvement occurs both early[4] and late[3] in the course of MC; the oculomotor, facial, and trigeminal nerves are most often affected. Our patient had a seizure, but lacked the characteristic headache of MC, and cranial nerve involvement was conspicuously absent.

Pain due to infiltration of nerve roots is a prominent symptom of spinal involvement by MC[3,4]; most frequent is lumbosacral pain radiating into the legs. As in our patient, this commonly is an early manifestation, since cells in the subarachnoid space gravitate to its lowest point early in the course, when the patient is not yet bedridden.[3,6]

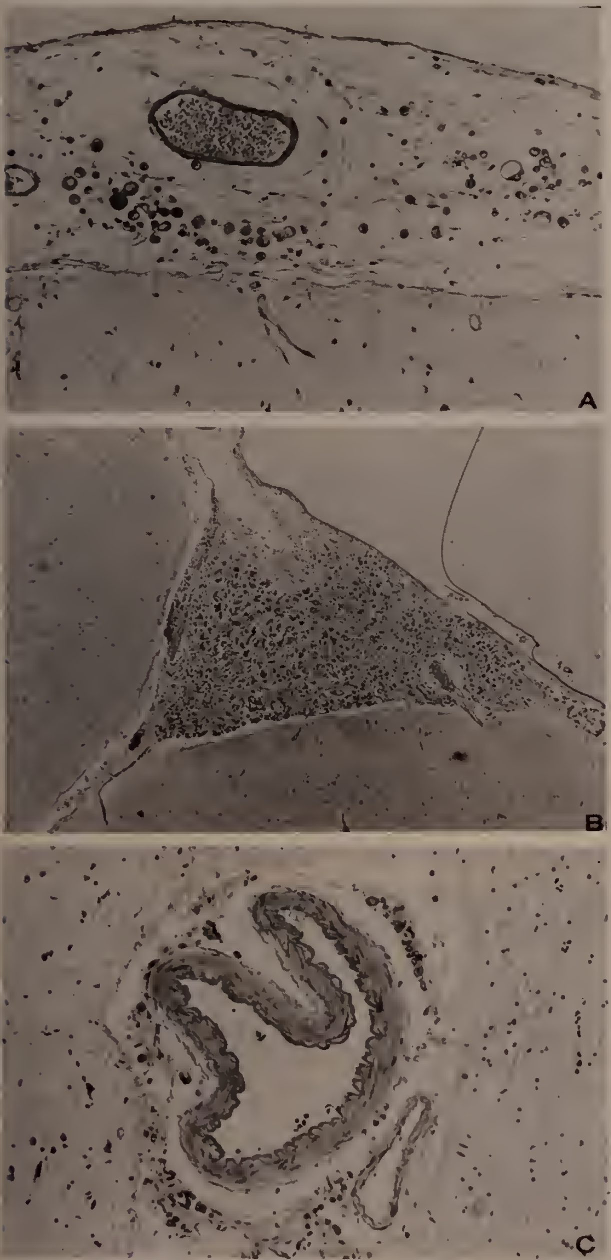

FIGURE 1. (A) Section of cerebral meninges reveals diffuse infiltration with tumor cells, some of which have classical signet ring appearance (hematoxylin and eosin stain, original magnification × 400). (B) Cerebral sulcus showing arachnoid trabecula filled with focal accumulation of carcinoma cells (hematoxylin and eosin stain, original magnification × 180). (C) Cerebral artery showing partial cuffing with carcinoma cells. Adjacent brain parenchyma is not invaded (hematoxylin and eosin stain, original magnification × 400).

Formerly, the clinical diagnosis of MC was made shortly before death or not at all.[1,2] Beyond examination of the CSF, the only study suggesting the diagnosis is myelography.[3,4] Multiple nodules on the spinal roots, particularly in the cauda equina, are strong evidence of involvement of the spinal meninges. Recently, 16 of 23 patients with breast cancer and MC were found to have carcinoembryonic antigen (CEA) in the CSF,[10] and this test may be of value for both diagnosis and management.

With effective intrathecal chemotherapy, isolated cases of prolonged palliation and survival in meningeal leukemia were reported,[11] and antifolate drugs were tried in nonleukemic disease of the meninges. Excellent response to methotrexate was reported in MC due to breast cancer[12] and to lung cancer.[13] In the latter case, despite clinical complete remission, autopsy disclosed residual tumor in the lumbosacral nerve roots. Since the perineural spaces may be privileged tumor sites, the combination of spinal irradiation with intrathecal therapy was suggested.[13] There is a single report of a two-year survival after treatment of MC from lung cancer by irradiation of the entire neuraxis.[8] Subsequent trials of radiotherapy were complicated by severe myelosuppression, which impeded the delivery of effective doses to the spinal meninges.[4,9] The combination of intrathecal methotrexate and radiotherapy to major involved areas of the brain and spinal cord proved effective.[4] A patient with MC from breast cancer had prolonged responses to cranial irradiation and intrathecal methotrexate and subsequently to intrathecal methotrexate and systemic lomustine (CCNU).[14] Such instances suggest that an aggressive approach to MC is justified, although the results in large series are disappointing. The one-year survival rate in 47 patients was only 10 percent, despite intrathecal cytosine arabinoside and methotrexate and radiotherapy to major areas of involvement.[15] Median survival was 7.2 months in patients without active disease outside the CNS but only 3 months in those with systemic metastases, suggesting that treatment of MC can prevent its becoming the life-limiting event.

The pathogenesis of MC is not fully explained. Malignant cells may gain access to the subarachnoid space by centripetal spread along perineural and perivascular lymphatics as well as within perineural sheaths.[16] The propensity of adenocarcinomas to spread by lymphatics in general,[17] and to invade the leptomeninges in particular,[2,16] is well documented. In cases of MC in which no primary cancer is detected, signet ring cells with copious mucin are good evidence that the primary tumor is an adenocarcinoma.[2] Greater than 95 percent of the systemic solid tumors giving rise to MC are adenocarcinomas, undifferentiated carcinomas, or melanomas,[2–4,16] and it has been suggested that the metastatic and invasive characteristics of these tumors are related to mucin production.[2]

The mechanisms by which leptomeningeal infiltration produces the cerebral manifestations of MC are obscure[4]; meningeal inflammation often is absent,[1,2] and severity of symptoms does not always correlate with the presence of hydrocephalus or subpial invasion of the brain parenchyma.[4] Interference with brain metabolism may account for such disparate symptoms as headache, seizures, cognitive disorders, and disturbances of consciousness.[4,6]

Our patient had widespread, rapidly progressive systemic metastases from her gastric cancer. The FAM regimen produced a complete clinical response, which is unusual,[7] and almost certainly prolonged her life and made possible the manifestation of MC more than 10 months after beginning chemotherapy. As drug treatment for advanced gastric cancer improves[7,18] and median survivals become longer, meningeal relapse may become an increasing problem, just as occurred in the acute leukemias when effective systemic chemotherapy led to major prolongation of life.[9]

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Acknowledgments. The authors wish to express their appreciation to Coroner J. Marra, M.D., for permitting access to the autopsy material.

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Books Reviewed

Modern Synopsis of Comprehensive Textbook of Psychiatry. Third edition. By Harold I. Kaplan, M.D. and Benjamin K. Sadock, M.D. Baltimore, Maryland, Williams & Wilkins, 1981. Illustrated, 1,034 pages. Softcover, $34.00.

This synopsis is a highly compact version of the encyclopedic three-volume set from which only some of the lesser clinical topics have been skimmed. Six years have elapsed since the last edition, and this 1,034-page book is jam-packed with the updated essentials of "everything you've ever wanted to know about psychiatry," including curriculum recommendations made by the National Board of Medical Examiners.

The 42 chapters in the text run the gamut from history, theory, basic sciences, examination, clinical syndromes, and therapies to subspecialty topics and contemporary issues. Major psychiatric disorders, including those of childhood, and biologic and psychosocial therapies, are extensively and extremely well covered. Briefly covered are many other timely topics, such as consultation-liaison, and psychosomatic, medical, surgical, geriatric, and forensic psychiatry. The coverage is broad, considering the size of the volume, and one is usually apt to find what one is looking for even in the index.

The textbook is the first and only one written to date à la DSM (**Diagnostic and Statistical Manual of Mental Disorders**) III, and abounds with disorders, diagnostic criteria, and multiple axes. (Some syndromes got lost and others were found in the shuffle. Nosology, however, is not the subject of review and one expects that DSM IV will iron out some of the wrinkles of neurosis, depression, and so forth.

The book is well written and the approach is interdisciplinary and eclectic. The double-column layout and clear topic headings make it highly readable. There are ample references included at the conclusion of each section.

There are not that many thorough textbooks in psychiatry, and I would say that this is must reading for all nonpsychiatric physicians, psychologists, and all other professionals engaged in the practice of psychotherapy, not to mention students of all disciplines.

The editors are professors of psychiatry at New York University School of Medicine and attending psychiatrists at University and Bellevue Hospitals in New York City. It would be hard to use the synposis without eventual referral to the three parent volumes whose contributors rank high among the experts in psychiatry. **Grace Bellotti, M.D.**

Hospital Trustee Development Program. Volume 2. Chicago, Illinois, American Hospital Assn., 1981. Softcover, $16.25.

I have just finished reading Volume 2, *Hospital Trustee*

continued on page 784

primarily at the periphery of the liver and over the spleen, suggestive of radiographic contrast material.

Thorotrast-Induced Angiosarcoma of Liver

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The carcinogenic properties of thorium dioxide (Thorotrast) have been well documented[1-3]; the liver is the organ most commonly affected. A total of 382 hepatic neoplasms in a worldwide population of approximately 100,000 patients given thorium dioxide between 1928 and 1950 has been reported in the literature to date.[4] We report a case of hepatic angiosarcoma with a latency period of 32 years after administration of thorium dioxide for carotid angiography, a remarkably long latent period.

Case report

A 76-year-old white woman, admitted to the hospital because of unconsciousness, developed respiratory distress, bradycardia, hypotension, and was found to have severe anemia. Despite supportive measures, including blood transfusions, she expired shortly after admission.

In 1949, at age 44, following carotid angiography for an intracerebral aneurysm, the patient developed a cerebrovascular accident with residual hemiparesis on the left side. She remained in relatively good health except for hemiparesis until 1980, when she was noted to have a 5-cm. large neck mass at the site of angiography. An excisional biopsy demonstrated fibrous inflammatory tissue with abundant pigmented macrophages, crystals, and granulomatous reaction, all suggestive of thorium dioxide-induced local reaction termed thorotrastoma. Laboratory data during the 1980 admission included: alkaline phosphatase 173 IU, serum glutamic pyruvic transaminase 19 IU, and lactic dehydrogenase 242 IU per liter; total protein 6.6 Gm. per deciliter; white blood-cell count 7,900 and RBC (red blood-cell) count 3.97 per millimeter; Hb (hemoglobin) 12.3 Gm. per milliliter. During the final admission: Hb 5.1 Gm. per milliliter, RBC count 1.40 per millimeter, Hct 13.8. The abdominal flat plate revealed scattered foci of radiodensity throughout the abdomen,

Autopsy findings

The pertinent findings were confined to the liver, spleen, and brain. A slightly enlarged liver weighed 1,500 Gm. The capsular surface exhibited blood-filled cystic nodules measuring up to 3 cm. in diameter, some oozing blood, which resulted in 500 cc. of intraperitoneal hemorrhage. The entire left lobe and 50 percent of the right lobe were replaced by a hemorrhagic, spongy, partially cystic 10- by 14-cm. mass. The uninvolved portion of the liver was firm, rusty brown, and coarsely nodular (Fig. 1A). Microscopically, the liver tissue showed a wide spectrum of changes. Sinusoidal dilatation, sinusoidal cell atypia and proliferation of variable degree, atrophy, and loss of cohesiveness of hepatocytes were noted. The angiosarcomatous zones which formed cystic spaces contained hemorrhagic tumor masses and were lined by sarcomatous spindle- or ovoid-shaped endothelial cells (Fig. 1B and C). In some areas the neoplastic cells lined fibrous stalks, imparting a papillary pattern. Brownish grey, granular particles, characteristic of thorium dioxide crystals, were readily seen in association with blood vessels and tumor (Fig. 1D). The uninvolved liver showed a portal type fibrosis with abundant deposits of thorium dioxide granules within the fibrous tissue and subcapsular spaces. Contact radiography of the liver and spleen at the end of six weeks' exposure showed weak alpha-type radioactivity-induced silver deposits corresponding to the location of thorium dioxide crystals. The spleen weighed only 8 Gm. and measured 4 by 4 by 2 cm. The splenic parenchyma and some of the abdominal lymph nodes showed replacement by dense, grey, fibrous tissue with abundant deposits of thorium dioxide crystals. The brain was asymmetrical due to a 6- by 5-cm. cystic old infarct in the right temporoparietal lobe. The vessels of the circle of Willis were delicate and patent. An aneurysm was not demonstrable. Microscopically, there were granular thorium dioxide pigment deposits in small cerebral arteries in the vicinity of the infarct. The right side of the neck revealed a retracted, well-healed scar, adherent to the underlying carotid artery. Samples of this tissue were similar to the biopsy specimen.

Comment

Thorotrast is a 20-percent colloidal solution of thorium dioxide which has a biological half-life of about 400 years and radioactive decay emitting mainly alpha radiation.[5,6] It was first introduced for radiographic studies in Germany in 1928. Because of its high atomic weight, relative chemical inertness, and few side-effects, it gained wide acceptance. Although used primarily for cerebral angiography,

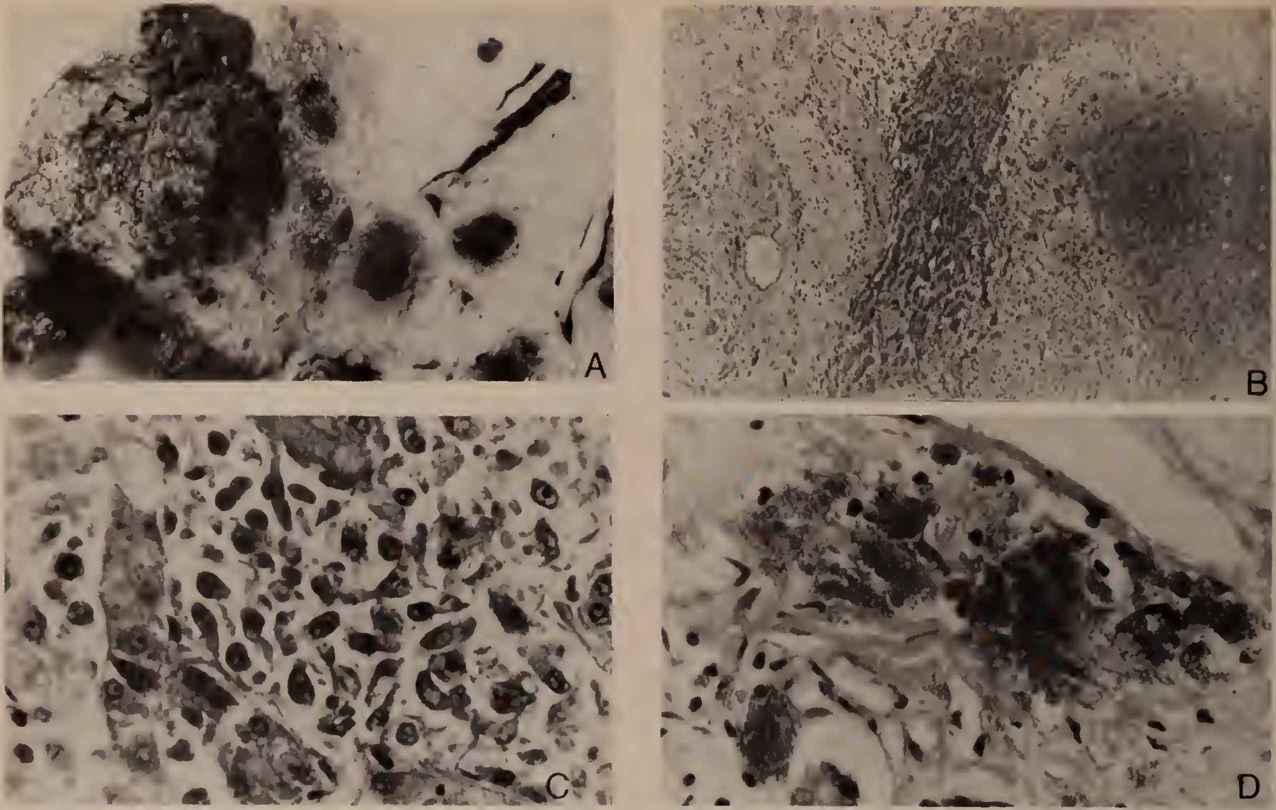

FIGURE 1. (A) Cross section of liver shows multiple hemorrhagic tumor nodules of variable size. Note nodular appearance of uninvolved parenchyma. (B) Low-power view of hemangiosarcomatous focus with hemorrhage. Adjacent cords are compressed and contain thorium dioxide crystals (hematoxylin and eosin stain, original magnification × 330). (C) Higher power view of disconnected sarcomatous cells between swollen, granular cords of hepatocytes (hematoxylin and eosin stain, original magnification × 1,320). (D) Fibrotic hepatic vein wall contains thorium dioxide granules (hematoxylin and eosin stain, original magnification × 1,320).

thorium dioxide was also employed in hepatolienography, urethrography, hysterosalpingography, retrograde pyelography, and paranasal sinus cavity visualization; it was widely used in Europe and the United States during the years 1930 to 1955, and an estimated 100,000 persons were injected with it.[7,8] The first thorium dioxide-induced angiosarcoma in man was reported by McMahon, Murphy, and Bates in 1947[9] in a patient who had received it 12 years before; since then, various malignant conditions in different sites have been reported, incriminating its use. Rare cases of osteosarcoma, soft tissue sarcomas, myelogenous leukemias, meningiomas, lymphoma, mesothelioma, and hemangioendothelioma have been reported.[6,8,10] By far the most frequent organ involved remains the liver, most often manifesting with angiosarcoma and less often with cholangiosarcoma or hepatocellular carcinoma.

Despite published reports, thorium dioxide was used in this country until the mid-1950s and elsewhere in the world until the 1960s. The cases reported have had a latent period ranging from 3 to 40 years. The angiosarcoma of the liver in our case fulfills the criteria set by Dahlgren for thorium dioxide-induced cancer, namely a history of cerebral angiography with findings of thorium dioxide crystals at the injection site and in the liver.[11,12] The long latency period of 32 years and the characteristic histologic elements of the liver add further credence. In addition, the fibrotic shrunken spleen, the smallest on record, is quite characteristic for patients with long-standing thorium dioxide exposure, unlike the vinyl chloride patients in whom the spleen is generally enlarged, weighing up to 1,000 Gm.[13] Clinicians, radiologists, and pathologists should be alerted to the possibility of thorium dioxide-associated neoplasm in patients with past history of angiography during the period when its use was acceptable.

Radiologic findings of radiopaque densities in the regions of the liver and spleen in a suspect patient may be a helpful diagnostic clue. In surgical specimens such as biopsies of lymph nodes, spleen, or thorotrastoma, suspecting thorium dioxide crystals and identifying them by x-ray diffraction method is most important.[4] In suspected cases, because of the hemangiomatous nature of this neoplasm and potential bleeding, liver biopsies should be avoided. Although the use of thorium dioxide is now of historical interest only, due to the long latency period, new cases may continue to arise. The recognition of this iatrogenic hazard demands continuous vigilance.

Summary

A 76-year-old woman who had received thorium dioxide (Thorotrast) for angiography developed angiosarcoma of the liver 32 years later. The clinical and pathologic findings of this rare iatrogenic tumor are presented, and pertinent aspects are discussed.

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Marathon running causes anemia

Marathon running can make you anemic.

Researchers from the Human Performance Laboratory of the University of California at Davis went to Hawaii to measure blood factors of 12 men running in the Great Hawaiian Footrace, a 312-mile run held over 20 days. The runners ran every day, except for a 70-hour rest period following day 10.

There was a marked drop in red blood cell count and blood hemoglobin concentration, says Rudolph H. Dressendorfer, Ph.D. "Sports anemia" is the name given by the doctors to this medical phenomena.

Although the runners became marginally anemic during the race, their running speeds were not significantly affected, Dr. Dressendorfer says.

It had been known previously that sustained strenuous exercise sometimes produces anemia. The Hawaiian study set out to find whether this affected athletic performance. The researchers concluded that it did not.

Data were collected in the early morning, before the runners began their daily grind. On the final race day the men showed red blood cell levels some 16 percent lower than those measured at the outset of the marathon.

Sports anemia had been noted previously in cross country skiers, long distance marchers in the military, and other similar exercise groups.

No special treatment is required for sports anemia. The athlete recovers once unusual exertion is eased.

The report is in the September 11 *Journal of the American Medical Association.*

Depression a la Haitian

A linguistic misinterpretation

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This article reports three cases of a specific diagnostic mistake due to a language barrier, occurring in the Haitian clientele of a public hospital. These unfortunate incidents led to unnecessary psychiatric referral and inappropriate use of antidepressive medication. In view of the recent migration of Haitian refugees to the United States, such errors may recur and are to be avoided.

Case reports

Case 1. A 29-year-old Haitian male was seen in the clinic because of headache, tiredness, myalgia, and sleepiness on the job. He was seen by a physician who used his college French to communicate. The patient repeatedly referred to his symptoms by using the word "depression." Findings on his physical examination, including a neurologic evaluation and fundoscopy were unremarkable. A complete blood count, serum creatinine phosphokinase, and L-thyroxine levels were normal. The patient was given acetaminophen and asked to return in four weeks. At the next visit the symptoms were still present and the patient was referred to the psychiatry department. Review of his history by a Haitian counseling nurse revealed that the patient worked seven days a week and frequently worked overtime; he traveled two hours each way, using both a subway and a bus, to get to work.

Case 2. A 36-year-old woman from Haiti was seen in the clinic because of fatigue and generalized malaise. She works evenings as a cleaning lady and takes care of her three preschool children during the day. She repeatedly used the word "depression" to describe her symptomatology. A French-speaking Egyptian was used as a translator. Findings on her physical examination and the laboratory data were normal. She was given amitryptyline (Elavil) and felt worse; she developed insomnia.

Case 3. A 22-year-old male came to the clinic because of tiredness and a sensation of being "run down." He spoke little English and explained with difficulty to a woman physician that he was experiencing a "depression." Findings on his physical examination were unremarkable; a complete blood count and a urinalysis showed normal results. He requested vitamin E but the physician explained that a mood elevator was preferable. Review of the history by a Haitian physician in "patois" revealed that the patient was not depressed; rather, he felt physically exhausted. He was indulging in unusually frequent sexual performances and he was embarrassed to share this information with a woman physician.

Comment

The official language of the Republic of Haiti (West Indies) is French. The educated Haitian speak and write a correct French. However, all Haitian speak a pidgin derived from French; it is called "Creole." Many people from other West Indian islands such as Trinidad, Grenada, Dominica, Saint-Lucia, and Saint-Croix speak a similar dialect. Although English is their official language, a French patois is widely spoken. In contrast, Haiti, Martinique, and French Guiana use French as their official language. Consequently, the islanders from these areas encounter great language difficulty in the United States.

In the Haitian patois, the word "depression" does not carry the psychologic connotation that it does in English or in French. It simply means physical exhaustion, debility, or extreme fatigue. To render the psychiatric meaning of the word, the educated Haitians say "depression mentale" and the illiterate would have to use a completely different colloquial jargon.

The average Haitian patient in a public hospital clinic is bound to complain of tiredness. He is a factory worker who often works seven days a week and overtime. Being unskilled, unable to communicate in English, and having just a visitor's visa, or no visa at all, he is usually at the mercy of a lawyer to obtain an alien residency visa. Therefore, he must work long hours to succeed in this expensive endeavor to meet the basic needs of a large family. One can easily understand that his sempiternal complaint is "depression" in the Creole sense of the word.

It would be helpful to mention other words that can be misleading to a physician in history-taking when dealing with Haitian patients (Table I). The word "gaz" (gas) refers to a pain or ache anywhere in the body and may have nothing to do with gastrointestinal gas. "Estomac" (stomach) refers to the chest and not to the abdomen or the abdominal organ. The word migraine is frequently used to describe a simple headache and does not refer to the episodic attack of unilateral headache associated with systemic symptoms, and so forth. Although there are

Table I. Translation of Creole words used during interviews of Haitian patients

Creole Word	French Corruption or Equivalent	English Equivalent	Actual Meaning
depresyon	depression	depression	physical depression, tiredness, exhaustion
gaz	gaz	gas	ache, pain, tenderness (anywhere in the body)
lestonmak	estomac	stomach	chest
migren'	migraine	migraine	any headache
rin	rein	kidney	low back or waistline
tansyon	tension	pressure	high blood pressure
vetij'	vertige	vertigo	lightheadedness
vin'n	veine	vein	any superficial structure: blood vessel, muscle, tendon
fiev-lan-san	fievre dans le sang	fever in the blood (literally)	sensation of being cold
foua	foie	liver	epigastric area
kramp	crampe	cramp	cramp but also ache, pain

many other ambiguous idioms, those are the ones most likely to be encountered in medical practice.

Given these linguistic idiosyncrasies, one can appreciate how difficult it is for the American physician to obtain a decent history from a Haitian patient. This difficulty persists even if the physician knows French or if a French-speaking translator is involved. In the three cases reported here, the linguistic problem is compounded by the fact that symptoms of a bona-fide depression are often quite similar to those of physical exhaustion. Indeed, an atypical form of depression may be present in patients with fatigue and neurasthenia.[1] In addition, it should not be overlooked that true depression may be a problem in the Haitian community and many factors may come into play: the language barrier, the low socioeconomic rank, the economic burden of a dichotomized family (part in Haiti, part in America), and the illegal status and occasional need to change identity to obtain medical care.[2] All that, plus the so-called "cultural shock" in a new land, can render the patient prone to depression.

Although psychiatric disorders may be a problem in the Haitian clientele of a public hospital because of these factors, we have discovered instances where psychiatric referral was absolutely unnecessary and was merely attributable to language barrier. Since appropriate referral constitutes one of the landmarks of sound medical practice,[3] and since inappropriate referral of a mentally fit person to psychiatry may be anxiogenic and destructive, it is our duty to alert the profession to a potential danger. Furthermore, linguistic misinterpretation generating medical mistakes may not be limited to the Haitian patient and may be found in cosmopolitan cities where many linguistic groups and subgroups reside.

Summary

The author reports three cases in which Haitian patients from a public hospital clientele were erroneously diagnosed as having "depression" and unnecessarily treated with antidepressants or referred for psychiatric treatment. In all three cases the patient's chief complaint was "depression" and the condition was merely physical exhaustion related to a specific cause. The situation is compounded by the fact that bona fide depression may present atypically as physical fatigue and neurasthenia. In Creole (French dialect spoken in Haiti), the word "depression" means excessive fatigue and debility and does not carry the psychiatric connotation it has in French and English. Some other misnomers, important to physicians, are also underlined here. Unraveling this problem is important in view of the significant recent migration of Haitian refugees to the United States.

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Postanginal Sepsis

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Postanginal sepsis was first described by Long in 1912.[1] Since then most reports of postanginal sepsis have appeared in the pediatric literature despite the fact that it most commonly occurs in young adults.[2] The purpose of this communication is to update information regarding the microbiology and pathogenesis of postanginal sepsis and to offer guidelines for diagnosis and treatment. The following case of postanginal sepsis illustrates the onset of life-threatening anaerobic sepsis following mild oropharyngeal inflammation.

Case report

A 21-year-old female was well until February 3, 1980, when she developed fever and sore throat. On hospital evaluation on February 5, her chest roentgenogram showed right apical pleural thickening with no evidence of parenchymal disease. The next day she experienced the abrupt onset of right shoulder pain. On February 9, she was seen at a second hospital, where the chest roentgenogram showed a right superior pleural effusion and right middle-lobe pneumonia. Erythromycin ethylsuccinate, 400 mg. orally, every six hours, was begun.

Her shoulder pain and fever persisted and, on February 11, she was admitted to the surgical service of Rochester General Hospital for evaluation of a mass which, on review of the roentgenogram, proved to be a loculated pleural effusion on the right with associated right middle- and lower-lobe infiltrates.

The following day, 200 cc. of sterile exudate were removed by thoracentesis; no organisms were seen on Gram stain. Cefamandole nafate, 1 Gm. I.V. (intravenously) every four hours, and clindamycin hydrochloride, 600 mg. I.V., every eight hours, were begun. At no time during the course of her illness had she experienced dyspnea; yet, on hospital day 3, she developed abrupt respiratory failure, requiring endotracheal intubation. Her chest roentgenogram showed increased effusion and alveolar infiltration throughout the right lung and left lower lobe. Respiratory secretions obtained by bronchoscopy were sterile.

The patient was transferred to the medical intensive care unit on day 5, at which time her temperature was 38.6°C. rectally, blood pressure 120/70, pulse 126 per minute, and respiratory rate 32 per minute. She had purulent gingiva and nuchal rigidity. A 1-cm. mobile, nontender right supraclavicular node was palpated. The hemithorax on the right side and the base of the left lung were dull to percussion with diffuse inspiratory crackles. The liver was tender and palpable 8 cm. below the right costal margin. The remainder of the physical examination findings were unrevealing.

Laboratory data included a hemoglobin concentration of 10.8 Gm. per deciliter, white blood-cell count of 17,600 per cubic millimeter, with 67 percent segmented neutrophils, 21 percent band forms, and a normal platelet count. Liver enzyme concentrations were (all milliunits per milliliter): alkaline phosphatase 214 (normal 30 to 115), lactic dehydrogenase 428 (normal 100 to 225), serum glutamic oxaloacetic transaminase 34 (normal 7 to 40), and gamma guanosine triphosphate 80 (normal 4 to 18). The bilirubin concentration was 1.3 mg. per deciliter (normal 0.2 to 1.2). The cerebral spinal fluid was normal, and cold agglutinins negative. A skin test with 5 tuberculin units of purified protein derivative was nonreactive, and the skin test findings for mumps were positive.

The patient's course was unremitting, and a tracheostomy was performed on day 6 since prolonged ventilatory support was anticipated. The same day, a blood culture obtained four days earlier was reported to be growing *Fusobacterium*. Clindamycin hydrochloride and cefamandole were discontinued and chloramphenicol succinate, 1 Gm., I.V., every six hours, was begun. On day 11, the patient complained of pain in the left side of the neck, and physical examination elicited tenderness confined to the area over the sternocleidomastoid muscle. By day 16, her pleural effusion had increased and surgical drainage resulted in 750 cc. of thick, cloudy fluid, which was sterile. Within 24 hours, the patient defervesced and was weaned from the respirator rapidly.

After 29 days of hospitalization, the patient was discharged on oral clindamycin hydrochloride. At the time of discharge, she was afebrile and tests showed normal arterial blood gases, liver function, and complete blood count. Her chest roentgenogram two days prior to discharge showed persistent right pleural effusion and bilateral alveolar densities. One month after discharge the patient was clinically well on no antimicrobal agents, and her chest roentgenogram disclosed no abnormalities.

Comment

Postanginal sepsis occurs when normal oral microbes, usually anaerobes, invade the parapharyngeal tissues or disseminate from a septic thrombophlebitis following an inflammatory process in the oropharynx.

Epidemiology. The incidence of postanginal sepsis is unknown. It is less common now than in the preantibiotic era, suggesting that the treatment of oropharyngeal infections prevents the subsequent evolution of disease. One of the authors, Dr. Powell, has cared for or discussed five cases of postanginal sepsis in the past four years; four of the five cases occurred following mononucleosis. As a relatively forgotten disease entity with a wide clinical spectrum of disease, the actual incidence is probably underestimated.

Microbiology. In the preantibiotic era, postanginal sepsis was reported to be caused by both aerobes (usually streptococci) and anaerobic oral commensals. More recently, *Fusobacterium* species, especially *Fusobacterium necrophorum* and *Fusobacterium nucleatum*, *Bacteroides* species (other than *Bacteroides fragilis*), and peptostreptococci have been associated with this syndrome.[3–6] The microbiology of postanginal sepsis is unclear because of advances in anaerobic methodology and changes in nomenclature. Some 52 synonyms or probable synonyms have been used to denote fusobacteria alone.[6] In current parlance, fusobacteria are members of the *Bacteroidaceae* family. They are nonsporeforming, obligately anaerobic gram-negative bacilli with a distinctive fusiform morphologic factor. Speciation requires identifying fatty-acid metabolic byproducts by gas-liquid chromatography and is done only in reference laboratories.

Pathogenesis. The primary oronasopharyngeal infection may be either viral or bacterial in origin, mild or severe. It is postulated that the antecedent infection alters local host factors, allowing oral commensals to become pathogens. The anatomy of spread of orodontofacial infections has been well described by Chow, Roser, and Brady.[7] Development of adjacent septic thrombophlebitis provides the source for septic embolization and dissemination. Studies of the effects on blood coagulation of *Bacteroides* species strain X-508 and *Fusobacterium mortiferum* suggest a clue to the pathogenesis of the thrombophlebitis. The lipopolysaccharide and lipid A of these two species accelerate coagulation without affecting the number of circulating platelets when injected into mice. The exact mechanism for enhanced coagulation has not been elucidated, but this observation might explain the frequent isolation of *Bacteroidaceae* from patients with septic thromboembolic disease.[8]

Clinical syndrome. The symptoms of postanginal sepsis reflect the five stages of the disease: (1) a primary infection of the oronasopharynx, (2) a latent period, (3) local lymphatic involvement or parapharyngeal spread, (4) sepsis, and (5) septic metastasis.

The latent period following the initial oropharyngeal infection varies from one day to seven weeks,[9] so the primary infection may be concomitant with or forgotten at the time of progression to stage 3. The third stage of postanginal sepsis involves structures contiguous with the original nidus of infection. Depending on the location of the original source of infection, spread can occur through interfascial compartments or by involvement of local lymphatic tissue. Pericoronal and periodontal infections also may spread directly to soft tissues; periapical infection must invade bone first. Clinical symptoms depend largely on the distensibility of infected tissues.

The most common symptom is pain due to the accumulation of pus in a nondistensible space. Meningismus may be due to spinal-nerve compression by retropharyngeal lymph nodes or by direct extension of infection to the meninges. Facial nerve palsy is observed with parotid gland involvement, and parapharyngeal disease may disturb the ninth through twelfth cranial nerves or the superior cervical ganglion, resulting in dysphagia, hoarseness, stridor, dysarthria, or Horner's syndrome; trismus is common. Life-threatening complications of contiguous spread include: upper airway obstruction, cavernous sinus thrombosis, vessel erosion with hemorrhage (usually the internal carotid artery), and purulent mediastinitis (with documented tamponade).[3]

In general, however, patients who develop postanginal sepsis have minor or unnoticed local symptoms. Patients with more obvious symptoms are probably treated before septic thrombophlebitis evolves, and it is thrombophlebitis that is key to the metastatic complications of postanginal sepsis.

As stated earlier, sepsis and metastasis are the fourth and fifth stages of this syndrome, respectively. Both stages are caused by the hematogenous dissemination of organisms from septic thrombophlebitis. The most commonly involved vessels are the internal jugular vein and the peritonsillar venulae, although septic thrombophlebitis of the facial vein has been reported.[9] Internal jugular vein phlebitis usually shows up as a tender sternocleidomastoid muscle, and, rarely, a venous cord is palpable. In the preantibiotic era, the internal jugular vein was frequently ligated in an effort to stop embolization.[1,9,10]

The symptoms of septicemia in postanginal sepsis are not distinctive; usually septic thrombophlebitis is suspected only when metastatic disease becomes manifest. Metastatic disease can affect almost any tissue; since the small vessels of the lungs are the first real obstacles to emboli, the lungs and pleura are most commonly affected.[2] However, septic embolization in postanginal sepsis has also been documented to the central nervous system, extradural space, bone marrow, spleen, kidney, skeletal muscle, liver, bone, endocardium, genital organs, thyroid, and joints.[9] Clinical manifestations depend on how extensively a particular tissue or organ system is affected.

Differential diagnosis. The parapharyngeal tissues and their contiguous spaces should be examined for evidence of inflammatory lesions in patients with anaerobic septicemia. Additionally, intra-abdominal or pelvic processes which predispose toward the propagation of septic thrombi in the vessels of the lower extremities, pelvis, or abdomen should be sought. The multisystem manifestations secondary to septic embolizations can be similar to other infectious diseases and to rheumatic or granulomatous diseases associated with widespread inflammation.

Since the lungs and pleura are most frequently affected by septic embolization, the most important differential to make in a patient with anaerobic septicemia and pleuropulmonary disease is between aspiration pneumonia and septic pulmonary emboli. The latter usually occur in multiple random foci, producing discrete infiltrates roentgenographically. Pleural effusion may occur prior to the appearance of parenchymal disease as was the case in our patient. The septic foci may progress to confluent areas of pneumonitis, but, unless necrosis or cavitation supervene, respiratory secretions are usually minimal and sterile. Cough, therefore, is not a common clinical feature. There is usually an indolent response to appropriate antimicrobial therapy even if started in the early stages of the disease.

In contrast, a segmental or lobar infiltrate is usually seen on roentgenogram in aspiration pneumonia, since large inocula of aspirated organisms have a predilection for dependent bronchi. The spectrum of disease includes pneumonitis, necrosis, abscess formation, cavitation, and parapneumonic empyema. Cough is the most common symptom.[11] Even when sputum is scant, the causative organisms are readily retrievable by transtracheal aspiration. Response to antimicrobial therapy is excellent in uncomplicated cases.[12]

In our case, the evidence for the pleuropulmonary disease, secondary to postanginal sepsis rather than to aspiration pneumonia, includes the appearance of pleural disease prior to parenchymal infiltration, multiple foci of pulmonary parenchymal disease, scant sterile sputum, and an indolent response to appropriate antimicrobial agents. The diffuse alveolar infiltration that appeared with the onset of respiratory failure was felt to represent the adult respiratory distress syndrome.

Diagnosis. The diagnosis of postanginal sepsis must be considered in light of the patient's history, physical examination, and clinical course. Since similar metastases can occur from any septic thrombus, it is important to exclude septic thrombophlebitis of pelvic, intra-abdominal, or lower extremity origin. The diagnostic laboratory has little to offer other than isolating the offending organisms. Hyperbilirubinemia as seen in our patient is common in anaerobic sepsis and does not necessarily imply hepatic septic embolization.[13] To make an etiologic diagnosis, it is essential that repeated meticulous aerobic and anaerobic blood and aspirate cultures be obtained.

Once postanginal sepsis is suspected, demonstrating a septic nidus may be difficult. Roentgenograms of the oropharynx and neck are unlikely to show more than displacement of normal structures. Lateral xeroradiographs of the upper airways provide clear definition of lesions impinging on the larynx or trachea and should be considered for patients with stridor. A major disadvantage to xeroradiography is the fourfold increase in radiation exposure, compared with a plain film.[14]

Ultrasonography probably provides the most information with the least risk to the patient.[4] Ultrasound examination not only can identify an abscess in parapharyngeal spaces, but, more important, can assess flow or thromboses in the internal jugular vein.[15] Computed tomography should demonstrate the same anatomy, possibly with better definition than echography; however, computed tomography would not detect a septic thrombophlebitis, and ultrasound might.[16] ^{67}Ga (radioactive isotope of gallium) imaging may help localize inflammation, but it takes longer to perform and is less sensitive than either echography or computed tomography. Phlebography has been associated with vessel rupture and catastrophic results and therefore it contraindicated.

Treatment. Fusobacteria and most other anaerobic oral commensals are quite sensitive to penicillins, clindamycin hydrochloride, chloramphenicol, and metronidizole.[17] Despite appropriate antimicrobial therapy, the protracted clinical course observed in our patient is not unusual.[6] Foci of infection poorly penetrated by antimicrobial agents and not amenable to surgical drainage probably explain the protracted course. The dramatic clinical response of our patient to drainage of her empyema emphasizes the importance of removing pus. It is not known how long antimicrobial therapy should be continued, but recent case reports suggest that prolonged therapy is necessary.[4,6,9,18]

Heparin therapy in conjunction with antibiotics has been promoted for treatment of septic pelvic thrombophlebitis and was used successfully in one reported case of postanginal sepsis.[18] Josey and Staggers[19] used intravenous heparin to treat 46 gynecologic patients with pelvic septic thrombophlebitis, 15 of whom had septic pulmonary emboli. They reported no hemorrhagic complications and suggested that heparinized patients defervesced earlier than those not treated with heparin. A controlled study is necessary, however, before heparin therapy can be advocated.

Prognosis. When postanginal sepsis is diagnosed and treated appropriately the chances of complete recovery are excellent. The course, however, even with optimal therapy, is frequently one of prolonged morbidity and hospitalization.

Summary

This report has reviewed postanginal sepsis and emphasizes the significant morbidity and mortality and the indolent response to appropriate antimicrobical agents. Postanginal sepsis is a relatively forgotten clinical entity which was described in the preantibiotic era. The disease occurs when oral commensals secondarily invade oronasopharyngeal tissues following an inflammatory process in the oropharynx. Septic thrombophlebitis, usually involving the internal jugular vein, may result in sepsis and metastatic infection due to septic emboli. The clinical spectrum of disease ranges from localized complications to multisystem disease and sepsis. Improvements in microbiologic and radiologic methods facilitate the diagnosis once the syndrome is considered.

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Serendipity in our files

. . . found *in the New York State Journal of Medicine, vol. 1, 1901, page 293.*

Correspondence.

THE STATE ASSOCIATION MEETING.[1]

MY DEAR WIFE: I want to let you know that I arrived in the big city of New York safe and sound. But, as you know, the express train was very late and I had to take the "long milk" train to get in. As a result it was pretty nearly midnight, but I found my way around easy enough and spent a very pleasant night in a nice little hotel not far away from the meeting place.

You remember when, last summer, I concluded to go into the New York State Association and was told of all the good things that might come to me if I joined, I felt as if I had been a little hasty in putting up the ten dollars, and that all the promises that were made were just a little bit too good to be true, so I made up my mind that I would just come down here and see for myself, and find out if things were so or if I had been buncoed.

You will be glad to know that the shirts were not crumpled a bit, and that I got the creases out of my swallow-tail without any trouble.

Well, as soon as I got there, there were half a dozen pretty presentable young fellows about, and pretty soon somebody got my name and address and handed me a badge like the rest of them wore, which I have been sporting on the lapel of my coat ever since. I was introduced to a lot of men whom I had read about and who do a powerful lot of writing and lecturing here, and every one of them was glad to see me and made me very welcome. The meeting room was comfortably filled, and not a few of the women doctors were present to listen to the papers.

What surprised me in all this was that men who we know to be very busy men can leave their homes, like Boston, Philadelphia and other places, and give up their business just for the sake of reading a paper before another medical society in a distant city, and it showed to me clearly and conclusively that their hearts were in it and that they did for the love of their fellow-men the best that they could do and did things that they would hesitate about doing for the mere sake of the money in it.

The papers read were all very interesting, the debates close to the point, and promptly at 1 o'clock each day the meeting adjourned, there was a roll of the folding doors and a table all spread was before us with lots of good dishes all about. There was plenty to eat and a barrel of brown stuff which a fellow called "peel" and which was served with plenty of froth in big brown jugs. I didn't know what the young fellow meant when he asked me if I would have a "stein of peel," but I took it just the same and it tasted somewhat different and felt different than our cider at home. Then they had cigars and I met a lot of men that I have not seen for a good many years and we had a chat about old times.

I can say to you that every single thing that we were told was straight goods, and I never saw such interest in anything medical in all my life. Why, when they talked about the American Medical Association if anybody had his hat on he would have taken it off, and when they talked about the growth of their own organization,—how a year ago they only had two counties and now had twenty-two, and then pointed out to us the men who were the chairmen of the District Branches who had done all this work—I could see that their loyalty to the cause was very great indeed.

We followed the programme closely and a very large proportion of the papers was read.

On the evening of the second day we had a banquet, and you just bet my swallow-tail was right in it because they had a lot of ladies there, and the next time I come, and I hope to next year, you must come along. The dinner was awfully good—somebody counted twenty-four different things to eat, and they gave us a kind of wine to drink that tasted like "your foot's asleep." After that the President of the Association made a short address and then called upon the others who were down to respond to toasts to say their say. It was all very interesting and doubly so to me because I found everybody so sincere. It was 12 o'clock before we started for our temporary homes.

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[1] This private letter has accidentally fallen into the hands of the Publication Committee. It is so frank and guileless that it deserves a better fate than the waste basket. With humble apologies to the writer for the liberty we are taking it is presented to our readers.

This Thursday afternoon we completed our session and the newly elected officers were installed. Those who had worked so hard for the success of this splendidly attended meeting were thanked by a unanimous vote, and that is all the reward they get, except their own conscience, which tells them that they have done their duty to the very best of their ability and to the satisfaction and gratification of their associates.

An announcement was made that they were going to have another meeting at Newburg, of the Fifth District Branch, lasting one afternoon, and with the announcement the statement was made that this is but the beginning of several similar meetings throughout the State. Who knows, they might come very near home some time, and if they do and they bring any of those New York and Brooklyn fellows along we certainly will turn around and show them what country hospitality is.

I would not have to write this all to you, and would prefer to tell it to you, but you know I have to go down Jersey Coast and I wanted to let you hear from me before leaving for there.

I hope that Joe exercises the horses and that Brown keeps a few of the folks alive for me until I get back.

With love to you and the little ones,
Your fond husband,
JIM.

. . . found in the New York State Journal of Medicine, vol. 34, no. 4, p. 1093.

"HOW TO KILL A MEDICAL SOCIETY"

Some of our medical exchanges are reprinting "for the good of the order" the advice that appeared originally in the *Illinois Medical Journal* on "How to Kill a Medical Society." It is worth remembering:

1. Don't come to the meetings. If you do come, come late.
2. If the weather doesn't suit you, don't think of coming.
3. If you do attend a meeting, find fault with the work of the officers and other members.
4. Never accept office, as it is easier to criticize than to do things. Nevertheless get sore if you are not appointed to a committee; but if you are, do not attend the committee meetings.
5. If asked by the chairman to give your opinion regarding some important matter, tell him you have nothing to say.
6. After the meeting, tell everyone how things ought to be done.
7. Do nothing more than is absolutely necessary, but when other members roll up their sleeves and willingly and unselfishly use their ability to help matters along, howl that the organization is being run by a clique.
8. Hold back your dues as long as possible; or don't pay at all.
9. Don't bother about getting new members; let George do it.

Obituaries

John G. Codik, M.D., F.A.C.C. Died February 3, 1982; age 83. Bronx. Medical School of Cluj University Klausenberg. Memberships: Bronx County Medical Society, Medical Society of the State of New York.

Joseph Edward Corr, M.D., F.A.C.S. Died December 2, 1981; age 91. Bronxville. Tufts College Medical School, 1923. Memberships: New York County Medical Society, Medical Society of the State of New York.

Robert Wendell Davis, M.D., F.A.A.P. Died November 11, 1981; age 64. Ithaca. Vanderbilt University Medical School, 1942. Memberships: Medical Society of the County of Tompkins, Medical Society of the State of New York.

Frank Joseph Decesare, M.D., F.A.C.O.G. Died December 22, 1981; age 45. Bronx. Stritch School of Medicine, Loyola University, 1961. Memberships: Bronx County Medical Society, Medical Society of the State of New York.

Norman M. Dennison, M.D. Died December 18, 1981; age 85. Rochester; Queens University Kingston, Ont. 1921. Memberships: Medical Society of Monroe County, Medical Society of the State of New York.

George B. Dorff, M.D., F.A.C.P. Died October 23, 1981; age 82. Brooklyn. New York University Medical School, 1926. Memberships: Medical Society of Kings County, Medical Society of the State of New York.

Julius P. Duic, M.D. Died January 8, 1982; age 55. Scarsdale. Medical School University of Zagreb, Yugoslavia. Memberships: Medical Society of the County of Westchester, Medical Society of the State of New York.

Henry Edelheit, M.D. Died December 9, 1981; age 62. New York. University of Chicago School of Medicine, 1951. Memberships: New York Psychoanalytic Society and Institute, Medical Society of the County of New York, Medical Society of the State of New York.

Herbert Leonard Elias, M.D. Died December 28, 1981; age 91. Rockville Centre. Harvard University Medical School, 1927. Memberships: Medical Society of the County of Nassau, Medical Society of the State of New York.

Emanuel Feit, M.D., F.A.C.A.L. Died January 30, 1982; age 79. Bronx. University of Maryland Medical School, 1929. Memberships: Bronx County Medical Society, Medical Society of the State of New York.

Alfred Martyn Feldshuh, M.D., F.A.C.C. Died December 23, 1981; age 76. Kerhonkson. Long Island College Hospital, 1919. Memberships: Medical Society of the County of Ulster, Medical Society of the State of New York.

Sidney Finkelstein, M.D., M.PH. Died December 5, 1981; age 70. Mayville; University of Glasgow Medical School, 1941. Memberships: Medical Society of the County of Chautaugua, Medical Society of the State of New York.

Frank Glenn, M.D., F.A.C.S. Died January 15, 1982; age 81. New York City. Washington University School of Medicine, 1927. Memberships: New York Academy of Medicine; Medical Society of the County of New York, Medical Society of the State of New York.

Manuel Green, M.D. Died October 1, 1981; age 73. Brooklyn. Royal College of Physicians & Surgeons, Edinburgh, 1936. Memberships: Medical Society of the County of Kings, Academy of Medicine of Brooklyn, Medical Society of the State of New York.

Karl William Gruppe, M.D. Died January 9, 1982; age 80. Sauquoit. University of Rochester Medical College, 1930. Memberships: Medical Society of the County of Oneida, Medical Society of the State of New York.

Grant Guillemont, M.D. Died July 28, 1981; age 77. Niagara Falls. Cornell University Medical College, 1929. Memberships: Medical Society of the County of Niagara, Medical Society of the State of New York.

Stuart Claude Heaton, M.D. Died January 10, 1982; age 71. New York City. Columbia University College of Physicians & Surgeons, 1936. Memberships: Medical Society of the County of New York, Medical Society of the State of New York.

Jacob William Heins, M.D. Died December 9, 1981; age 67. Plattsburgh. Cornell Medical College, 1946. Memberships: Medical Society of the County of Clinton, Medical Society of the State of New York, American Medical Association, Texas State Medical Association.

R. Scott Howland, M.D., F.A.C.S. Died December 9, 1981; age 72. Elmira. Cornell University Medical College, 1933. Memberships: American Medical Association, Medical Society of the County of Chemung, Medical Society of the State of New York.

John T. Kane, M.D. Died December 10, 1981; age 72. Binghamton. McGill University, 1937. Memberships: Medical Society of the County of Broome, Medical Society of the State of New York.

Raymond S. McKeeby, M.D. Died December 8, 1981; age 69. Binghamton. Temple University School of Medicine, 1931. Memberships: Medical Society of the County of Broome, Medical Society of the State of New York.

Max Mannheimer, M.D. Died February 14, 1981; age 76. Jackson Heights. University of Berlin Medical School,

1910. Memberships: Medical Society of the County of New York, Medical Society of the State of New York.

James Alexander Moore, M.D. Died February 1, 1982; age 74. Albany. Cornell University Medical School, 1936. Memberships: Medical Society of the County of Kings, Medical Society of the State of New York.

Louis Muzzicato, M.D. Died January 1, 1982; age 77. Wappingers Falls. Loyola University School of Medicine, 1931. Memberships: American Academy of Family Physicians, Geriatrics Society, Medical Society of the County of New York, Medical Society of the State of New York.

Alfred H. Rifkin, M.D. Died January 24, 1982; age 68. New York City. New York University College of Medicine, 1939. Memberships: American Academy of Psychoanalysis, Medical Society of the County of New York, Medical Society of the State of New York.

Aaron Maurice Spirer, M.D. Died February 3, 1981; age 74. New York City. University of Budapest, Hungary, 1939. Memberships: Medical Society of the County of New York, Medical Society of the State of New York.

Max Shenberg, M.D. Died January 16, 1982; age 79. East Meadow. University of Cracow, Poland, 1928. Memberships: Medical Society of the County of Westchester, Medical Society of the State of New York.

Leon Ernest Sutton, M.D., F.A.C.S. Died January 19, 1982; age 88. Cranberry Lake. Syracuse University College of Medicine, 1919. Memberships: Medical Society of the County of Onondaga, Medical Society of the State of New York.

medical procedures in each year. Average fees for the two services, appendectomy and a regular physician office visit were: appendectomy, $75.00 in 1950 and $300.00 in late 1979; regular office visit, $5.00 in 1950 and $15.00 in late 1979.

In choosing the jobs, I have deliberately stayed away from occupations involving telecommunications, computer analysis and certain other highly paid jobs that did not exist in 1950; for example, that of television anchorman.

In every instance it took fewer hours of labor for any of the randomly selected jobs to purchase the medical services in 1979 than it did in 1950. When one compares apples with apples and oranges with oranges, the physician is not paid excessively and is not the culprit for the high cost of medical care.

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Reprinted from *Medical Tribune*, December 10, 1980.

MOST CHILD MOLESTERS KNOW THEIR VICTIMS, STUDY SAYS

If parents want to protect their children from sexual abuse, telling them to be suspicious of strangers isn't much help.

A newly published study suggests that — since children usually are molested by someone they know — it's more effective to teach children that "sexual advances from anyone, including relatives, are inappropriate and should be reported to a trusted adult."

Only 18% of the children included in the study were abused by a stranger, according to an article published in the January issue of *Pediatrics*, the journal of the American Academy of Pediatrics. This figure contradicts the misconception that the typical child molester is a "sly, devious stranger seducing children in isolated settings," the article's authors say.

The study was conducted at Maricopa County General Hospital, Phoenix, Ariz., by Mary Ellen Rimsza, M.D., FAAP, and Elaine H. Niggemann, M.D. Medical records were reviewed for all of the 311 patients under age 18 who were treated at MCGH between April 1977 and September 1980. The hospital is a publicly funded referral center for sexually abused children as well as a center for general pediatric care of an indigent population.

Children treated for sexual abuse at the hospital ranged in age from two months to seventeen years; their mean age was 9.2 years.

Eighty-six percent of the victims were girls; fourteen percent were boys. All the molesters were males.

Thirty percent of the study's patients said they'd been assaulted more than once over periods ranging from one week to nine years, and 131 of the victims were assaulted by relatives, usually fathers. The authors note that incest victims frequently are abused over a long period of time.

Because it may take some time for children to overcome their fear of reporting incestuous attacks, the researchers say it's important for adults — relatives, school officials, physicians, or ministers — to act promptly when children do report incest. Thirty-three children in Rimsza and Niggemann's study reported that they had told an adult about incestuous assaults, but the adults had done nothing.

Sexual abuse is damaging physically as well as emotionally: only 23% of the patients were found to be completely normal when they were examined. In almost one third of the cases, the exams' results suggested that penetration had occurred. Patients under age four and adolescents were most likely to have evidence of "genital or nongenital trauma."

As a result of reviewing these 311 cases, Rimsza and Niggemann suggest that victims of sexual abuse should be examined for physical trauma, venereal disease, and pregnancy if the victim is a teen-aged girl.

Physicians usually rule out rape if sperm is not found when they examine abuse victims. However, the authors say, the victim may have delayed reporting the assault, and some rapists have sexual dysfunction during rape.

The researchers also say that physicians should not "naively assume" that teen-age girls who are pregnant for the first time are pregnant "as a result of intercourse with a peer. The possibility of sexual abuse should always be considered." Seven percent of teen girls in the study became pregnant as a result of abuse.

The researchers also recommend that programs designed to prevent sexual assault be included in high school curricula.

The American Academy of Pediatrics is an organization of more than 23,000 pediatricians dedicated to the health, safety and well-being of infants, children and young adults in North and South America. Recommendations or opinions expressed in *Pediatrics* articles do not necessarily reflect official Academy policy.

Month in Washington

Congress has sent clear warnings to the White House that President Reagan's budget proposal faces stormy going on Capitol Hill.

Much of the lawmakers' concern centers on the size of the projected deficit — $91 billion — but strong opposition has also surfaced to the New Federalism plan to turn major programs over to the states and to recommend slashes in domestic programs, including health.

Spearheading the fight for the Administration's budget, David Stockman, head of the Office of Management and Budget, told Congress not to give up on President Reagan's proposals. He predicted in testimony before the Senate Budget Committee that Congress eventually will embrace most of the Administration's program.

However, Stockman said the Administration's position isn't inflexible. "I would dispel the notion that somehow we have said some things are nonnegotiable in any absolutely rigid sense."

A radical revision of the Administration's program has been proposed by Senate Budget Committee Chairman Pete Domenici (R-NM), who has been a staunch supporter of the President. The Senator proposed larger tax increases, smaller increases for Defense and a freeze on most domestic programs.

The President's budget "fails to do enough to cut spending and accepts almost benignly what are malignant deficits" that could "crush any hope of economic recovery," said Domenici.

Meanwhile, Senate Finance Committee Chairman Robert Dole (R-KS), who will have a big say in the fate of health programs, said the battle over changes in the budget may reach a climax in April.

In addition to Domenici's alternative budget plan, Senate Majority leader Howard Baker (R-TN) has suggested a temporary surtax on income to ease the deficit; and Ernest Hollings (D-SC) has recommended a freeze on defense increases, tax increases and entitlement program spending.

The major economy proposed by the Administration in health is a $5 billion reduction in the rate of growth of the Medicare and Medicaid programs. The House Ways and Means Health Subcommittee will conduct hearings on this issue during the next month.

President Reagan's plan that would federalize Medicaid and turn major welfare and other health programs over to the states encountered resistance at the annual meeting of governors. However, the National Conference of State Legislatures approved the New Federalism concept with the warning that each of its provisions must be carefully examined and negotiated. The state lawmakers also urged the government to federalize income maintenance and food stamps as well as Medicaid.

Budget chief Stockman said that if Medicaid is federalized the Administration hopes to standardize services, but he told the governors there are no plans to radically change any of the program's provisions. He said it is not practical to have 30 optional services under Medicaid in one state and none in another.

The nation's medical schools fear the threatened squeeze on federal loan funds and aid for students could lead many students to drop out.

Loss of the guaranteed loan program for graduate and professional students would be devastating, according to Robert Boerner, Director of the Division of Student Programs of the Association of American Medical Colleges (AAMC).

Noting that the Administration proposal would hit the entire graduate and professional academic community, Boerner exclaimed "where the hell are we going to get the leaders of the country?"

The AAMC has been warning that the already-carried-out elimination of capitation aid for medical schools (federal grants based on number of students), plus the proposed curbs on federally-aided loans could make medical schools the province of only wealthy students.

Lower standards of admission, smaller classes, and slashed overhead costs may be in the offing. Some schools might not be able to survive the crunch, some AAMC officials have said. The number of applicants for schools is now the lowest it has been in 10 years and may drop below two applicants per place. In some areas involving state residents and public schools, the ratio is one to one.

According to Boerner the federal graduate student loan program provides 78 percent of all loan money available to medical students with 72 percent of all students participating in such loans.

Not only is the subsidized graduate loan program in jeopardy, but the fall-back loan and aid programs are in trouble. The Administration has proposed no further funding of the Exceptional Financial Need Scholarship Program which benefits two percent of medical students. The Health Professions Student Loan Program, utilized by about five percent of medical students, and the National Direct Student Loan Program, also about five percent, are recommended for cancellation.

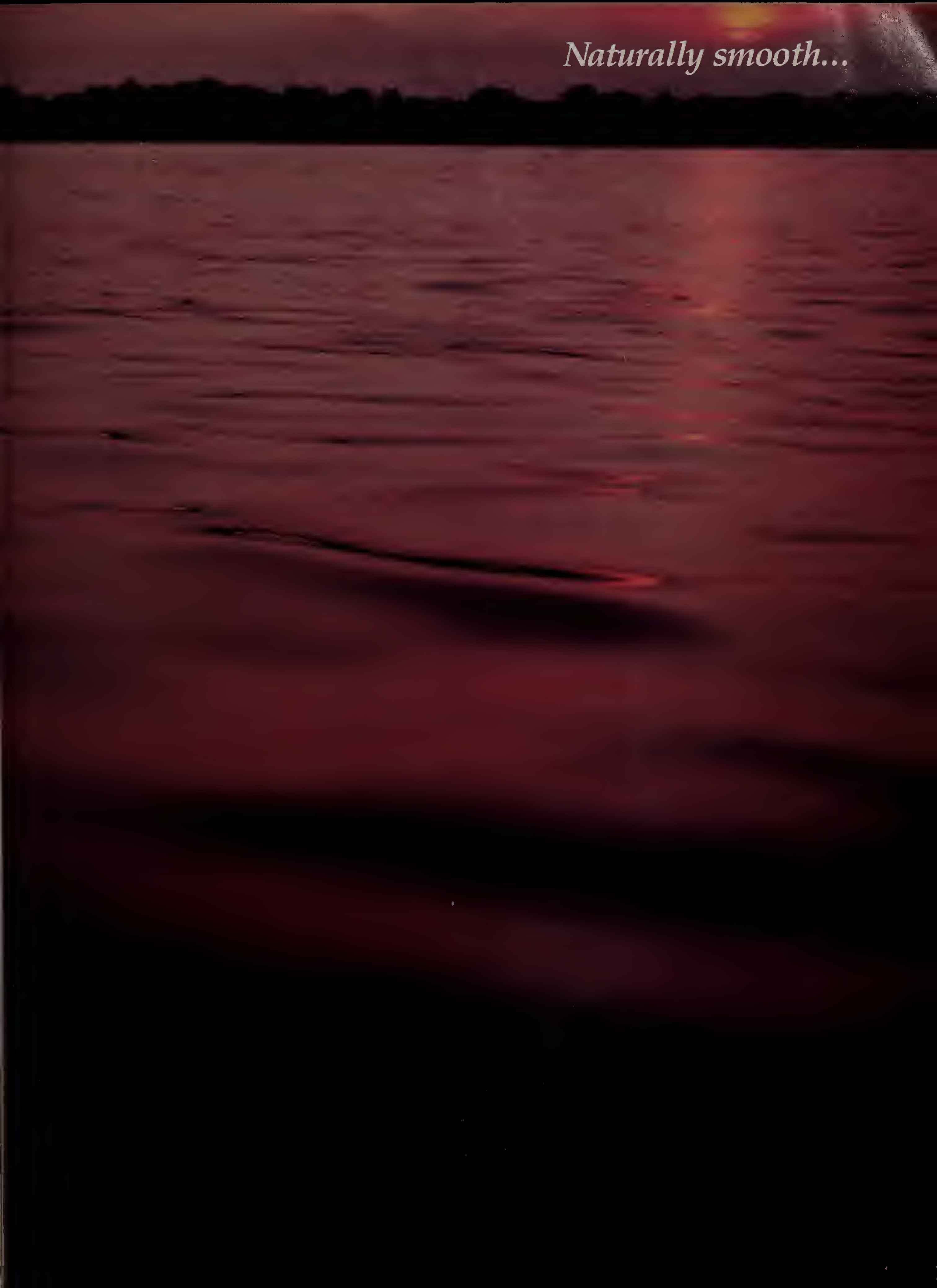
These three loan programs account for 85 percent of all loan dollars available to the medical students, Boerner said.

The major remaining source is the Health Educations Assistance Loan program (HEAL) which involves federal guarantees of loans from private sources. These loans are made at roughly the prevailing interest rates without any federal subsidy. The Administration wants to limit this fund to $80 million, Boerner said, but medical schools alone (other health schools also participate) estimate they will need more than $110 million in fiscal 1983 "for this, the high cost loan of last resort."

* * *

Prepared by the Washington, D.C. office of the American Medical Association

continued on page 771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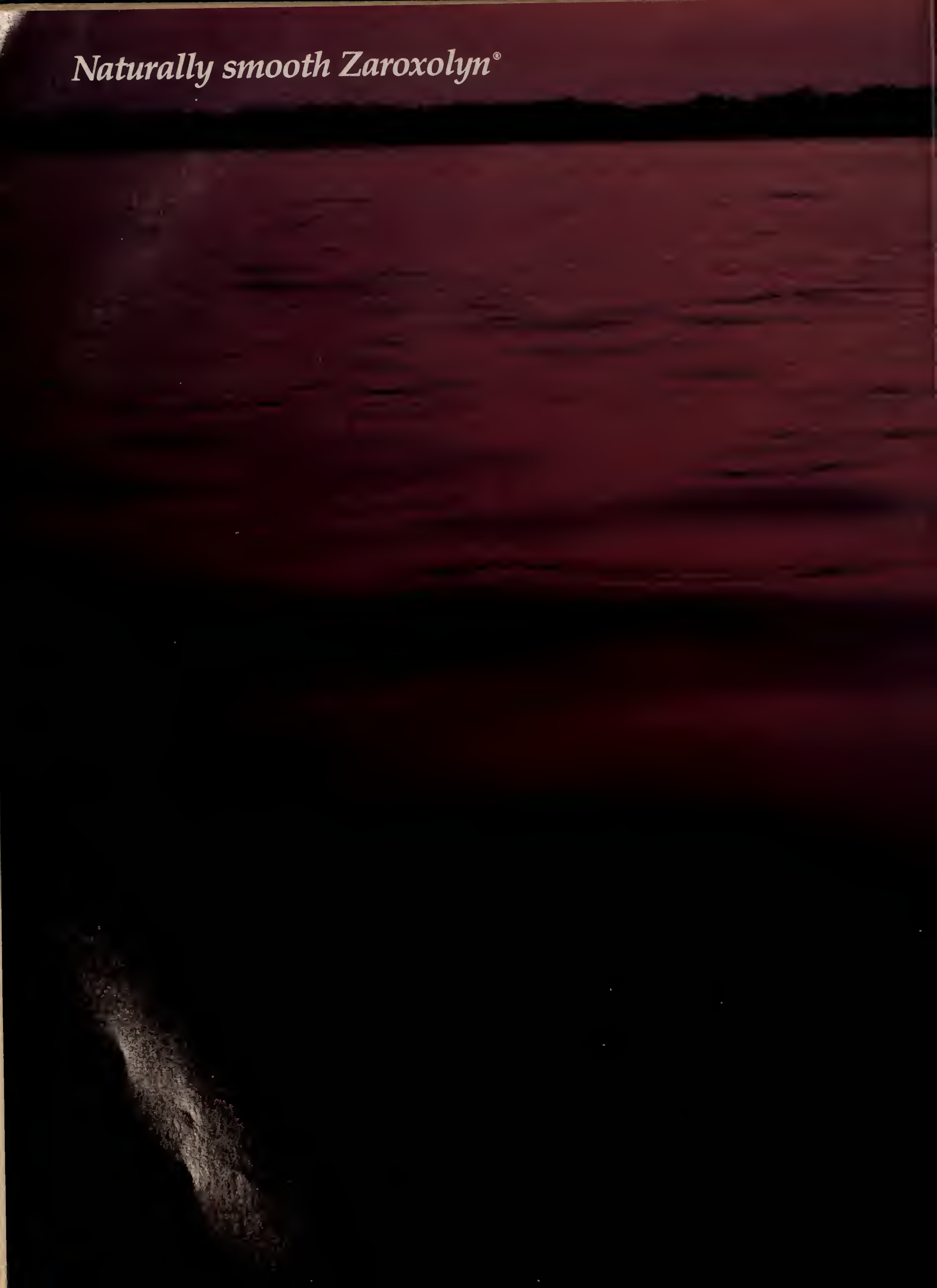
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Long-term efficacy with Zaroxolyn alone[1,6,7] *can spare patients the cost and side effects encountered with step-2 antihypertensives*

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Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents, and also, edema associated with heart failure and renal disease. Routine use in pregnancy is inappropriate. **Contraindications:** Anuria, hepatic coma or precoma; allergy or hypersensitivity to Zaroxolyn. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of child-bearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis and hypokalemia. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Insulin requirements may be affected in diabetics. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg; edema of renal disease—5 to 20 mg. Dosage adjustment is usually necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg.

A-312 3/82

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℞ DIVISION
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ROCHESTER NEW YORK 14623

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The government has proposed new regulations for kidney dialysis designed to save $130 million a year.

The proposals, which already have drawn fire from some patients' groups, call for prospective reimbursement of facilities and for a single rate whether dialysis is at home or at a facility. "This should encourage home dialysis where costs are lower, when the physician recommends home dialysis," said the Health and Human Services Department (HHS).

Under a proposed new methodology for computing rates, average reimbursement would be $132 per treatment for hospital-based facilities and $128 per treatment for independent facilities.

"By basing the rate on median costs experienced by all facilities, HHS will be providing a fair return to the efficient provider," said HHS.

The End-Stage Renal Disease Program (ESRD) will cost Medicare about $1.8 billion this fiscal year at an average cost per patient of $24,000. There are 59,000 patients covered.

About 17 percent of dialysis patients are treated at home "though home dialysis is believed to be suitable for 30 to 40 percent of patients," HHS said. Median cost is $97 per treatment.

* * *

Cigarette smoking is the chief avoidable cause of death in this country and the most important public health issue of our time, said C. Everett Koop, M.D., Surgeon General of the Public Health Service (PHS).

Releasing the annual PHS report on smoking and health, Dr. Koop said male smokers have double the cancer death rate of non-smoking males and that female smokers have a 30 percent higher cancer rate than nonsmoking females.

About 129,000 Americans will die this year of smoking-related cancer, the report said.

The Tobacco Institute released a statement that disputed the link between smoking and cancer. "While statistical associations may raise valid questions and suggest possible leads for further research, they do not prove a cause-and-effect relationship," said Institute chairman Horace Kornegay.

Federally-funded clinics will have to notify parents of teenagers within 10 days after prescribing contraceptive drugs or devices, under a proposed regulation of the Health and Human Services Department (HHS).

HHS Secretary Richard Schweiker said "parents should know when a child . . . is being given a prescription drug . . . so they can be aware of any health risk their child is taking."

Supporters of the federal family planning program in Congress, led by Rep. Henry Waxman (D-CA), have protested that the new regulations will discourage youths from seeking clinic advice and that the effect violates patient confidentiality.

"The health of teenage Americans would be endangered if proposed regulations are enacted forcing clinics to notify families of young people who are seeking family planning help, Luella Klein, M.D., of the American College of Obstetricians and Gynecologists, told the House Subcommittee on Health. ACOG was joined in its opposition to such regulations by the AMA and the American Academy of Pediatrics.

Dr. Klein quoted an ACOG policy which, while urging professionals working with adolescents to encourage family involvement, states that the adolescent should not be denied care and services by reason of such consideration. Dr. Klein said the proposed regulations would "deter adolescents from seeking care" and "should be avoided in the interest of the adolescents' health."

Health care providers need to be stronger and more purposeful in moderating health care cost increases, AMA Executive Vice President James Sammons, M.D., told the American Hospital Association.

It will be no easy task to do this while at the same time assuring the quality of care, Dr. Sammons said.

The New Federalism program of the Reagan Administration will result in the smallest proportionate federal health care "pie" in history, he told the AHA's annual meeting in Washington, D.C.

One example of the private sector moving to meet the challenge is the new national effort to avoid local coalitions. Unless the private sector acts, "surely we will have it done for us," the physician warned.

Spending curbs must not impede progress in medical technology and research, according to Dr. Sammons, who said that "a greater effort than ever expended before" is needed to cope with the new tides of government spending.

* * *

A National Institutes of Health (NIH) Advisory Committee has rejected a plan to lift most federal regulations on gene transplant experiments, voting to maintain some government control over the controversial research.

Three types of experiments would require NIH prior review and approval; those that would confer drug resistance on bacteria that are not normally resistant; those that confer the ability to make deadly toxins on bacteria that cannot ordinarily do so; and those that would deliberately release any recombinant organisms into the environment.

* * *

Stanley Nelson, Executive Vice President and Chief Executive Officer of Detroit's Henry Ford Hospital, has been installed as the chairman of the Board of Trustees of the American Hospital Association.

Noting proposals to reduce federal health spending, Nelson called for preservation of "those preventive health measures and early treatment programs which are so vulnerable during a budget crisis."

"Abandonment (of the programs) could result in future costs to society many times current costs," he said. "These programs represent the true bargains in health and their elimination would prove to be a false economy."

* * *

Declaring it is time to control "runaway government spending," President Reagan has said he will name a private sector task force on federal government cost control.

The "no-nonsense, results-oriented" study will begin with the Defense, Health and Human Services, and

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contemporary nutrition®

NUTRITION AND IMMUNITY

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The nutritional status of the elderly and of children is a major factor affecting host resistance. After maturity, some, but not all, key host defense systems decline in their level of reactivity. It is clear that many people do not die of old age, but rather from infectious diseases.[1,2] Compared to adults, newborns and children have greater susceptibility to many diseases due to a combination of immunological immaturity and lack of previous exposure to microbes.

Malnutrition and Disease

Historically, the association between malnutrition and lowered disease resistance has been recognized by many cultures. It is not merely by chance that famine and pestilence are two of the dreaded "Four Horseman of the Apocalypse." They might well have been depicted riding the same horse, so close is the historical association.[1] The high morbidity and mortality suffered by malnourished populations are caused mainly by nutritional deficiencies which impair immune systems.[1] A major impediment to the study of these problems in human populations lies in the complexity of their nutritional backgrounds and immunological host-defense systems. Undernutrition as well as overnutrition in different populations may exist in a large variety of permuted combinations. These nutritional states may include deficiencies or excesses in protein, calories, vitamins and trace minerals. In addition, the failure to distinguish between these various degrees of malnutrition prevents a critical evaluation of some human studies.

Host defenses include such diverse systems as nonspecific immunity (saliva flow, skin, bactericidal enzymes) humoral immunity (serum antibodies, complement-mediated lysis), cellular immunity (such as phagocytosis, T-lymphocyte "killer cells") and mucosal immunity (antibodies in secretions).[1] These immune systems vary in their response to nutritional stresses, yet their combined functions provide overall host defense.[1,3]

On a worldwide basis, protein-calorie malnutrition is the most common cause of acquired immuno-deficiency.[1] Most human studies to date have focused on severe protein-calorie malnutrition in hospitalized children.[1,3] Although children suffering from marasmus or kwashiorkor represent most dramatically the effects of malnutrition on disease susceptibility, they comprise only 3 to 5% of malnourished children in developing countries. In contrast, up to 60% of all preschool children in many preindustrial societies suffer from the milder forms of malnutrition.[1] Many elderly humans in the United States who are undernourished have contributing factors to nutritional stress including cancer, alcoholism, prolonged hospitalization and other illnesses. In the hospitalized populations of industrialized countries, such as the United States, malnutrition is a major contributing factor to the poor health of these individuals.

Effects of Malnutrition on Humoral Immunity

The humoral immune system is comprised of soluble serum proteins, in particular immunoglobulins (IgG, IgM IgA) and the complement system. The complement system is comprised of eleven protein components (C_1-C_{11}) that act in a coordinated "cascade" sequence in conjunction with IgA, IgG, and IgM antibodies to perform a complex set of host-defense functions. One reaction sequence of the complement system can result in lysis of foreign cells However, the key role of the complement system in host defense is amplification of other portions of the immune system. These include enhancement of phagocytic cells to engulf pathogens, stimulated attraction of phagocytic cells to the site of infection, and viral neutralization. Almost all studies of severely malnourished children and animals show a significant decrease in total hemolitic complement and an increased incidence of infection.[1] For example, protein-calorie malnourished Thai and Colombian children showed a marked decrease in serum complement component C_3. A total decrease in this complement component has been shown to significantly reduce the efficiency of response by this system. On the other hand, the levels of serum antibodies which must bind to the pathogen before the complement system will function, are generally unaffected by nutritional stresses. Since all complement components react in sequence, anything which significantly reduces the level of activity of even one component affects the function of several aspects of host defense. Complement levels are markedly reduced by dietary protein insufficiency in the young and elderly.[1,3] Hence, persons suffering from prolonged anorexia or surgical trauma which results in negative nitrogen balance would be susceptible to complement suppression and, hence, decreased disease resistance.

Malnutrition and Mucosal Immunity

Although the skin usually acts as an effective barrier to pathogens, there are sites in the body which lack this nonspecific protection. The oral cavity, eye and intestinal tract are frequently exposed to potential pathogens, in addition to those regularly present. To protect these mucosal surfaces from colonization or growth by foreign pathogens, the body has mucosal immune defenses which are susceptible to nutritional stresses.[1,3] These defenses include enzymes (e.g., lysozyme), flow of secretions (IgG and secretory IgA), and cellular defenses in the top cell layers of the mucosal surface.

Recently, moderate and severe protein malnutrition has been shown to significantly suppress the secretion of lysozyme into the tears of children.[3,4] This could result in reduction of host defense against certain bacteria that would normally be destroyed by lysozyme. In addition, the synthesis and secretion of secretory IgA, a principal group of antibodies produced for mucosal defense, was impaired. Many pathogens enter and colonize mucosal surfaces in the intestine, lung or mouth, which are protected by mucosal immunity. In other studies, severely protein-undernourished Thai, Indian and Colombian children had significantly reduced (35-50%) levels of secretory IgA, while IgG levels were unaffected.[1] The levels of nasopharyngeal secretory IgA measles and polio antibodies were also found to be low or undetected in severely protein-calorie, malnourished Indian children following immunization with polio and measles viral vaccines.[5] These suppressed antibody responses are very disturbing since the body relies largely on the immune system to recognize and then respond defensively to pathogens. To the extent that malnutrition impairs immune responses to new pathogens, patients on dietary restriction may be at risk to disease from foreign organisms including those for which vaccines do not exist. Unfortunately, the effects of mild to moderate nutritional stress on secretory immune responses are largely unknown.[1]

Nutritional Suppression of Cellular Immunity

Cellular immunity is produced by a subpopulation of lymphocytes which bind to foreign protein components of microbial pathogens or cancer cells. This binding process can result in direct killing of the pathogen or, more importantly, attraction and activation of macrophages into "killer cells." The macrophages then engulf and destroy the pathogen.

Severe protein undernutrition in children and adults and in young animals frequently is associated with a profound impairment of cell-mediated immune functions.[1,3] Both the number and functional capability of T-lymphocytes are markedly reduced, as is the delayed hypersensitivity response to antigens and sensitizing chemicals. In general, the severity of the impaired immunological response parallels the severity of the protein or calorie nutritional deficiency. Much less is known about the effect of other nutrient deficiencies on cellular immune functions. Severe nutritional deficiencies appear to interfere with production by T-lymphocytes of protein signals to "killer" macrophages resulting in poorer phagocytosis and destruction of pathogens. In addition, the efficacy of vaccines which stimulate cell-mediated immunity may be impaired in severely malnourished individuals.

Studies involving adults and elderly people usually are complicated by surgery, cancer and/or other diseases in addition to malnutrition.[1] For example, patients with adult marasmus with less than 85% of standard weight-height ratio, but with normal levels of serum albumin, showed normal cellular immunity as determined by using in vitro parameters (i.e., complement fixation). On the other hand, in vivo tests of intradermal skin response to candidin and streptokinase-streptodornase was suppressed. In spite of these differences, suppressed cellular immune responses, as determined by either in vivo or in vitro tests, are well recognized signs of immuno-suppression and, hence, increased probability of infections following surgery.[6,7] Indeed, in hospitalized, undernourished patients, presurgical nutritional therapy has been shown to help restore suppressed cellular immune responses. Such therapy may decrease the incidence of morbidity. In fact, measurement of immunological status is becoming a helpful way to assess nutritional status.[7]

Benefits and Problems of Marginal Malnutrition on Host Defenses

Moderate protein malnutrition is clearly associated with important changes in immunological responsiveness. However, the changes observed in certain parameters of cell-mediated immunity may be normal, impaired or sometimes enhanced in moderately malnourished children or animals.[1,3] For example, experiments have recently shown an enhancement of cellular immunities in mature animals fed a moderately low-protein diet.[1,8,9] Marginally malnourished mice fed an 8% protein diet after weaning showed an increase in cellular immunities and their macrophages engulfed pathogenic bacteria at a significantly greater rate than control animals fed a complete protein diet.[10] One postulated explanation may be that macrophages of these mice were activated due to increased immuno-competence of effector T-lymphocytes stimulated by the elevated number of other pathogens found in the malnourished animals. Clearly, protein or calorie intakes which are below normal, but which do not cause severe malnutrition, can produce enhancement in some immune responses in animals.[1,2,3,9] It follows, therefore, that reduced dietary intakes of protein or calories in animals sometimes result in enhanced longevity.[2] For example, female mice nutritionally stressed with a 40% reduction in calories showed a reduced incidence of spontaneous mammary carcinoma and a 70% reduction in tumor incidence compared to well-nourished mice.

Immunological processes which are basic and vital to the living organism can be affected and to a certain extent controlled by nutritional manipulation. Functions such as growth, health, malignancies and tumor development, enzyme activity, longevity and immune response all have been shown to respond to dietary manipulation. The interrelationship between longevity, immunities and diet is very complex. These changes in the host-defense systems appear to be dependent on components of the diet, age at which the animal has started on the diet, and duration of dietary manipulation.

Summary

Severe protein deficiencies such as kwashiorkor result in immuno-suppression of humoral cellular and mucosal immune systems. These suppressions result in a greater incidence of disease in animals and humans and create increased risks of morbidity and mortality due to infectious disease or neoplasias. The effect of moderate protein-calorie deficiency on immunocompetence appears to be highly variable in studies with experimental animals. In young animals, some parts of the host-defense systems are stimulated while others are inhibited. These effects appear to result in long life spans. This may be due to slower maturation and, hence, a slower decline of host-defense systems in the moderately malnourished animals.

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HYPERTENSION:

METHYLDOPA? RESERPINE? INDERAL? COUNTLESS THOUSANDS WOULD BE BETTER OFF WITH

Today, INDERAL—instead of methyldopa, instead of reserpine.

INDERAL exhibits few of the disturbing side effects of methyldopa and reserpine. Sedation, depression, and impotence are rare.* Tolerance is not likely to occur, as it frequently does with methyldopa. For the vast majority of patients—INDERAL means a step toward improving the quality of life. (INDERAL should not be used in the presence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.)*

INDERAL blocks beta-receptor sites *in the heart* to reduce heart rate and cardiac output—reducing cardiac work load—sparing an overburdened heart.

Hypertensive hearts can rest easy with INDERAL. For many—it is ideal, first-step therapy.

INDERAL—the sooner, the better for hypertension—a leading risk factor in coronary heart disease.[1]

*Please see following page for Brief Summary of Prescribing Information.

INDERAL®

(PROPRANOLOL HCl) B.I.D.

The sooner, the better.

THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD

INDERAL®

(PROPRANOLOL HCl)

B.I.D. FOR HYPERTENSION

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)*
Inderal® BRAND OF propranolol hydrochloride A beta-adrenergic blocking agent

BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

INDERAL is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i e* , that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect The effects of INDERAL and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol s potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function beta blockade will impair the desired inotropic effect Therefore INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e g* , isoproterenol or levarterenol However such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS EMPHYSEMA) INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure intensification of AV block hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura

Central Nervous System lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium and decreased performance on neuropsychometrics

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping diarrhea constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION *Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED

BRADYCARDIA ADMINISTER ATROPINE (0 25 to 1 0 mg) IF THERE IS NO RESPONSE TO VAGAL BLOCKADE ADMINISTER ISOPROTERENOL CAUTIOUSLY

CARDIAC FAILURE DIGITALIZATION AND DIURETICS

HYPOTENSION VASOPRESSORS, *e g* LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE)

BRONCHOSPASM ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

TABLETS

No 461	Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100
No 462	Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100
No 464	Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100
No 468	Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

INJECTABLE

No 3265	Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10

Reference: 1 Freis, E D Hypertension (Suppl. II) 3 230 (Nov-Dec) 1981 **7997/482**

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Medical News

THE YEAR IN MEDICINE, 1981

There have been a number of significant acomplishments in medicine over the past year, all of which rest on sound experimental research and years of investigation, according to James H. Sammons, M.D., Executive Vice President of the American Medical Association. What often seems startlingly new, or what captures sudden attention, is something we've been watching progress for months or years, he said, so it is difficult to draw arbitrary lines and say that a particular achievement in medicine happened on a particular day or month. Nonetheless, among the most exciting developments — and ones that we feel have advanced the course of medicine — one would have to include:

PET Scanner — Spawned from the CAT scanner, this second generation medical technology (PET: Positron emission tomography) allows us to witness for the first time whether or not actual cells are working as they are supposed to.

Hepatitis B Vaccine — The first entirely new viral vaccine to be approved in ten years, this will be the first line of protection against a virus that infects as many as 300,000 Americans a year.

Lytic Enzyme Therapy — This still highly experimental treatment shows tremendous promise for preserving the heart muscle from further damage following a heart attack, or possibly even nipping a heart attack in the bud, so to speak, by dissolving the clotted material where it clogs a coronary artery.

Hybridoma Technology — This technology has made possible the production of monoclonal antibodies, which can be thought of as akin to the targeted weapons of our immunological defenses. The advent of this technology has opened up new vistas in cancer detection and disease therapy, as well as added to our general understanding of the body's immune system.

Microsurgery — Techniques to join blood vessels continue to expand, now into the brain.

Electrical Stimulation to Promote Bone Healing — Using electromagnetic forces, physicians in a number of medical centers have achieved bone healing at a rate comparable to that of bone-graft operations, with considerably less risk to the patient.

In-Utero Surgery — This year saw pioneering fetal surgery, the bold extension of the surgeon's skills into the womb for the treatment and correction of a number of disorders that threaten unborn babies.

Calcium Antagonists — A new direction for the treatment of certain heart beat irregularities and angina by drugs that influence calcium metabolism at the cellular level.

Beta-Lactams — These new, third generation antibiotics (penicillins were the first generation of beta-lactam antibiotics) have a wide spectrum of activity against gram-negative bacterial infections.

Beta-Blockers — This new line of drugs has sharply reduced the death rate among heart attack victims by significantly protecting against the recurrence of an attack.

Looking forward to the new year, organized medicine is committed to help develop effective health care mechanisms at the local level at as the federal government begins to cut back on funds for providing health care. The American Medical Association is determined to make health care more cost-effective while preserving its quality and its availability.

AMA PLANS PROGRAM OF WRITTEN PATIENT MEDICATION INSTRUCTIONS

The American Medical Association is developing a Patient Medication Instructions (AMA-PMI) program through which written information about certain drugs will be made available to physicians for distribution, along with prescriptions to their patients. The Association anticipates that the written information will reinforce the physician's oral instructions to the patient and will enhance consumers' knowledge about the drugs they are taking.

Although the program will be conducted solely by the AMA, Association staff members have met with representatives of the American Pharmaceutical Association, the pharmaceutical industry and the U.S. Food & Drug Administration, to explore mutual interest in the development of the Patient Medication Instructions program.

The scientific basis for all statements made in AMA-PMIs will be drawn from the Association's authoritative compendium, *AMA Drug Evaluations*, as well as from other reliable sources.

Initially, AMA-PMIs will be written for 10 of the most widely prescribed medications, both single entity drugs and combinations, and, in time, will cover 200 widely used drugs. For single entity drugs, the generic name will be the principle identifying designation and, whenever practical, the most widely known trade names will be included. Trade names only used to identify combination drugs. The AMA-PMIs also will include common, documented side effects.

Plans call for the first group of AMA-PMIs to be available to physicians in the spring of 1982.

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Material for inclusion in the medical news section must be received eight weeks prior to publication date.

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Positive Government Action Against Tobacco-Related Disease

The Surgeon General's report on smoking and cancer has provided Congress with a solid foundation for positive government action against tobacco-related disease, Dr. Robert V. P. Hutter of Livingston, New Jersey, President of the American Cancer Society, declared today.

He announced that the American Cancer Society has joined forces with the American Heart Association and the American Lung Association to form a coalition which will work with legislators toward development of a consistent national policy concerning cigarettes and the public health.

"The Surgeon General's report contains the information Congress has been needing to justify stronger steps for protection of the public," Dr. Hutter said. "Cancer death rates in this country will continue to rise until something is done about mortality which is related to the use of tobacco. It is primarily the cigarette habit which has kept the overall death rate from coming down."

Calling the Surgeon General's report "an indictment of tobacco as a major cause of cancer death," Dr. Hutter declared that "Congress now has the data to justify stricter regulation of the toxic substances which are regularly sold to the public as components of cigarettes and other tobacco products.

"These substances should conform to standards of safety similar to those imposed on the foods, the medicines and the personal products we use each day."

Dr. Hutter pointed out that many of the ingredients of tobacco products, such as flavoring additives, are kept secret even from the government. "The cards are stacked against the consumer," he said, "and this is not right."

Commenting on that section of the Surgeon General's report which establishes causal or contributory relationships between tobacco use and cancers of the lung, larynx, oral cavity, esophagus, bladder, kidney and pancreas, Dr. Hutter said:

"When we hear of a bad accident involving 20 or 30 people everyone is horrified and officials start clamoring for more consumer protection. Here we have a situation in which two to three hundred people a day are being killed by toacco-related cancers, and these people have been given virtually no protection at all."

He pointed out that "most of the cancers caused by smoking are those which offer a patient the smallest hope for recovery. The 5-year survival rate for lung cancer is only 10 percent, and the 5-year survival rate for cancer of the esophagus is 4 percent. For cancer of the pancreas it's even less — 2 percent."

The American Cancer Society estimates that 111,000 Americans will die of lung cancer this year. It says cancer of the esophagus will account for 8,300 deaths, and cancer of the pancreas will cause 22,300 deaths.

LEAD POISONING DETECTED IN BROOKLYN CHILDREN

A New York City Health Department special Summer lead screening program found 66 young children from the

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Bushwick and Bedford-Stuyvesant sections of Brooklyn suffering from lead poisoning, according to test results released today by Acting City Health Commissioner Dr. Margaret T. Grossi.

All the affected children were between the ages of one and six. Health Department physicians recommended hospitalization for six children who were found with dangerously high levels of lead in their blood. The remaining children were referred to the Department's district health clinics.

"Specially trained teams from the Health Department's Lead Poison Control Unit tested over 1800 children from Bushwick and Bedford-Stuyvesant," Commissioner Grossi said. "Mobile testing booths were set up on sidewalks. Door to door appeals and loudspeaker announcements from the streep urged parents to have their children tested. Testing sites were also in operation in day care centers throughout the two communities.

"Our street testing was an extremely effective detection method," Commissioner Grossi explained. "Approximately half the children tested during the Summer screening effort were from sidewalk locations. These children accounted for over 92 per cent of the new lead poisoning cases, (61). They were found with the illness at ten times the rate of children tested in the day care centers and four times the rate of the 80,000 children tested annually city-wide in Health Department Clinics.

Bushwick and Bedford-Stuyvestant are considered the heart of the City's lead belt. In the past 4½ years over 800 children from these areas have developed lead poisoning. This number represents only known cases. The frequency of lead poisoning is higher in these communities because the older, and at one time more affluent homes, were habitually painted with lead paint, a premium product in years past.

"Children develop lead poisoning from the ingestion of flaking, leaded paint chips and the licking of fingers powdered with leaded dust," Commissioner Grossi noted. "The cracking of walls with old leaded paint forms dust particles which fall to the floor. As children crawl on the floor their hands become contaminated with this dust. When children place their hands in their mouth — as most children are inclined to do — the leaded dust is ingested. Extreme or prolonged cases of lead poisoning could adversely affect the central nervous system and cause convulsions and brain damage."

Health Department environmental sanitarians visited the home of each child detected with the illness. All the walls with chipping paint in each of these apartments were checked for lead content. Leaded surfaces were stamped with a lead poisoning warning insignia and the landlord was ordered to immediately cover the surfaces with sheet rock or some other type of permanent wall covering. If the landlord does not respond, the City's emergency repair program completes the renovation and bills the owner.

Dr. Grossi concluded: "We will continue to actively screen and monitor for lead poisoning in at risk children living within the City's lead belt areas."

What makes a good neighborhood?

Clean streets? A new playground? Well-kept lawns?

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Being retarded never stopped anyone from being a good neighbor.

[illegible]

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Information: Call or write: Dr. Frederick Rose, Director of Medical Education, Robert Packer Hospital/Guthrie Clinic, Sayre, PA 18840, Phone: (717) 888-6666, extension 366.

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Housing and Urbans Affairs Departments, the President told a news conference.

The panel, whose members are scheduled to be named soon, will bring to the problem of government spending "an outsider's veiw on improving management and reducing federal costs," Reagan said.

* * *

$16.2 million private effort to help communities tackle rising health care costs has been announced by the Robert Wood Johnson Foundation.

The program, co-sponsored by the American Hospital Association and the Blue Cross and Blue Shield Associations, would fund such cost containment projects as new methods of reimbursing hospitals and physicians, possibly on the basis of a fixed annual amount per person treated.

Other possible projects cited by Robert Blendon, M.D., Vice President of the Foundation, were restructuring of insurance benefits, conversions and mergers of existing services or facilities, and the regionalization of high technology, high cost services.

* * *

The government has advised that the use of aspirin to treat children with chicken pox or flu-like illness has been linked with "possible increased risk" of Reye syndrome.

The joint statement for parents and physicians was issued by Edwardt Brandt, M.D., HHS Assistant Secretary, and the Center for Disease Control, following a review of four scientific studies by an outside advisory group.

The Health Research Group founded by Ralph Nader charged that the warning was too weak. Aspirin manufacturers disputed the studies and said the cautionary statement was "totally unjustified."

* * *

Warning that drug abuse among young people is reaching epidemic proportions, the White House has scheduled a conference "to determine ways to curb the staggering amount of drug use by teenagers and young adults."

The one-day conference will be sponsored by ACTION, the national volunteer agency, and will be hosted by President and Mrs. Reagan.

The conference was announced following a two-day trip by Mrs. Reagan to Florida and Texas where she visited schools and drug treatment programs. Mrs. Reagan said she wants to get more parents involved and hopes that by calling attention personally to the problem she can make a difference.

ACTION director Tom Pauken said the "enormous assault" of drug use on youth "must be reversed at the local level by parents and teachers who can tell young people the truth about using drugs."

At the conference, corporate leaders, media officials, religious leaders and national volunteer association officials will meet with ACTION and White House staff and parents groups' representatives to "help plan national drug abuse strategies and discuss ways that the private sector can cooperate with parents to eradicate drug abuse . . . ."

Medical Meetings

Alzheimer and Related Disorders Social Work Conference on Aging

Date: Thursday, May 6, 1982
Time: 8:30 a.m. to 4:30 p.m.
Place: The Auditorium of the Jewish Institute for Geriatric Care New Hyde Park, New York
Tuition: $45.00 (includes Luncheon)
For further information, please contact: Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, New Hyde Park, New York 11042; (212) 470-2114

Annual Meeting in Atlantic City

Medical Society of New Jersey to be held at Resorts International Hotel Casino, Atlantic City, May 15 to 17, 1982.

Postgraduate Course on Fractures

The Twenty-Sixth Annual Postgraduate Course on Fractures and Other Trauma, sponsored by the Chicago Committee on Trauma of the American College of Surgeons, will be held on May 12, 13, 14, 1982 in the historic John B. Murphy Auditorium, American College of Surgeons, 55 East Erie, Chicago.

For additional information contact: Jack L. Robbins, M.D., Chairman, Postgraduate Course
312-475-4040

Nurses' Convention

The 30th annual convention of the National Student Nurses' Association, April 28–May 2, 1982, will feature an impressive line-up of nursing leaders and educational programs for student participants. The convention theme is "50's to 80's: Three Decades Towards Excellence." The convention takes place at the Minneapolis Auditorium in downtown Minneapolis.

Post-Graduate Education

Pediatrics "Conversations with Jerome O. Klein and Jerold F. Lucey," June 9, 1982, Weiskotten Hall, Upstate Medical Center, 766 Irving Avenue, Syracuse, New York 13210

For more information write to: Office of Continuing Education, Upstate Medical Center, State University of New York, 766 Irving Avenue, Syracuse, New York 13210; Telephone: (315) 473-4606

Eastern Section American Thoracic Society

The Eastern Section American Thoracic Society will meet at the Copley Plaza Hotel, Boston, Massachusetts on October 15 and 16, 1982. Early reservations are encouraged since hotel room availability is limited in Boston. Deadline date for reservations: September 14, 1982. For further information, contact Ms. Colleen H. McComas, American Lung Association of Massachusetts, 263 Summer Street, Boston, Mass. 02210. (617) 426-8330.

CME Conferences in Wilderness Regions

(Santa Barbara, CA). This summer, for the first time, physicians can combine accredited CME study with vacations in North American wilderness recreation areas. Scheduled during May through August, this series of 34 Wilderness Medical Conferences is offered by the American Institute of Primary Care Medicine, sponsor of ER Reports, a self-study CME program in acute medicine.

For the wilderness conferences, doctors will have an opportunity to select from 10 week-long adventures, ranging from kayaking and rafting in Alaska, Colorado, and Utah, sailing and hiking in Maui and Mexico and backpacking in Idaho and Kauai. In keeping with the wilderness spirit, trips are limited to small groups, averaging only 20 physicians and spouses or guests and one faculty member. Experienced guides accompany each group and provide instruction in kayaking, sailing or rafting.

Focusing on topics in acute medicine, participants will spend 4 to 5 hours per day in independent study and small group discussions. To facilitate review of course topics, each physician will receive a "textbook" that includes comprehensive reports of 22 critical topics in acute care: 11 in trauma and 11 in general acute medicine. Physicians who pass post-tests on materials covered will receive 24 Category 1/Prescribed credits applicable toward the Physician's Recognition Award of the American Medical Association and approved by the American College of Emergency Physicians and the American Academy of Family Physicians.

Dr. Craig Alan Sinkinson, president of the American Institute of Primary Care Medicine, believes physicians will appreciate the unique combination of medical education and wilderness adventures. "In surveying physicians, we've found that they demand more from their CME experience than just education. Since most physicians take vacation with their CME activities, we've designed a program that's good for not only the physician's clinical needs but also good for the body and soul."

For more information on the Wilderness Medical Conferences, including complete schedules and trip costs, contact: Nancy Bays, Program Director, American Institute of Primary Care Medicine, 1434 East Ojai Avenue, Ojai, California 93023; Telephone: (805) 646-2982 or (805) 646-2673.

Material for inclusion in the Medical meetings section must be received eight weeks prior to publication date.

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June 11-13
Virginia Beach, VA
July 16-17
San Francisco, CA
July 16-18
Vail, CO

July 30-Aug. 1
Boyne Mountain Resort
Boyne, MI
August 13-15
Orlando, FL

September 24-25
Washington, DC
October 22-23
Cincinnati, OH
October 29-31
Las Vegas, NV

Clinical Management of Coronary Disease and Dual-Mode Exercise Testing**

May 14-15
Chicago, IL
June 25-27
Newport Bch., CA
July 16-18
Tamiment Resort
Tamiment, PA
(The Poconos)

July 30-Aug. 1
Lodge of the Four Seasons
Lake of the Ozarks, MO
August 13-15
Monterey, CA

August 20-22
Montreal, Canada
September 24-25
Seattle, WA
October 22-23
Boston, MA

ECG Interpretation & Arrhythmia Management*

May 21-22
San Francisco, CA
June 25-27
Orlando, FL
July 23-25
Cape Cod, MA
July 30-Aug. 1
Lake Geneva, WI

August 6-8
Lake Tahoe, NV
August 13-15
Nashville, TN
August 13-15
Hilton Head, SC

September 24-26
Las Vegas, NV
October 15-16
Atlanta, GA
October 22-23
Chicago, IL

Cardiac Rehabilitation**

May 14-15
St. Louis, MO
September 24-25
Philadelphia, PA

October 15-16
Detroit, MI
October 29-30
Chicago, IL

Ambulatory Electrocardiography: Clinical Applications, Methodology & Interpretation

May 7-9
Las Vegas, NV
June 25-26
Toronto, Canada
July 16-18
Orlando, FL

August 6-8
Concord Resort
Kiamesha Lk., NY
(The Catskills)
August 20-22
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October 1-3
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Development Program, published by the American Hospital Association.

As a physician member of a hospital's Board of Trustees, I think for the first time I really began to understand the real function of a Board in the successful functioning of a hospital. The material presented beautifully focuses on and integrates with the many interrelated activities that must be considered by a Board to understand just what is practically and legally required of a Board.

This volume should be required reading by all Board members, both new and old. **Robert J. O'Connor, M.D.**

Perinatal Medicine Today. Edited by Bruce K. Young, M.D. New York, Arthur R. Liss, Inc., 1980. Progress in Clinical and Biological Research Series, Volume 44. Cloth, 229 pages. Price $20.00.

Dr. Young has gathered a distinguished group of specialists, each of whom is outstanding in his subspecialty. The papers were presented at a symposium in June, 1979, which was conducted at the New York University School of Medicine and represents the current state of the art as well as works in progress. It is a very valuable addition to the literature on perinatal medicine. **William F. Finn, M.D.**

Legionnaires' Disease. By Gary L. Lattimer, M.D. and Richard L. Ormsbee, Ph.D. New York, Marcel Dekker, Inc., 1981. Infectious Diseases and Antimicrobial Agents Series. Illustrated, 250 pages. Hardcover, $23.50.

The recognition of a newly defined clinical entity and the description of a new genus and family of microorganisms, *Legionella pneumophila*, represent fascinating developments in biomedical science. In this 250-page book, Dr. Lattimer and Dr. Ormsbee have extensively reviewed the relevant literature that has emerged during the past five years and has resulted in an understanding of Legionnaires' disease. This excellent volume reviews historical events leading to the identification of this clinical entity, clinical features, clinical diagnosis, laboratory diagnosis, therapy, pathology, microbiology, and epidemiology. The book includes excellent photomicrographs of the organism, histopathology of the disease, and clinical features. It provides a comprehensive review of current understanding of Legionnaires' disease and is thus an essential volume for investigators and clinicians. The authors accurately and critically review present concepts of the pathogenesis and microbiology of the disease. This book is highly recommended for physicians, microbiologists, public health personnel, and biomedical scientists in general. **Steven D. Douglas, M.D.**

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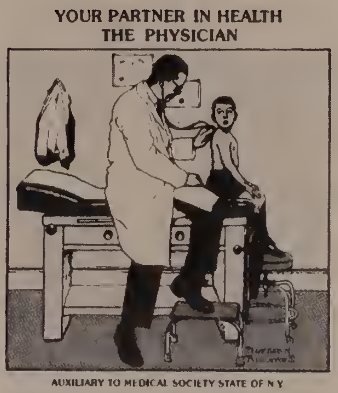
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JUNE 7–11, 1982: UPDATE YOUR MEDICINE 1982. The New York Hospital-Cornell Medical Center, New York City, AMA accredited, sponsored by the Office of Continuing Medical Education of Cornell University Medical College and the Association of Practicing Physicians of the New York Hospital. Director: Lila A. Wallis, M.D. Co-Director: Stephen Scheidt, M.D. Information: Office of Continuing Medical Education, Cornell University Medical College, Room F-436, 1300 York Avenue, New York, N.Y. 10021. (212) 472-5600.

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OPHTHALMOLOGIST, BOARD CERTIFIED desires to purchase practice in the New York City or suburban area. Confidence Maintained. Please contact Dept. 168, c/o NYSJM.

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PEDIATRICIAN, BOARD CERTIFIED, FMG, well trained and experienced, held teaching appointment in very good hospital, in private practice, affiliated with teaching hospitals, wishes to associate or buy pediatric practice in Queens/Nassau/Western Suffolk. Reply Dept. 240, c/o NYSJM.

POSITIONS WANTED

32 FEMALE BOARD ELIGIBLE Pediatrician, looking for full time, part time positions in Emergency Room, ambulatory care or private practice in New York City. Reply Dept. 233, c/o NYSJM.

RADIOLOGIST DESIRES LOCUM TENENS work. University trained in general radiology with special expertise in arteriography. Available for vacation coverage after April 1st. Call (303) 925-2331.

PERINATOLOGY—BOARD ELIGIBLE OB/GYN with Board eligibility in maternal fetal medicine. Interested in university affiliation, suburban community hospital practice, resident education, research and only some administration. Reply Dept. 239, c/o NYSJM.

PRACTICES AVAILABLE

FOR SALE, VERY ACTIVE PARTNERSHIP (2 man) practice, general and internal medicine. Established 28 years, south shore eastern Nassau County. Grosses 6 figures annually. Partners will retire upon sale of practice. Reply to Dept. 211, c/o NYSJM.

BUSY SUCCESSFUL FAMILY PRACTICE—30 years Queens County, New York City. High income. Retiring. Will work with and introduce. Hospital privileges available. Terms negotiable. Available July 1, 1982 or later. Reply Dept. 236, c/o NYSJM.

OPHTHALMOLOGICAL PRACTICE for sale in fastest growing area in South Florida (Boca Raton). Fully equipped and furnished. Call: Days (305) 392-5313; Evenings (305) 742-8524.

FOR SALE: ESTABLISHED FAMILY PRACTICE and fully equipped 2 story large clinic: 4 exam rooms, E.R., X-ray, lab, P.T. room. One OB-GYN on first level renting. $185,000. Spacious river home with tennis court, large pool, within walking distance of clinic, also available. Write for details. Reply Dept. 237, c/o NYSJM.

PEDIATRIC PRACTICE FOR SALE, Western Suffolk; retiring from practice. Reasonable price. Tel: (516) 273-3400.

FOR SALE, SYOSSET, L.I., N.Y. Home and office active general practice, at location 25 years, near shopping center, hospital. Will introduce. C. A. Scarano, M.D., 2 Comet Road, Syosset, L.I., New York. Call (516) 681-2776.

FAMILY PRACTICE, HOME-OFFICE for sale. Buffalo, N.Y. area. Over 40 year active practice. Poor health forces sale. Call (716) 693-6715.

FAMILY PRACTICE, WELL ESTABLISHED in Westfield, "City of Lakes and Grapes" N.Y. State. Beaches, good schools and golf. Six digit income. Attractive furnished air conditioned office in a 3 bedroom, 3 bathroom, 2 car garage home, five minutes from new hospital, labs and X-ray. Call Dr. Leszek (904) 783-6149, or Westfield Agency, Dick Davies (716) 326-4635.

ROCHESTER, NY, LARGE, VERY ACTIVE GENERAL practice in pleasant area. 90% internal medicine, additionally some slight injuries. Purchase real estate or rent office only. Will introduce or participate as long as desired. Short C.V. first letter. Reply Dept. 238, c/o NYSJM.

M.D. OFFICE FOR RENT, PRACTICE FOR SALE—excellent central Nassau location. 34 years General Practice in one location for sale. 800 sq. ft. office for rent. Large waiting room, 2 examination rooms, large consulting room, nurse station, full bath, ample parking. $825/mo. Sale of practice includes office furnishings and equipment. 9 am–5 pm (516) 822-9359.

PHYSICIANS WANTED

BOARD ELIGIBLE OR CERTIFIED (INTERNIST-CARDIOLOGIST) to associate with group in rapidly growing area in Ocean County, New Jersey. Salary with eventual partnership. Please send curriculum vitae to: Dept. 193, c/o NYSJM.

PHYSICIANS—NEEDED for 75 summer camps for children, located in Northeastern states, July and/or August. Contact: Association of Independent Camps M, 157 West 57th Street, New York, N.Y. 10019. (212) 582-3540.

PHYSICIAN DURING JULY AND AUGUST, 1982 for children's camp located at Beach Lake, Pa., accommodates 350 campers, age 6–16; complete modern Health Center; 2 R.N.'s in attendance; will accept one M.D. for each month; no children accepted who are of camp age. Camp opens June 29 and closes August 23. Private room and facilities. Write, and include your phone number, to Trail's End Camp, c/o Beach Lake, Inc., 215 Adams Street, Brooklyn, N.Y. 11201.

INDUSTRIAL PHYSICIAN: Albany, N.Y. area. Interested in treatment of injuries, preemployment examinations, and evaluation of disabilities. Knowledge of disability evaluation of Workers Compensation claims is essential. Pension plan and excellent fringe benefits. Well established professional corporation with shareholder acquisition or investment potential. Salary negotiable. Reply Dept. 181, c/o NYSJM.

EMERGENCY DEPARTMENT PHYSICIAN needed for 316-bed modern, general hospital with complete facilities from cardiovascular surgery to neonatal intensive care. Excellent salary with incremental raises over 2 year period. Excellent fringe benefits: retirement plan; malpractice insurance; long term disability and supplemental life insurance; 4 weeks vacation; 2 weeks educational leave with expense account; 40 hour week of 8 hour shifts. Regional hospital serves multi-county area of 250,000 plus population. City of 40,000 with excellent schools and college. Outstanding outdoor recreational opportunities near Finger Lakes. Charles H. Kinley, M.D., Director, Emergency/Outpatient Department, Arnot-Ogden Memorial Hospital, Elmira, New York 14901. (607) 737-4258.

OBSTETRICIAN/GYNECOLOGIST NEEDED to join two others 50 miles from New York City in mid-Hudson Valley. Salary leading to full partnership. Beautiful area, growing population. Send C.V. to Drs. M. L. Giampe and P. W. O'Daly, Box 990, Beacon, N.Y. 12508.

ATTRACTIVE OPPORTUNITY FOR INTERNIST with special cardiology interest or family practitioner. Medical center established for 3 or 4 man group including general surgeon and physician's assistant. Malpractice provided. Outstanding 200 bed hospital within half block. Located a half hour from Upstate Medical Center in Syracuse. Office completely equipped with X-ray, lab, treadmill and pharmacy. Beautiful Finger Lakes section of Central New York. Contact Donald R. Gibbs, M.D., 110 N. Main Street, Cortland, N. Y. 13045. Phone collect (607) 756-9941.

ORTHOPAEDIC SURGEON: Board eligible or certified to associate with a busy three man practice in Syracuse area. Ideal professional and financial opportunity. University and private hospital affiliations. Reply Dept. 232, c/o NYSJM.

PRIME POSITIONS AND PRIME PRACTICE locations now available throughout sunny Texas for physicians in the following specialties: OB/GYN, E.N.T., Internal Medicine, Urology, Orthopedic Surgery, Radiology, Anesthesiology, Pediatrics and Family Practice. These practice locations are located in medium-sized towns. Most offer salary guarantee and free office rent the first year. For further information, contact Denise Michaels, Director of Professional Relations, The Methodist Hospital Health Care System, 6560 Fannin Street, Suite 1824, Houston, Texas 77030, (713) 790-6372.

OB/GYN: MULTISPECIALTY HOSPITAL BASED group in rural upstate New York seeks Board Certified/eligible OB-GYN for established practice. Position will be available in July 1982. Certified nurse-midwife is part of group. Salary negotiable. Beautiful recreational area in upper Catskill mountain region. JCAH hospital with excellent medical staff and support services. Contact: Thomas E. Lavell, M.D., 1 Titus Place, Walton, N.Y. 13856.

PARTNER WANTED for busy General Office Practice, in Astoria, New York. Daily Hours. Call or write: Dr. S. Didner, 30-36 34th St., Astoria, NY 11103, (212) 278-5651.

MEDICAL DIRECTOR

Leading Medical School affiliated, Geriatric long term care facility with a comprehensive health care delivery system, requires full or part time Medical Director. Previous medical administrative experience and knowledge of Health Care Economics preferable.

Board certified in Internal Medicine with N.Y.S. licensure required. Please respond with resume and other pertinent information to:

Benjamin Sischy, M.D.
The Jewish Home and Infirmary Inc.
1180 St. Paul Street
Rochester, New York 14621

PHYSICIANS WANTED—CONT'D

FAMILY PHYSICIAN NEEDED for new, well-equipped Health Center. Will be sole physician. Upstate rural New York. Good schools. One hour from State Capitol. Three nearby hospitals. Excellent opportunity to develop strong practice. Call collect, Dr. Sam Shorter, Worcester, N.Y. 12197, (607) 397-8783.

WANTED ASSOCIATE FOR ACTIVE PRACTICE in Queens. Part time, with possibility of taking over practice upon my retirement. J. P. Hartman, M.D. 60-01 Metropolitan Ave., Ridgewood, N.Y. 11385.

M.D. PARTNERSHIP AVAILABLE. Internist seeking partner in growing, office based, nutrition and medical diet practice in metro New York area. Practice incorporates two offices in choice locations. Initial investment required. Internal medicine, general medicine or bariatric background desirable. Interested parties send C/V or resume to: Robert Mery, 139 Summit cross, Rutherford, New Jersey 07070.

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Nassau School For Medical And Dental Assistants

W. Hempstead (516) 483-0577

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The Treatment of Trigeminal Neuralgia With Chinese Acupuncture Techniques

Any doctor who can refer trigeminal neuralgia patients for whom medications and surgery have brought no significant improvement, please contact:

Ling Sun Chu, M.D.
107 East 73rd St., New York, N.Y. 10021
(212) 472-3000

Acupuncture treatments will be free of charge to the patient if patient brings letter from referring physician that: 1) Contains patient's medical records. 2) Stating that: a) Referring physician agrees to participate in project, by evaluating the effects of the treatment on patient. b) Patient will remain under referring physician's care. Call or write for further details.

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THE PROFESSIONAL'S PROFESSIONAL—We offer expert consultation on the rental, sublet, or purchase of Manhattan professional offices and Co-ops. For personal attention in all matters including appraisal, please contact: Nathan H. Friedman, V.P.-Douglas Elliman-Gibbons & Ives, Inc., 575 Madison Ave., N.Y., N.Y. 10022. (212) 832-5571.

OLD FASHIONED, 10 ROOM FRAME HOUSE. Fireplaces and French doors. Situated on one acre of land with enter and exit driveway. One part of first floor is temporarily converted to physician's office. Please call for appointment Tuesdays or Thursdays between 1 and 3 p.m. Kingston, N.Y. (914) 331-4293.

FOR SALE—HOME/OFFICE—Levittown/Hicksville area—7½ room office down, 3 room apartment up—$90,000.—or rent up to 3,000 sq. ft. in new professional building $10. sq. ft.—both excellent locations/ample parking—owner (516) 922-1299.

LUXURIOUS PENTHOUSE CONDOMINIUM Apartment for sale or rent with option to purchase: bedroom, living room, dining room, fully modern kitchen, bath and terrace. View of Throgs Neck Bridge, water and skyline. Wall to wall carpeting, central air, excellent security, washer-dryer facilities, concierge, underground parking, indoor-outdoor pool, health spa, shopping, transportation to all boroughs within walking distance. Sale price negotiable, $70,000 assumable mortgage available. Call (212) 359-3446 or (212) 353-2252.

AVAILABLE—PRIME SUITE 700 SQ. FT. Medical Bldg. A/C Heat inc. $12 sq. ft. near Huntington Hospital. Inquire broker after 5 p.m. (516) 265-8901.

FRANKLIN SQUARE-PROFESSIONAL OFFICE for rent. 1027 square feet plus parking. Excellent location on Franklin Avenue. Ideal layout for professional. $950. a month including heat. Many other properties for rent or sale—we have your ideal shelter for 1982. Chateau, 972 Hempstead Tpke., Franklin Square (516) 328-1010.

MEDICAL SPACE AVAILABLE. Part time/full time, in an ultramodern Bayside office, near all transportation including the L.I.R.R., 2–3 treatment rooms for private use, also will share reception room, business administration area, patient education-staff room and all other facilities. Call (212) 423-7009 or (212) 937-8336.

PROFESSIONAL CONDOMINIUMS: Your profit potential in converting your Medical Arts or Professional building into a commercial condominium is excellent. Learn more about this profitable, flexible concept. Contact Paul Gellert, Gelco Associates, 155 W. 68th St., New York, NY 10023. Phone: (212) 223-1130.

HOUSE FOR SALE—Fishkill Colonial, 1 year old, corner plot, new development, 4 bedrooms, 2½ baths, vinyl siding and brick, gas heat, central air, gas burning fireplace, pool and tennis privileges, gorgeous view overlooking the valley—$110,000. (914) 896-9297.

MODERN MEDICAL OFFICE BUILDING with 20 physicians on a main street with busline, opposite 320-bed active General Hospital. Off-street parking lot and garage. Available space of 1,600 sq.ft. which for 10 years was occupied as a successful orthopedic. Ideal for any specialty or general practice. Contact G. Segal, M.D., St. Elizabeth Hospital, Utica, New York. (315) 798-8114.

SCARSDALE VICINITY, EASTCHESTER. Why rent when you can buy? Professional suites: 900 sq. ft. could be shared by 3 or 4 doctors. $487. maintenance charges. $165,000. Also suite with 3 ample size rooms plus kitchen/lab area and small office. $300. maintenance charges. $85,000. Convenient area. Claire D. Leone (914) 723-8228.

NEW MEDICAL OFFICE BLDG.—Suites built to suit—Brooklyn—Ocean Parkway/Kings Highway vicinity. Excellent transportation—subspecialty exclusivity—open September 1982. Contact Medical Practice Associates (212) 757-5545.

JAMAICA ESTATES, QUEENS COUNTY. Brick professional residence. Large living room/fireplace, eat-in-kitchen, dining room, 3 bedrooms, 2 baths, full attic, gas heat, finished basement, security system, sprinkler system on ⅓ acre with luxury 7 room office with separate entrance. Many extras. Owner: (212) 291-8205.

what goes on IN CONTINUING MEDICAL EDUCATION

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Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK CITY

State University of New York Downstate Medical Center, Kings County Hospital Center in cooperation with District I, NYSSA

450 Clarkson Avenue
Brooklyn
May 3, 4:00–5:00 p.m.
NEUROANESTHESIA—PHYSIOLOGIC AND PHARMACOLOGIC PRINCIPLES
Harvey M. Shapiro, M.D.
May 4, 5:00–6:00 p.m.
CEREBRAL BLOOD FLOW—PHYSIOLOGY AND PHARMACOLOGY—NEWBORN vs. ADULT
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, MD., SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn 11203. Tel: 212/735/2133.

The Jewish Hospital and Medical Center of Brooklyn in Association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY Downstate Medical Center
555 Prospect Place
Brooklyn

*B-51 Conference
Basement, Leviton Bldg.
3:30–4:30 p.m.
May 5
IRON DEFICIENCY IN CHILDREN REVISITED
Philip Lanzkowsky, M.D.
May 12
MALIGNANT LYMPHOMA
Daniel Fillippa, M.D.
May 19
PSYCHOSOCIAL ASPECTS OF CHILDHOOD CANCER
Trish Greene, R.N.
May 26
HEREDITARY HEMOLYTIC ANEMIAS AND ERYTHROCYTE ENZYME DEFICIENCIES
Ernst Jaffe, M.D.
NO FEE. CREDIT: AMA Cat. 1
For further information contact the Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212/240-1211.

Saint Mary's Hospital of Brooklyn

170 Buffalo Avenue
Brooklyn
8:00–9:00 a.m., Wednesdays
**Third Floor Board Room*
May 5
UPDATE ON ORAL HYPOGLYCEMIC AGENTS
Charles Kilo, M.D.
May 12
HYPEROSMOLAR NONKETOTIC COMA
Stephen Podolsky, M.D.
May 19
INSULIN DELIVERY SYSTEMS
Philip Felig, M.D.
May 26
TREATMENT OF THE OUTPATIENT DIABETIC
Sheldon Bleicher, M.D.
CREDIT: AMA Cat. 1
For further information contact Saint Mary's Hospital of Brooklyn, 170 Buffalo Avenue, Brooklyn 11213. Tel: 212/774-3600. Ext. 2044 or 2045.

Doctors Hospital

170 East End Avenue
4:15 p.m., Thursday
CLINICAL LECTURE
May 6
FEVER OF UNKNOWN ORIGIN
Sheldon Wolff, M.D.
CREDIT: AMA Cat. 1 ($1\frac{1}{2}$ hrs.)
9:00 a.m.–1:00 p.m., Saturday
CLINICAL SYMPOSIA
May 8
VIRAL HEPATITIS
Allan R. Aronson, M.D.
CREDIT: AMA Cat. 1 (4 hrs.)
For further information contact the Secretary of CME, Doctors Hospital, 170 East End Avenue, New York 10028. Tel: 212/870-9118.

Metropolitan Hospital Center in affiliation with New York Medical College

1901 First Avenue
*Metropolitan Hospital
May 12
BREAST
Luciano Ozzello, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Victor Tchertkoff, M.D. Metropolitan Hospital Center, 1901 First Avenue, New York 10029. Tel: 212/360-6253.

New York Society for Clinical Ophthalmology

146 East 71st Street
*The New York Academy of Medicine
2 East 103rd Street
May 17, 8:00 p.m.
RESIDENTS NIGHT
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Norman B. Medow, 146 East 71st Street, New York 10021.

The New York Cardiological Society, Inc.

84 Grove Street, Suite Two
New York 10014
*Waldorf-Astoria Hotel, Jade Room
May 15, 1982, 9:00 a.m.–5:00 p.m.
54th ANNUAL SCIENTIFIC SESSION: HEART DIESEASE IN THE YOUNG AND IN THE ELDERLY
CREDIT: AMA Cat. 1 (5 hrs.)
For further information contact New York Cardiological Society, Inc., 84 Grove Street, New York. Tel: 212/924-5346

State University of New York Downstate Medical Center Department of Anesthesiology

*University of California at San Diego
La Jolla, California
May 3 & 4, 1982
VISITING PROFESSORS
Harvey M. Shapiro, M.D.
For further information contact Abraham I. Raskob, M.D., Dept. of Anesthesiology, 450 Clarkson Avenue, Brooklyn, N.Y. Tel: 212/270-1233

Semmelweis Scientific Society

515 Madison Avenue

Suite 1720, New York 10022
*New York Academy of Sciences
2 East 63rd Street
New York 10021
Friday, May 28, 1982 at 8:00 p.m.
A LECTURE IN OPHTHALMOLOGY FOR NON-OPHTHALMOLOGIST
G. Peter Halberg, M.D.
CREDIT: AMA & AAFP Cat. 1
For further information contact Otto C. Kestler, M.D., President, Semmelweis Scientific Society. Tel: 212-758-2590

Beth Israel Medical Center Co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
New York 10003
*Gottlieb Auditorium, Morris J. Bernstein Institute, Beth Israel Hospital, 301 Second Avenue, New York 10003
Saturday and Sunday, May 15 & 16th, 8:15 a.m.-5:00 p.m.
2nd ANNUAL PACEMAKER SYMPOSIUM
Emanuel Goldberg, M.D., Marvin Berger, M.D.
Alan D. Bernstein, Ph.D., Thomas Edery, BMET
CREDIT: AMA Cat. 1 (12¼ Hrs.)
For further information contact Beverley R. Baptiste. Tel: 212-420-2000.

The New York Academy of Medicine

2 East 103rd Street
New York
Section on Geriatric Medicine
Wednesday, May 19, 1982 at 2:00 p.m.
ENDOCRINE AND METABOLIC ASPECTS OF OLD AGE
Eugene Y. Berger, M.D., Moderator
NUTRITION, OBESITY AND LONGEVITY
Jules Hirsch, M.D.
DIABETES MELLITUS IN THE AGED PATIENT
Donald A. Holub, M.D.
THYROID DISEASE IN THE ELDERLY UNMASKED
Paul L. Gilbert, M.D.
NEW EVIDENCE OF SEXUALITY IN THE LATER YEARS
Marcella Bakur Weiner, M.D.
CREDIT: AMA Cat. 1 (3 hrs.)
No Fee

New York University Medical Center Post-Graduate Medical School

550 First Avenue, New York 10016
*Schwartz Lecture Hall F
401 East 30th Street
New York
Saturday, May 1st & 2nd, 1982—8:00 a.m.-5:30 p.m.
REVIEW OF BASIC SCIENCES IN UROLOGY
Dr. Salah Al-Askari
Dr. Mirceau Golimbu
CREDIT: AMA Cat. 1 (13½ Hrs.)
For further information contact Registration Office, NYU Post-Graudate Medical School, 550 First Avenue, New York. Tel: 212-340-5295

State University of New York Downstate Medical Center-Department of Anesthesiology-Kings County Hospital Center in Cooperation with District I, NYSSA

450 Clarkson Avenue, Brooklyn, New York 11203
Monday, May 3rd, 1982—4 p.m.-5 p.m.
NEUROANESTHESIA—PHYSIOLOGIC AND PHAMACOLOGIC PRINCIPLES
Harvey M. Shapiro, M.D.
Tuesday, May 4, 1982—5 p.m.-6 p.m.
CEREBRAL BLOOD FLOW—PHYSIOLOGY AND PHARMACOLOGY—NEWBORN vs. ADULT
Harvey M. Shapiro, M.D.
CREDIT: AMA Cat. 1

Westchester Square Hospital in Collaboration with Albert Einstein College of Medicine

*Conference Room
2475 St. Raymond Avenue
Bronx, New York 10461
Thursday, May 6, 1982 at 4:00 p.m.-5:30 p.m.
PITFALLS IN THE USE OF ANTIBIOTICS
Roy Soeiro, M.D.
CREDIT: AMA Cat. 1 (2 Hrs.)
Thursday, May 20, 1982 at 4:00 p.m.-5:30 p.m.
HEADACHES AND THEIR EVALUATION
David Kaufman, M.D.
CREDIT: AMA Cat. 1 (2 Hrs.)

QUEENS COUNTY

The Jamaica Hospital Medical Center

89th Avenue & Van Wyck Expressway
Jamaica
*Community Room
10:45-11:45 a.m., Monday
May 5
PULMONARY DISEASES
SEMINARS/CASE PRESENTATIONS IN PULMONARY MEDICINE
SLEEP APNEA SYNDROME
Elliot D. Weitzman, M.D.
*Community Room
Noon-1:00 p.m., Monday
May 10
OTOLARYNGOLOGY
OFFICE OTOLARYNGOLOGY
Ali Agarabi, M.D.
May 17
EARLY DIAGNOSIS OF MALIGNANCY OF THE OROPHARYNX
P. R. Caracciolo, M.D.
May 24
THE ROLE OF AUDIOMETRIC TESTING
Ali Agarabi, M.D.
*Community Room
Noon-1:00 p.m., Monday
PSYCHIATRY
May 3
CLOSING THE GAP BETWEEN MEDICINE & PSYCHIATRY-CURRENT CONCEPTS
Wilfred Dorfman, M.D.
*Community Room
10:45-11:45 a.m., Tuesday
ENDOCRINOLOGY & METABOLISM
May 4
REVIEW OF THYROID DISEASE—PART III
Lawrence Rosman, M.D.

The following *ENDOCRINOLOGY LECTURES* are held on Wednesday, from 9:00-10:30 in the Trump Pavilion: *MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE*
May 19
CURRENT CONCEPTS OF ETIOLOGY & TREATMENT OF DIABETES
Elliot J. Rayfield, M.D.

ENDOCRINOLOGY CASE PRESENTATIONS are conducted monthly, from Noon-1:00 in the Community Room, on Tuesdays,

Amar Jit Singh, M.D.
*Community Room
10:45–11:45 a.m., Tuesday
May 11
HEMATOLOGY
DISEASES OF IRON METABOLISM
Mary T. Ti, M.D.

HEMATOLOGY CASE PRESENTATION are conducted monthly, from Noon–1:00, in the Community Room, on Tuesdays—Malcolm E. Levine, M.D. and Staff

HEMATOLOGY GRAND ROUNDS are conducted bi-monthly on Fridays, from 1:00–2:30 in the Community Room

*Community Room
10:45–11:45 a.m., Tuesday
NEPHROLOGY
May 25
THE KIDNEY IN SYSTEMIC DISEASE
Emmanuel B. Masih, M.D.

NEPHROLOGY CASE PRESENTATIONS are conducted monthly, from Noon–1:00 in the Community Room, on Tuesdays, Amarjit Singh, M.D. & Emmanuel B. Masih, M.D. and Staff

*Community Room
10:45–11:45, Tuesday
NEUROLOGY
May 18
HEAD INJURIES
Charles Huey, M.D.

NEUROLOGY CASE PRESENTATIONS are conducted monthly, from Noon–1:00 in the Community Room, on Tuesdays—Neurology Staff

TUESDAYS: 8:00–9:00, Rheumatology Case Presentations conducted by William A. O'Connell, M.D.
3:30–4:30 p.m., Infectious Diseases Case Presentations conducted by Robert H. Lapin, M.D.

*Trump Pavilion
9:00–10:30 a.m., Wednesdays
MEDICAL GRAND ROUNDS & PROGRESS IN MEDICINE
May 5
SLEEP APNEA SYNDROME
Elliot D. Weitzman, M.D.
May 12
LIAISON PSYCHIATRY
Stephen M. Saravay, M.D.
May 19
CURRENT CONCEPTS OF ETIOLOGY & TREATMENT OF DIABETES
Elliot J. Rayfield, M.D.
May 26
INFECTIOUS DISEASE UPDATE
Paul Iannini, M.D.

WEDNESDAYS, 1:00–2:00, *TUMOR BOARD*—Fourth Wednesday—*CLINICAL PATHOLOGY CONFERENCE*, Assembly Room

*Community Room
8:30–9:30 a.m., Thursday
CARDIOLOGY
May 6
CORONARY HEART DISEASE: RISK FACTORS—UPDATE 1982
Michael Alderman, M.D.
May 20
THE MOST SIGNIFICANT CARDIOLOGY LITERATURE OF THE DECADE
Stephen Scheidt, M.D.

ECG & ARRHYTHMIAS CONFERENCES are held monthly, on Thursdays, from 9:30–10:30, Thomas A. Bizzaro, M.D.

*Community Room
9:30–10:30 a.m., Thursdays
INFECTIOUS DISEASES
May 13
OFFICE & OPD MANAGEMENT
Robert H. Lapin, M.D.

The following *INFECTIOUS DISEASE LECTURE* will be held on Wednesday, from 9:00–10:30 in the Trump Pavilion: *MEDICAL GRAND ROUNDS-PROGRESS IN MEDICINE*
May 26
INFECTIOUS DISEASE UPDATE
Paul Iannini, M.D.

INFECTIOUS DISEASES CASE PRESENTATIONS are conducted monthly, from 3:30–4:30 in the Community Room, on Tuesdays, Robert H. Lapin, M.D.

*Community Room
9:30–10:30 Thursdays
ONCOLOGY
May 20
NUTRITIONAL SUPPORT OF THE CANCER PATIENT
Michael Burt, M.D.

TUMOR BOARD 1:00–2:00, Wednesdays, Fourth Wednesday—*CLINICAL PATHOLOGY CONFERENCE*, Assembly Room

*Community Room
9:30–10:30 am., Thursdays
RHEUMATOLOGY
May 27
SPONDYLOARTHROPATHIES
Allan Gibofsky, M.D.

RHEUMATOLOGY CASE PRESENTATIONS are conducted monthly, from 8:00–9:00 in the Community Room, on Tuesdays, William A. O'Connell, M.D. and Staff

*Community Room
10:45–11:45, Fridays
MEDICAL GASTROENTEROLOGY
May 14
NEWER RADIONUCLIDE PROCEDURES IN GASTROENTEROLOGY
Perry R. Mandel, M.D.

MEDICAL GASTROENTEROLOGY CASE PRESENTATIONS are conducted on alternate Fridays, in the Community Room, 10:45–11:45, Robert T. Todaro, M.D., and Staff

FRIDAYS, Noon–1:00, Assembly Room *RADIOLOGY CONFERENCES*, Emerick Demeter, M.D. & Staff, alternating with *MEDICAL-PATHOLOGY-MORTALITY CONFERENCE*, Elizabeth Khayat, M.D. & Staff, or *PATHOLOGY GRAND ROUNDS*, Department of Pathology, Cornell Medical Center

*Assembly Room
Noon–1:00 p.m., Friday
May 28
PATHOLOGY GRAND ROUNDS
THE PATHOLOGY OF THE ADRENAL GLAND
Mary E. King, M.D.

FRIDAYS, bimonthly, 1:00 to 2:30 Community Room, *HEMATOLOGY GRAND ROUNDS*

For further information contact The Jamaica Hospital Medical Center, Department of Medicine, 89th Avenue and Van Wyck Expressway, Jamaica 11418. Tel: 212/657-1800.

NASSAU COUNTY

Long Island Jewish-Hillside Medical Center—Sponsored by Department of Surgery, LIJ Medical Center, The Post-Graduate Institute for Medical and Dental Education, New Hyde Park, New York and the Health Sciences Center State University of New York at Stony Brook New Hyde Park

May 6
EXTRACRANIAL REVASCULARIZATION
John Chang, M.D.
May 13
INFLAMMATORY BOWEL DISEASE
George Flint, M.D.
May 20
ABDOMINAL TRAUMA
Peter Weil, M.D.
May 27
THE INFECTED GRAFT: A MAJOR CHALLENGE TO THE

VASCULAR SURGEON
William Doscher, M.D.
For further information contact Long Island Jewish-Hillside Medical Center, New Hyde Park 11042.

Nassau County Medical Center sponsored by Department of Medicine, co-sponsored by The Office of Continuing Medical Education, Nassau County Medical Center

2201 Hempstead Tpke.
East Hempstead
*Amphitheater Dynamic Care Building
10:00 a.m., Thursdays

May 6
CLINICAL AND PATHOLOGIC ASPECTS OF LUPUS NEPHRITIS
James E. Balow, M.D.

May 13
IMMUNE COMPLEX MECHANISMS IN HUMAN DISEASE
Charles Christian, M.D.

May 20
TREATING A SICK PATIENT
Eric J. Cassell, M.D.

May 27
THE LOW T3 SYNDROME
George C. Schussler, M.D.
For further information contact Nassau County Medical Center, 2201 Hempstead Turnpike, East Meadow, 11554.

Long Island Jewish-Hillside Medical Center sponsored by The Department of Ophthalmology The Postgraduate Institute for Medical and Dental Education and the Health Sciences Center SUNY at Stony Brook *Teaching Center Auditorium (Room E201A,B,C) Long Island Jewish-Hillside Medical Center New Hyde Park

8:00 a.m.–4:00 p.m.

May 12
A CLINICAL DAY IN OPHTHALOMOLOGY: COMPLICATIONS OF CATARACT SURGERY
David A. Rosen, M.D., Milton A. Boniuk, M.D., Miles A. Galin, M.D., Norman S. Jaffe, M.D.
FEE: $100. CREDIT: AMA Cat. 1
For further information contact Mrs. Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, New Hyde Park, 11042. Tel: 212/470-2114.

The Department of Social Work Services of the Jewish Institute for Geriatric Care and Long Island Jewish-Hillside Medical Center The Postgraduate Inst. for Medical and Dental Education at The Health Sciences Center State University of N.Y. at Stony Brook

New Hyde Park, N.Y.
*The Auditorium of the Jewish Institute for Geriatric Care New Hyde Park, N.Y.
Thursday, May 6, 1982–8:30 a.m. to 4:30 p.m.
SOCIAL WORK CONFERENCE ON AGING: ALZHEIMER AND RELATED DISORDERS
CREDIT: AMA Cat. 1 (6 hrs.)
Fee: $45 (includes luncheon)
For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center. Tel: 212-470-2114

Nassau Hospital

259 First Street
Mineola, New York 11501
*Breed Conference Room—FAMILY PRACTICE
Tuesday, May 25, 1982 at 10:00 a.m.
THINGS THE FAMILY PRACTITIONER SHOULD KNOW ABOUT ONCOLOGY
Larry Nathanson, M.D.

*Conference Room B—INTERNAL MEDICINE
Mondays, 11:00 a.m.–12:00 noon

May 3, 1982
THE PHARMACOKINETICS OF AGING
David Mumford, M.D.

May 10, 1982
ALTERED CLINICAL PRESENTATION OF DISEASE IN THE ELDERLY
David Mumford, M.D.

May 17, 1982
SPORTS INJURIES IN ADOLESCENCE
Patrick De Rosa, M.D.

May 24, 1982
THE PAINFUL SHOULDER
Nagib Helou, M.D.

*Breed Conference—CRITICAL CARE
Tuesdays, 11:00 a.m.–12:00 Noon

May 4, 1982
DRUG INDUCED LIVER
Bertram Fuchs, M.D.

May 11, 1982
PULMONARY EMBOLUS
Jalal Elahi, M.D.

May 18, 1982
DIAGNOSIS AND MANAGEMENT OF PERICARDIAL TAMPONADE AND CONSTRICTION
Steven Zeldis, M.D.

May 25, 1982
BLEEDING PROBLEMS IN THE SURGICAL PATIENT
Bernard Castle, M.D.

*Breed Conference Room—ADVANCES IN MEDICINE
Wednesdays, 10:00 a.m.–11:00 a.m.

May 5, 1982
ADVANCES IN OUR UNDERSTANDING OF MEGALOBLASTIC ANEMIA
Bernard Babior, M.D.

May 12, 1982
INFECTIOUS DISEASES SYMPOSIUM
Theodore C. Eickoff, M.D., Donald B. Louria, M.D., Gerald L. Mandell, M.D., Richard V. McClosky, M.D., Ronald L. Nichols, M.D.

May 19, 1982
ADVANCES IN THERAPY—THE CALCIUM ANTAGONISTS
Stephen Scheidt, M.D.

May 26, 1982—9:00 a.m.–12:00 Noon
OBESITY SYMPOSIUM
MEDICAL CLASSIFICATION AND MANAGEMENT OF OBESITY
Ashok Vaswani, M.D.
PRESENT STATUS OF THE SURGICAL APPROACH TO MORBID OBESITY
Ralph Ger, M.D.
THE PSYCHOLOGY OF OBESITY
Linda Craighead, Ph.D.

*Breed Conference Room—PROBLEM SOLVING
Fridays, 11:00 a.m.–12:00 Noon

May 7, 1982
MALABSORPTION
Jesse Berkowitz, M.D.

May 14, 1982
PANCREATITIS
Bertram Fuchs, M.D.

May 21, 1982
CLINICAL TRIALS DESIGN
Larry Nathanson, M.D.

May 28, 1982

ENCEPHALITIS
Burke A. Cunha, M.D.
*Breed Conference Room—NUCLEAR RADIOLOGY
May 5, 1982—3:30 p.m.–4:30 p.m.
PEDIATRIC NUCLEAR MEDICINE
Philip O. Alderson, M.D.
May 19, 1982—3:30 p.m.–4:30 p.m.
ROLE OF SCINTIGRAPHY IN GASTROINTESTINAL BLEEDING
Stanley Goldsmith, M.D.
*Room-Lower-Level—OBSTETRICS AND GYNECOLOGY
May 14, 1982 at 8:00 a.m.
THE MANAGEMENT OF CARDIAC ARRYTHMIAS, M.D.
Mark Goodman, M.D.
*Maternal-Child Conference Room Lower Level—UPDATE IN GYNECOLOGIC ONCOLOGY
May 7, 1982—9:00 a.m.
ABNORMALITIES OF SEX DIFFERENTIATION
Donald Clark, M.D.
May 28, 1982
TROPHOBLASTIC DISEASE
*Maternal-Child Conference Room Lower Level—PATHOLOGY UPDATE
May 7, 1982 at 8:00 a.m.
INTERPRETATION OF LABORATORY RESULTS
Shokathusen Fatteh, M.D.
May 21, 1982 at 8:00 a.m.
PATHOLOGY OF THE OVARY I
Marian Waxman, M.D.
*Maternal-Child Conference Room Lower Level—PERINATAL LECTURE SERIES
May 21, 1982 at 9:00 a.m.
PRENATAL DIAGNOSIS—CURRENT STATUS
Steven Klein, M.D.
*Breed Conference Room—ONCOLOGY-MULTIDISCIPLINARY TUMOR CONFERENCE
Tuesdays, 8:00 a.m.
May 4, 1982
RADIOTHERAPY
May 11, 1982
SURGERY
May 18, 1982
UROLOGY
May 25, 1982
MEDICAL ONCOLOGY
*Board Room—OPHTHALMOLOGY
May 4, 1982 at 5:00 p.m.
A REVIEW OF ANTERIOR SEGMENT BLOCKAGE GLAUCOMA
David Krohn, M.D.
*Pathology Conference Room—PATHOLOGY
May 3, 1982 at 8:00 a.m.
CYTOLOGY OF THE GASTRO—INTESTINAL TRACT I
May 17, 1982 at 11:00 a.m.
CTYOLOGY OF THE GASTRO—INTESTINAL TRACT II
*Pathology Conference Room—COURSE IN BASIC IMMUNOLOGY
May 25, 1982 at 11:00 a.m.
IMMUNOLOGY LABORATORY INVESTIGATION AND CLINICAL APPLICATION V
*Pathology Conference Room—SURGICAL PATHOLOGY
May 5, 1982 at 8:00 a.m.
SLIDE REVIEW
May 6, 1982 at 3:30 p.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
May 12, 1982 at 8:00 a.m.
SLIDE REVIEW
May 13, 1982 at 11:00 a.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
May 19, 1982 at 8:00 a.m.
SLIDE REVIEW
May 20, 1982 at 3:30 p.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
May 26, 1982 at 8:00 a.m.
SLIDE REVIEW
May 27, 1982 at 11:00 a.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
*Maternal-Child Conference Room Lower Level—PEDIATRICS
May 6, 1982 at 1:00 p.m.
THYROID DISORDERS IN NEWBORN
May 13, 1982 at 1:00 p.m.
NEONATAL SKIN DISORDERS
May 20, 1982 at 1:00 p.m.
GROUP B STREP INFECTIONS
May 27, 1982 at 1:00 p.m.
IMMUNOLOGY OF NEONATE
*Maternal-Child Conference Room—PERINATAL/NEONATAL CONFERENCE
May 7, 1982 at 12:00 Noon
MORBIDITY AND MORTALITY CONFERENCE
May 14, 1982—12:00 Noon
CARDIOVASCULAR DISEASES IN INFANCY AND THE NEWBORN
May 21, 1982 at 12:00 Noon
PERINATAL CASE STUDIES
May 28, 1982 at 12:00 Noon
HYPERTENSIVE RENAL VASCULAR DISORDERS
*ONE New Conference Room—PSYCHIATRY
May 5, 1982 at 12:15 p.m.
CLINICAL APPRAISAL OF DSM III AS IT PERTAINS TO PSYCHOSEXUAL DISORDERS
May 23, 1982 at 12:15 p.m.
CLINICAL APPRAISAL OF DSM III AS IT PERTAINS TO FACITIOUS DISORDERS
May 19, 1982 at 12:15 p.m.
CLINICAL APPRAISAL OF DSM III AS IT PERTAINS TO DISORDER OF IMPULSE CONTROL
May 26, 1982 at 12:15 p.m.
CLINICAL APPRAISAL OF DSM III AS IT PERTAINS TO ADJUSTMENT
*Breed Conference Room—RADIOLOGY GUEST LECTURE SERIES
May 13, 1982—4:00 p.m.–5:00 p.m.
ADDITIONAL USES OF CT AND DIGITAL RADIOGRAPHY IN CENTRAL NERVOUS SYSTEM DISEASE
Norman Chase, M.D.
*Breed Conference Room—SYMPOSIUM
May 12, 1982—8:00 a.m.–1:00 p.m.
INFECTIOUS DISEASE SYMPOSIUM
*Breed Conference Room—SYMPOSIUM
May 26, 1982—9:00 a.m.–12:00 p.m.
OBESITY SYMPOSIUM
BASIC SURGICAL EDUCATIONAL CORE PROGRAM FOR May 1982
May 3, 1982 at 3:00 p.m., Room B
AORTIC & PERIPHERAL ANEURYSMS
Dr. Hines
May 4, 1982 at 4:00 p.m.—Room HOAG 5
PATHOPHYSIOLOGY OF COMA
Dr. Louis
May 5, 1982 at 4:00 p.m.—Room B
PANCREATIC DISEASE
Dr. Janelli
May 10, 1982 at 3:00 p.m.—Room B
ACUTE RENAL FAILURE IN THE POSTOP PATIENT
Dr. Imbriano
May 11, 1982 at 4:00 p.m.—Room HOAG 5
ANGIOGRAPHY IN SURGICAL DIAGNOSIS & TREATMENT
Dr. Epstein
May 12, 1982 at 4:00 p.m.—Room B
CEREBROVASCULAR INSUFFICIENCY CAROTID, VERTEBRAL, BASILAR, SUBCLAVIAN
Dr. Mohtashemi
May 14, 1982 at 2:00 p.m.—Room B
THE ROLE OF ANGIOPLASTIC PROCEDURES IN SURGICAL DISEASE

Dr. Baxi
May 17, 1982 at 3:00 p.m.—Room B
SPINAL PROCEDURES
Dr. Dimancescu
May 18, 1982 at 4:00 p.m.—HOAG 5
IMMUNOHEMATOLOGY AND BLOOD BANKING FOR SURGEONS
Dr. Kalter
May 19, 1982 at 4:00 p.m.—Room B
COLONOSCOPY AND COLON DISEASES
Dr. Edinburgh
May 24, 1982 at 3:00 p.m.—Room B
METABOLIC ALKALOSIS
Dr. Imbriano
May 25, 1982 at 4:00 p.m.—Room HOAG 5
SKIN CANCER
Dr. Fardelmann
May 26, 1982 at 4:00 p.m.—Room B
EXTRAHEPATIC BILIARY TREE
Dr. Janelli

SUFFOLK COUNTY

Brookhaven Memorial Hospital Medical Center

101 Hospital Road
Patchogue
*1st Floor Conference Room
8:30 a.m.
May 1
MEDICAL GRAND ROUNDS AT BROOKHAVEN MEMORIAL HOSPITAL MEDICAL CENTER
Morton Nathanson, M.D.
CREDIT: AMA Cat. 1 & AAFP
*2nd Floor Conference Room
8:00–9:00 a.m.
PEDIATRIC GRAND ROUNDS
THE SWOLLEN JOINT
Lazaros Lazarou, M.D.
CREDIT: AMA Cat. 1 & AAFP
*1st Floor Conference Room
8:00–9:00 a.m.
May 4
PEDIATRIC CONFERENCES
CHANGING TRENDS IN PEDIATRIC PRACTICE
Laurence Finberg, M.D.
Fee: $10. CREDIT: AMA Cat. 1 & AAFP
*1st Floor Conference Room
8:00–9:00 a.m.
CLINICAL PROBLEMS IN FAMILY MEDICINE
May 7
CHANGING PATTERNS OF DISEASE
Richard Rothenberg, M.D.
May 14
PHYSICAL MEDICINE & NEUROLOGY
MUSCLE DISORDERS
Marcia Box Satlow, M.D.
May 28
PROSTHETICS
Andrew Meyers, C.O.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Dorothy S. Lane, M.D., Director of Medical Education, Brookhaven Memorial Hospital Medical Center, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.

St. Charles Hospital cosponsored by Suffolk Academy of Medicine

200 Belle Terre Road
Port Jefferson
*St. Charles Classroom A
May 7, 8:00 a.m., Friday
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
May 11, 8:00 a.m., Tuesday
PERINATAL CONFERENCE
(TOPIC TO BE ANNOUNCED)
May 14, 8:00 a.m., Friday
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
*St. Charles Board Room
May 17, 7:00 a.m., Monday
ANESTHESIOLOGY CONFERENCE
ANESTHESIA FOR HOP FRACTURE
Edward A. Norris, M.D.
St. Charles Lecture Room
May 17, 7:30 a.m., Monday
OPHTHALMOLOGY CONFERENCE
*St. Charles Classroom A
May 21, 8:00 am., Friday
PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
For further information contact Jesse W. Mahoney, M.D., Director, St. Charles Hospital, 200 Belle Terre Road, Port Jefferson 11777. Tel: 516/473-2800.

Mather Memorial Hospital cosponsored by Suffolk Academy of Medicine

North County Road
Port Jefferson
*Mather Conference Room
May 3, 11:45–1:15 p.m., Monday
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
May 3, 7:00 p.m.–10:00 p.m., Monday
POST GRADUATE DENTAL PROGRAM
DIAGNOSIS AND AUSCULTATION OF THE PULMONARY SYSTEM
Victor L. Cangelosi, M.D.
May 4, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES
MEDICAL/MORAL DILEMMAS IN CRITICAL CARE DECISIONS
Edmund Pelligrino, M.D.
May 10, 11:45 a.m.–1:15 p.m., Monday
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
May 11, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES
DIAGNOSIS AND TREATMENT OF MIGRAINES
Seymour Diamond, M.D.
May 12, 7:30 a.m., Wednesday
Co-sponsored by Department of CME, State University of New York, Stony Brook
PSYCHIATRIC CONFERENCE
ALCOHOLISM—THE YOUNGER ALCOHOLIC
Joseph Kern, M.D.
May 17, 11:45 a.m.–1:15 p.m., Monday
TUMOR CONFERENCE
PROLACTIN PRODUCING TUMORS OF THE PITUITARY
Zev Rosenwaks, M.D.
May 18, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES
RHEUMATOID ARTHRITIS
Robert Greenwald, M.D.
May 24, 11:45 a.m.–1:15 p.m., Monday
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
May 25, 11:30 a.m.–1:00 p.m., Tuesday
WEEKLY EDUCATIONAL SERIES
RE-ENTRY: THE ANATOMY OF ARRHYTHMIAS
Peter F. Bruno, M.D.
For further information contact Jesse W. Mahoney, M.D., Mather Memorial Hospital, North Country Rd., Port Jefferson, 11777. Tel: 516/473-1320.

SYRACUSE

SUNY-Upstate Medical Center
Office of Graduate and Continuing Education

750 East Adams St.
Syracuse
*Hotel Syracuse
Syracuse
May 27–28
UPSTATE MEDICAL CENTER
32nd ANNUAL MEETING: OTOLARYNGOLOGY
Richard R. Gacek, M.D.
For further information contact Program Coordinator, Office of Continuing Education, Upstate Medical Center, State University of New York, 750 East Adams St., Syracuse 13210.

Suny-Upstate Medical Center

750 East Adams Street
Syracuse, New York 13210
*Holiday Inn
701 East Genesee Street
Syracuse, New York 13210
May 18, 1982
CRITICAL ISSUES IN OBSTETRICS AND GYNECOLOGY
Raja W. Abdul-Karim, M.D.
CREDIT: AMA Cat. 1
For further information contact the Program Coordinator, Office of CME, Upstate Medical Center, State University of New York. Tel: 315-473-4304.

ONEONTA

The A.O. Fox Memorial Hospital
The Mary Imogene Bassett Hospital & The Otsego County Medical Society
Cooperstown, New York 13326

*Hartwick College Anderson Auditorium
Oneonta
Thursday, May 27, 1982—12:30 p.m.–4:30 p.m.
GASTROENTEROLOGY FOR CLINICIANS
John S. Davis, M.D., Robert M. Glickman, M.D., Randolph E. Knob, M.D., William H. Ramsey, M.D., Gary A. Weaver, M.D.
CREDIT: AMA & AAFP Cat. 1 (3 Hrs.)
For further information contact Office of CME, The Mary Imogene Bassett Hospital, Cooperstown, New York 13326. Tel.: 607-547-3764

NEW HARTFORD

Upstate New York Chapter
American College of Surgeons, Inc.

210 Clinton Rd.
New Hartford
*Hershey Motor Lodge
Hershey, Pennsylvania
April 30–May 3
THIRD NEW YORK STATE CONJOINED SURGICAL SYMPOSIUM
*The Rye Town Hilton
Port Chester
May 13–16
FOURTH NEW YORK STATE CONJOINED SURGICAL SYMPOSIUM
*Grossinger Conference Center
Liberty
May 15–May 18
NEW YORK STATE CONJOINED SURGICAL SYMPOSIUM
For further information contact Upstate New York Chapter American College of Surgeons, Inc., 210 Clinton Rd., New Hartford 13413. Tel: 315/735-2203.

Upstate New York Chapter American College of Surgeons, Inc.

210 Clinton Road
New Hartford, New York 13413
*Rye Town Hilton Hotel
Port Chester, New York 10573
FOURTH NEW YORK STATE CONJOINED SURGICAL SYMPOSIUM
May 6, 1982—9:00 a.m.–5:00 p.m.
CINE CLINIC
FOURTH JOHN L. MADDEN LECTURE
G. Thomas Shires, M.D.
May 7, 1982—8:30 a.m.–5:30 p.m.
SCIENTIFIC PROGRAM
UPSTATE NEW YORK CHAPTER, ACS
SOCIO-ECONOMIC PROGRAM
Lieutenant Governor Mario Cuomo
CINE CLINIC
May 8, 1982 at 8:30 a.m.–5:30 p.m.
SCIENTIFIC PROGRAMS
Upstate New York Chapter, ACS
N.Y. State Society of Otolaryngologists and Maxillofacial Surgeons
Upstate New York Vascular Society
Westchester New York Chapter, ACS
CINE CLINIC
May 9, 1982 at 9:00 a.m.–12:30 p.m.
CINE CLINIC

OUT OF STATE

American College of Surgeons Sponsored by Committees on Trauma Regions I, II, III
*Resorts International

Atlantic City, New Jersey
May 2–5, 1982
FIRST ANNUAL EASTERN TRI-REGIONAL TRAUMA CONFERENCE FOR PHYSICIANS AND NURSES
CREDIT: AMA Cat. 1 (24 Hrs.), FEE: $375
For further information contact Charles C. Wolferth, M.D. 227 North Broad Street, Philadelphia, Penn. 19102. Tel: 215-563-5468

Child Protection Center—Special Unit
Children's Hospital National Medical Center

111 Michigan Avenue, N.W.
Washington, D.C. 20010
*Stouffer's National Center Hotel
Metropolitan Washington, D.C.
2399 Jefferson Davis Highway
Arlington, Virginia 22202
May 6, 7, and 8, 1982
SECOND NATIONAL CONFERENCE ON SEXUAL VICTIMIZATION OF CHILDREN
CREDIT: AMA Cat. 1 (16 hrs.)
For further information contact Conference Coordinator, Child Protection Center-Special Unit, Children's Hospital National Medical Center, 111 Michigan Avenue, N.W., Washington, D.C. 20010. Tel: 202-745-5682.

SCHEDULE OF SCIENTIFIC MEETINGS

1982 ANNUAL CME ASSEMBLY

Medical Society of the State of New York
Rye Town Hilton, Port Chester, New York

FRIDAY, JUNE 25

Morning:	Anesthesiology/Surgery (General Session) Emergency Medicine/Radiology (General Session) Medical Legal & Workers' Compensation Matters/Occupational Medicine (General Session) Obstetrics & Gynecology Orthopedic Surgery
Afternoon:	Chest Diseases Dermatology & Syphilology Emergency Medicine/Radiology (General Session-cont'd) Gastroenterology, Colon & Rectal Surgery Hand Surgery (General Session) Obstetrics & Gynecology (cont'd)

SATURDAY, JUNE 26

Morning:	Cancer (General Session) Cardiovascular Diseases Internal Medicine Neurology & Neurosurgery (General Session) Ophthalmology Urology
Afternoon:	Cancer (General Session—cont'd) Internal Medicine (cont'd) Ophthalmology (cont'd) Otolaryngology Pathology

SUNDAY, JUNE 27

Morning:	Allergy & Immunology Physical Medicine & Rehab. Plastic, Reconstructive & Maxillofacial Surgery (General Session) Preventive Medicine Psychiatry/Pediatrics/School Health/Family & General Practice (General Session)

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CME CREDITS: Each program will be eligible for CME Category I Credits on an hour-for-hour basis

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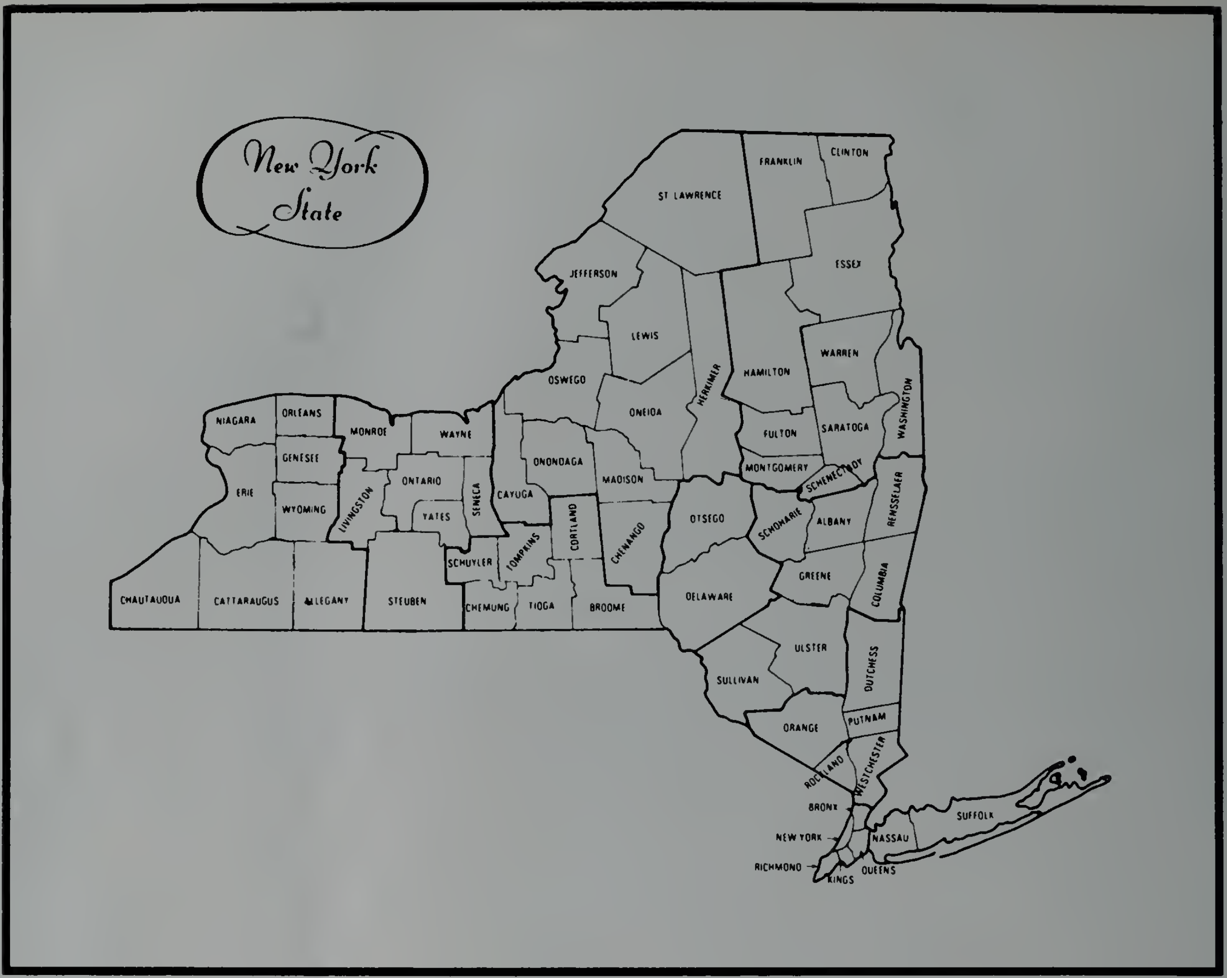
SCIENTIFIC & TECHNICAL EXHIBITS



physicians' placement opportunities

Compiled by the
Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100

ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello, N.Y. 12701. Tel: 914/794-4900.

ANESTHESIOLOGIST

MONTICELLO, N.Y., contact Carl K. Heins, M.D., Hamilton Avenue Hospital, Monticello 12701. Tel: 914/794-4545.

NORWICH, N.Y., contact Martin H. Jacobi, M.D., Norwich, N.Y. 13815 at 607-334-2832.

SARATOGA SPRINGS, N.Y., contact Allen T. Jones, 384 Broadway, Saratoga Springs 12866. Tel: 518/584-1978.

WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

COMMISSIONER OF HEALTH

POUGHKEEPSIE, N.Y., contact Andree F. Sullivan, New Tower, Vassar Brothers Hospital, Poughkeepsie 12601. Tel: 914/452-2140.

EMERGENCY ROOM

BUFFALO, N.Y., contact Lafayette General Hospital, 113 Lafayette Avenue, Buffalo 14213. Tel: 716/885-8900.

ONEONTA, N.Y., contact Randolph E. Knob, M.D., Director or Mr. F. M. Isbell, Adm., A. O. Fox Memorial Hospital, 1 Norton Avenue, Oneonta 13820. Tel: 607/432-2000.

UTICA, N.Y., contact Irving Cramer, M.D., Medical Director, St. Luke's Memorial Hospital Center, P.O. Box 479, Utica 13503.

ENT

GLENS FALLS, N.Y., contact Orei Friedman, M.D., 591 Glen St., P.O. Box 444, Glens Falls 12801. Tel: 518/792-1404.

LONG BEACH, N.Y., contact Oscar Sreter, M.D., 270 Edward Blvd., Long Beach 11561. Tel: 516/431-7861.

OLEAN, N.Y., contact Dr. Edward R. Mountain, 1909 West State St., Olean, 14760. Tel: 716/372-2788.

ORCHARD PARK, N.Y., contact R. M. Patel, M.D., 55 Melroy Avenue, Lackawanna, N.Y. 14218

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ADAMS, N.Y., contact South Jefferson Recruiting Comm., c/o Mrs. Fred Spinner, RFD#2, P.O. Box 1114, Adams 13605.

ATHENS, N.Y., contact Village Clerk, 2 First Street, Athens 12015. Tel: 518/945-1551.

AUBURN, N.Y., contact Charles D. Hicks; Director, Physician Procurement Committee, 157 Ross Street, Auburn 13021. Tel: 315/253-3388.

BATH, N.Y., contact W. A. Klepack, Box 831, Bath 14810. Tel: 607/776-6438 call collect.

BINGHAMTON, N.Y., contact Broome County Medical Society. Tel: 607/729-9261.

BROCKPORT, N.Y., contact James P. Goetz, M.D., 80 West Avenue, Suite 204, Brockport 14420. Tel: 716/637-3905.

BROOKHAVEN, N.Y., contact Dorothy S. Lane, M.D., Dept. of Community Medicine, Brookhaven Memorial Hospital, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.

HICKSVILLE, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.

HUNTINGTON, N.Y., contact Douglas R. Phillips, M.D.,1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.

ITHACA, N.Y., contact Jerry Hersh, M.D., 402 North Cayuga Street, Ithaca 14850. Tel: (Office) 607/273-8505 or (Home) 607/277-3280.

MANHATTAN and QUEENS, N.Y., contact Robert L. Mery c/o Dr. W. G. Grantham, 170 East 77th Street, New York 10021.

MARGARETVILLE, N.Y., contact Joseph Kehoe, Adm., Margaretville Hospital, Margaretville 12455. Tel: 914/586-2631.

NEW PALTZ, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel: 914-255-1200.

OLEAN, N.Y., contact Dr. John S. Reach, 2223 W. State St., Olean 14760. Tel: 716/372-7600.

ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.

OSWEGO, N.Y., contact J. Sherwood Dunham, Oswego Hospital, 110 West Sixth Street, Oswego 13126. Tel: call collect 315/349-5526.

POUGHKEEPSIE, N.Y., contact B. Lipton, M.D., 79 Hooker Avenue, Poughkeepsie 12601. Tel: 914/454-3232.

PULASKI, N.Y., contact George W. Chapman, M.D., 7580 Delano Street, Pulaski, N.Y., Tel. #315-298-6564.

STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.

SYRACUSE, N.Y., contact Jesse L. Serby, M.D., 3101 S. Salina Street, Syracuse, N.Y. Tel. #315-478-1657.

TONAWANDA, N.Y., contact Mrs. Sophie Rosokoff, 128 Delaware St., Tonawanda 14150. Tel: 716/693-6715.

VICTOR, N.Y., contact Victor Medical Associates, 7120 Lane Road Extension, Victor 14564. Tel: 716/924-5120.

WEBSTER, N.Y., contact Mr. D. H. Dessin, Adm. 193 W. Main Street, Webster, N.Y., #716-872-0650.

GENERAL SURGEON

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CORNWALL, N.Y., contact Jos. Anthony Garcia, M.D., 295 Main St., Cornwall 12518. Tel: 914/534-2244/2088.

FREEPORT, N.Y., contact Lydia E. Hall Hospital, 320 West Merrick Road, Freeport 11520.

HANCOCK, N.Y., contact Osias M. Villaflor, M.D., 5 Fairview Avenue, Hancock 13783. Tel: 607/637-4941.

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LITTLE FALLS, N.Y., contact Nicholas A. Prisco, Adm., Little Falls Hospital, 140 Burwell Street, Little Falls 13365. Tel: 315/823-1000, ext. 261 or 262.

MANHATTAN, N.Y., contact A. J. Cuti, M.D., Flower-Fifth Family Medical Office, 10 East 107th Street, N.Y. Tel: 212-369-2211.

NEW PALTZ, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel. #914-255-1200.

NEW YORK, N.Y., contact I. W. Eagle, M.D., 41 West 125th Street, New York 10027. Tel: 212/289-5795.

ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.

ROCHESTER, N.Y., contact A. D. Crown, M.D., 7 Sandle Drive, Fairport 14450. Tel: 716/586-0443.

SARANAC LAKE, N.Y., contact David A. Johnson, M.D., Old Lake Colby Drive, Saranac Lake, New York 12983.

SIDNEY, N.Y., contact John W. Sands, Adm., The Hospital, Sidney 13838. Tel: 607/563-3512.

STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.

VICTOR, N.Y., contact John J. Gaidula, M.D. Tel: (Office) 716/924-5120 or (Home) 716/924-5217.

NEUROLOGIST

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OBSTETRICIAN/GYNECOLOGIST

BINGHAMTON, N.Y., contact Dr. Joseph B. Watrous, Jr., 137 Hawley Street, Binghamton, N.Y. 13903 Tel. 607-772-0246.

NORWICH, N.Y., contact Richard B. Foster, M.D. 129 N. Broad Street, Norwich 13815. Tel: #607-334-9229.

WALTON, N.Y., contact Thomas E. Lavell, M.D., 1 Titus Place, Walton 13856. Tel: 607/865-6526.

OPHTHALMOLOGIST

JERICHO, N.Y., contact Norman Yourish, M.D., 400 N. Broadway, Jericho 11753. Tel: 516/681-2220.

TROY, N.Y., contact Robert M. Webb, M.D., 213 Pawling Avenue, Troy 12180.

ORTHOPEDIST

OSWEGO, N.Y., contact J.Sherwood Dunham, Coordinator, 110 West Sixth St., Oswego, 13126. Tel: call collect 315/349-5526.

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JOHNSON CITY, N.Y., contact Farouq Al-Khalidi, M.D., 370 Main St., Johnson City 13790.

WARWICK, N.Y., contact Bruce A. Smith, Adm., St. Anthony Community Hospital, 15–19 Main Ave., Warwick 10990. Tel: 914/986-2276.

PEDIATRICS

BROCKPORT, N.Y., contact James P. Goetz, M.D., 80 West Avenue, Suite 204, Brockport 14420. Tel: 716/637-3905.

MANHATTAN, N.Y., contact A. J. Cuti, M.D., Flower-Fifth Family Medical Office, 10 East 107th Street, N.Y. Tel. 212-369-2211.

PSYCHIATRIST

HORNELL, N.Y., contact Paul E. Shephard, Associate Administrator, St. James Mercy Hospital, 411 Canisteo Street, Hornell 14843. Tel: 607/324-3900 ext. 245.

NOTICE

The Medical Society of the State of New York invites the Deans of Medical Schools and the Administrators of Hospitals to send notices of continuing medical education including teaching days, important lectureships, courses, and similar programs for publication in WHAT GOES ON to: The Editor, WHAT GOES ON, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100. This is a free service.

AMA'S PHYSICIANS' PLACEMENT SERVICE

Physicians seeking placement opportunities outside New York State should contact AMA, Physicians' Placement Service, 535 N. Dearborn Street, Chicago, Ill. 60610. Tel: 312/751-6000 and also refer to the physicians' opportunities listed in the classified ad section of *JAMA*, the Journal of the AMA.

ATTENTION, ANYONE WISHING TO SUBMIT AN ANNOUNCEMENT FOR "WHAT GOES ON IN CONTINUING MEDICAL EDUCATION" ALL CONTINUING MEDICAL EDUCATION ANNOUNCEMENTS MUST BE RECEIVED THE 15th OF THE MONTH, THREE MONTHS PRIOR TO THE DATE OF THE EVENT.

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INFORMATION REGARDING OPENING FOR A PHYSICIAN
(General Practice or Specialist Associate)

Date______________

Name of Town____________________County____________________State__________

Population________Population of area served by physician____________________

What type of specialty?____________________New opening?______________

If this is a replacement, why did former physician leave?____________________

When will position be available?____________________

Please list special requirements: a) Residency training?____________________

b) Board eligible?______________Board certified?______________Age?__________

Please describe type of practice: a) Solo?_____b) Association?_________Please describe the reason for associateship____________________

c) Group practice? Please give details, i.e., number in group, number in this specialty, when group was commenced____________________

____

Please show what type of financial agreement is acceptable: a) Straight salary?__________

b) Percentage basis?_________c) Will investment be necessary?____________________

d) If partnership basis is acceptable, how soon would it be available?______________

______________e) Would written agreement be used?____________________

Office space available? Yes______No______ If yes, describe briefly____________________

____

Living quarters available? Yes______NO______ If yes, describe briefly____________________

____

____

Is there a hospital in the town? Yes______No______ If yes, please describe, i.e., number of beds, type of ownership, how soon can physician obtain hospital privileges______________

____

____

____

If no, please describe hospitals in nearby areas____________________

____

____

____

List any other features which you consider would make the position attractive to a prospective physician____________________

____

____

List person to be contacted by interested physician giving name, address and telephone number

____

____

____

When completed, kindly return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100.

QUESTIONNAIRE FOR PHYSICIANS SEEKING LOCATIONS

(Please print in black)

Name____Date____________

Address____

____

(Zip code number) (Telephone Number)

Date of Birth____________Place of Birth______________________________

Citizenship Status_____________________________Marital Status__________

Medical School________________________________Year Graduated__________

Internship____

Hospitals_______________________________________Dates______________

Residency____

Hospitals_______________________________________Dates______________

Specialty____

Licensed in what States?____

Applied for____

American Board Certificates held?____________________________________

Eligible_______________________Certified_____________________________

Do you have a New York State License?________Date of Certificate____________

Military Status____

Professional Organization Memberships__________________________________

Are you in practice at present?_________What type of practice are you interested in?

Solo______Associate______Industrial______Group______Institutional________

Other____

Date you will be available for practice________Former locations in which you have practiced____

(Give dates)

____

When completed, please return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Tel. 516/ 488-6100.

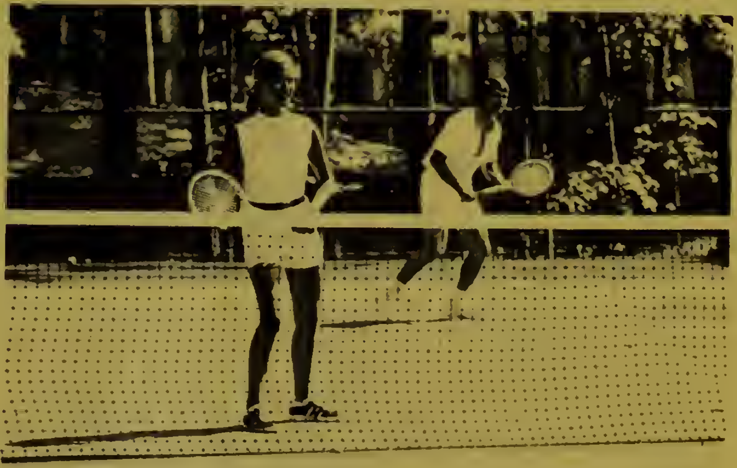
THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

1982 Annual CME Assembly

Friday, June 25—Sunday, June 27

Medical Controversies of the 80s

All physicians are invited to attend our Annual Continuing Medical Education Program to be held at the Rye Town Hilton. You will have the opportunity to obtain Category I CME Credits during 2½ days of outstanding General Sessions, Symposia, and Panel Discussions. Our meetings are designed to inform the physician of the latest developments not only in his specialty, but in other areas of medicine as well.



As in the past, there will be Scientific and Technical Exhibits to help the physician to become acquainted with the latest research techniques, and to learn about new products and services that will help the physician provide better medical care. The opportunity to visit with friends and colleagues in a relaxed setting is an important part of the Annual Assembly. Come join us!

at the

JUST 40 MINUTES FROM MANHATTAN

RYE TOWN HILTON

699 Westchester Avenue Town of Rye Port Chester, New York

SCHEDULE OF SCIENTIFIC MEETINGS

1982 ANNUAL CME ASSEMBLY

Medical Society of the State of New York
Rye Town Hilton, Port Chester, New York

FRIDAY, JUNE 25

Morning: Anesthesiology/Surgery (General Session)
Emergency Medicine/Radiology (General Session)
Medical Legal & Workers' Compensation Matters/Occupational Medicine (General Session)
Obstetrics & Gynecology
Orthopedic Surgery

Afternoon: Chest Diseases
Dermatology & Syphilology
Emergency Medicine/Radiology (General Session-cont'd)
Gastroenterology, Colon & Rectal Surgery
Hand Surgery (General Session)
Obstetrics & Gynecology (cont'd)

SATURDAY, JUNE 26

Morning: Cancer (General Session)
Cardiovascular Diseases
Internal Medicine
Neurology & Neurosurgery (General Session)
Ophthalmology
Urology

Afternoon: Cancer (General Session—cont'd)
Internal Medicine (cont'd)
Ophthalmology (cont'd)
Otolaryngology
Pathology

SUNDAY, JUNE 27

Morning: Allergy & Immunology
Physical Medicine & Rehab.
Plastic, Reconstructive & Maxillofacial Surgery (General Session)
Preventive Medicine
Psychiatry/Pediatrics/School Health/Family & General Practice (General Session)

●

CME CREDITS: Each program will be eligible for CME Category I Credits on an hour-for-hour basis

●

SCIENTIFIC & TECHNICAL EXHIBITS

PRELIMINARY PROGRAM
1982 ANNUAL CME ASSEMBLY

June 25 through 27, 1982

MEDICAL SOCIETY OF THE STATE OF NEW YORK

The Rye Town Hilton
Port Chester, New York

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Registration

Registration is open to MSSNY members and their guests, nonmember physicians, and members of the allied professions. There is no registration fee.

A preregistration form will be found in this issue. For those who preregister, your identification badge and tickets will be held at the MSSNY Registration Desk located in the Grand Ballroom exhibit area. For those who have not preregistered, registration will take place Thursday, June 24 from 4:00 p.m. to 8:00 p.m., Friday and Saturday, June 25 and 26, from 8:00 a.m. to 5:00 p.m., and Sunday, June 27, from 8:00 a.m. to 12:00 Noon. All meetings and exhibits will close at 12:30 p.m. on Sunday.

Identification badges or buttons are required for admittance to all CME meetings and exhibits. It is imperative that each registrant show identification at the registration desk before a badge or button is issued. We ask that you wear your identification at all times while in the meeting and exhibit areas. These measures are taken to ensure that your meeting will be a professional one and not available to anyone who may walk in from the street.

Scientific Program

General Sessions will be held on Friday, June 25, from 8:30 a.m. to 12:30 p.m. and from 1:30 p.m. to 5:00 p.m.; on Saturday, June 26, from 9:00 a.m. to 12:00 Noon and from 2:00 p.m. to 5:00 p.m.; and on Sunday, June 27, from 8:30 a.m. to 12:30 p.m.

Section meetings will be held on Friday and Saturday, June 25 and 26, from 8:30 a.m. to 12:30 p.m. and from 1:30 p.m. to 5:00 p.m., and Sunday, June 27, from 8:30 a.m. to 12:30 p.m.

CME Credits

The Medical Society of the State of New York, as an organization accredited for CME, designates this continuing medical education activity as meeting the criteria for the designated number of credit hours in Category 1 of the Physician Recognition Award of the AMA, and/or MSSNY's Method 6.

Each program is acceptable for prescribed or personal interest credits by the American Academy of Family Physicians (AAFP) as designated.

The Medical Society of New York CME credit forms will be issued in the meeting room at the close of each program.

Exhibits

Scientific Exhibits and Technical Exhibits will be located in the Grand Ballroom. Exhibits will be on view Friday and Saturday, June 25 and 26, from 8:30 a.m. to 5:00 p.m., and on Sunday June 27 from 8:30 a.m. to 12:30 p.m.

Physician Message Center

Messages for physicians may be left at the Information Desk at the Medical Society registration area. The names of those for whom messages have been received will be posted on a board at the MSSNY registration area in the Grand Ballroom.

Friday, June 25

A RECEPTION sponsored by the Medical Society of the State of New York. Members, spouses, and exhibitors are invited. The Rye Town Hilton Grand Ballroom (exhibit area) from 6:00 p.m. to 7:00 p.m. Your identification badge must be presented at the door.

BROADWAY SHOW AND SUPPER. Round trip transportation by private bus from the Rye Town Hilton to a Broadway show and supper at the Tavern-On-The Green in Manhattan. See details and reservation form in this issue.

Saturday, June 26

MSSNY RECEPTION AND DINNER DANCE. All physicians and their guests are invited to attend the Medical Society dinner on Saturday, June 26th. Ronald Dougherty, M.D., Chairman, MSSNY Committee on Drug Abuse, will be the guest speaker. A reception sponsored by the Medical Society of the State of New York will begin at 7:00 p.m. Dinner will be served at 8:00 p.m. $39.00 per person. Tickets may be ordered on preregistration form.

1982 ANNUAL CME ASSEMBLY

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■ All papers *read before the Society become the property of the Society. The original copy of each paper shall be left with the Secretary of the Section.*

■ Discussers *should have their remarks typed and should hand them to the Secretary.*

■ Section meetings *shall begin promptly at the hour specified.*

■ Executive Session—*The first order of business, election of officers. "To participate in the election of any section, a member of the Medical Society of the State of New York must register with such section."*

—BYLAWS, ARTICLE XII, SECTION I

FRIDAY, JUNE 25, 1982

GENERAL SESSION
Emergency Medicine
Radiology

8:30 A.M.-5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 7½ Hours, Category 1; AAFP, 7 Hours, Prescribed

INJURIES TO THE CERVICAL SPINE, KNEE, AND ANKLE

RALPH ALTMAN, M.D., New York City, *Moderator*
Director, Emergency Services, Metropolitan Hospital Center

Objective: To present the latest practice and controversies in the management of cervical spine, knee, and ankle injuries from the initial injury to definitive care.

EXECUTIVE SESSIONS

8:30 A.M. **Prehospital Aspects of Cervical Spine Injuries: Newer Field Stabilization Devices**

PETER MOYER, M.D., The Bronx

Director, Emergency Services,
Jacobi Hospital

9:15 A.M. **Emergency Department Aspects of Cervical Spine Injuries: Conflicts in Evaluation and Stabilization**

JOHN E. SPOOR, M.D., Laurens

Director, Emergency Services,
A.O. Fox Memorial Hospital,
Oneonta

10:00 A.M. **Demonstration of Cervical Stabilization Devices**

Directed by PETER MOYER, M.D., The Bronx

Assisted by Paramedics, New York City
with Audience Participation

10:20 A.M. **Coffee Break to View Exhibits**

10:35 A.M. **Radiological Aspects of Cervical Spine Injuries**

SALVATORE J. SCLAFANI, M.D., Brooklyn

Chief of Trauma Radiology,
Kings County Hospital Center;
Assistant Professor of Radiology,
State University of New York-Downstate Medical Center

11:20 A.M. **Cervical Spine Trauma: The Orthopedic Approach**

JAMES J. ELTING, M.D., Oneonta

Attending Orthopedic Surgeon,
A.O. Fox Memorial Hospital;
Consultant, Orthopedic Surgery, The Hospital

12:05 P.M. **Panel Discussion:** The Above Speakers

1:30 P.M.-5:00 P.M.

1:30 P.M. **Prehospital Aspects of Knee and Ankle Injuries: The Management of Open and Closed Injuries**

PETER MOYER, M.D., The Bronx

2:10 P.M. **Emergency Department Aspects of Knee and Ankle Injuries: Initial Evaluation and Care**

FRANK COUGHLIN, M.D., Cortland

Director, Ambulatory Care and Emergency Services, Cortland Memorial Hospital

2:50 P.M. **Radiological Aspects of Knee and Ankle Injuries**

SALVATORE J. SCLAFANI, M.D., Brooklyn

3:30 P.M. **Coffee Break to View Exhibits**

3:50 P.M. **Orthopedic Aspects of Knee and Ankle Injuries: Commonly Missed Injuries and Sequelae**

JOSEPH F. GIATTINI, M.D., New York City

Associate Professor of Orthopedic Surgery, New York Medical College;
Chief of Service, Metropolitan Hospital Center

4:30 P.M. **Knee and Ankle Injuries**

Question and Answer Session: The Above Speakers

(continued)

GENERAL SESSION
Medical Legal and Workers' Compensation Matters
Occupational Medicine

8:30 A.M.–12:00 NOON

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3½ Hours, Category 1; AAFP, 3 Hours Prescribed

OCCUPATIONAL STRESS: GENERAL, LEGAL, AND WORKERS' COMPENSATION ASPECTS

BERNARD J. SCHUMAN, M.D., New York City, *Moderator*

Medical Director, Port Authority of New York and New Jersey; Chairman, Section on Medical Legal and Workers' Compensation Matters, Medical Society of the State of New York

Objective: To gain an understanding of the increasing significance of stress-related disorders in occupational health practice, and in Workers' Compensation consideration.

EXECUTIVE SESSIONS

8:40 A.M. **Introduction**

9:00 A.M. **Psychological Aspects of Work Stress**

HOWARD HESS, M.D., New York City

Agency Psychiatrist,
Port Authority of New York and New Jersey;
Corporate Psychiatrist, Western Electric Company

9:30 A.M. **Stress Management: The Corporate Medical Director's View**

LEON J. WARSHAW, M.D., New York City

Executive Director,
The New York Business Group on Health

10:00 A.M. **Stress: The Employee's View**

ARTHUR B. SHOSTAK, Ph.D., Philadelphia, Pa.

Professor, Department of Psychology and Sociology,
Drexel University

10:30 A.M. **Coffee Break to View Exhibits**

10:45 A.M. **Stress and Worker's Compensation**

BURT J. JACOWITZ, Esq., Brooklyn

President,
New York Workers' Compensation Bar Association

11:15 A.M. **Panel Discussion:** The Above Speakers

BERNARD J. SCHUMAN, M.D., New York City, *Moderator*

GENERAL SESSION
Hand Surgery

1:30 P.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3½ Hours, Category 1; AAFP, 3½ Hours, Prescribed

CONTROVERSIES IN PRIMARY HAND TREATMENT

THOMAS J. PALMIERI, M.D., New Hyde Park, *Moderator*

Assistant Professor of Clinical Surgery,
State University of New York at Stony Brook;
Physician-in-Charge of Hand Surgery, Long Island Jewish-Hillside Medical Center

Objective: The program is intended for primary care physicians, orthopedic surgeons, plastic surgeons and physiatrists who deal with common controversial problems. The advantages and disadvantages of each type of treatment will be discussed in detail and the discussor will indicate which one he feels is the preferred method of treatment.

1:30 P.M. **Fingertip Amputations: Is Resurfacing Necessary?**

HAROLD DICK, M.D., New York City

Clinical Professor of Orthopedic Surgery,
Columbia University College of Physicians and Surgeons

1:50 P.M. **Primary or Secondary Repair of Flexor Tendon Injuries in the Hand**

ROBERT E. CARROLL, M.D., New York City

Professor of Orthopedic Surgery,
Columbia University College of Physicians and Surgeons;
Director of Hand Surgery, Columbia-Presbyterian Medical Center

(*continued*)

2:10 P.M. **Open or Closed Reductions of Hand Fractures**

Martin Posner, M.D., New York City

Associate Professor of Clinical Surgery, Mount Sinai School of Medicine of the City University of New York

2:30 P.M. **Discussion Period and Questions**

3:00 P.M. **Coffee Break to View Exhibits**

3:15 P.M. **Simple Hand Infections — When is Drainage Necessary?**

Thomas J. Palmieri, M.D., New Hyde Park

3:35 P.M. **Controversies in the Care and Rehabilitation of the Burned Hand**

Lester Silver, M.D., New York City

Assistant Professor of Clinical Surgery (Plastic), Mount Sinai School of Medicine of the City University of New York

3:55 P.M. **Digital Reattachment: When Should it be Done?**

Berish Strauch, M.D., The Bronx

Professor and Chief, Division of Plastic Surgery, Albert Einstein College of Medicine and Montefiore Hospital and Medical Center

4:15 P.M. **Discussion and Questions**

GENERAL SESSION
Anesthesiology
Surgery

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 3½ Hours Prescribed

1982: SOME NEW DEVELOPMENTS AND EXISTING CONTROVERSIES UPDATED

Alfred F. Luhr, Jr., M.D., Kenmore, *Moderator*

Clinical Assistant Professor Otolaryngology (Head and Neck),
State University of New York at Buffalo;
Attending, Sisters of Charity Hospital, Buffalo

Objective: Some newer surgical developments in clinical surgery as well as updating of older controversial areas are presented.

EXECUTIVE SESSIONS

8:30 A.M. **Systemic Septic Response; Physiologic-Metabolic Correlates**

John B. Wiles, M.D., Buffalo

Instructor in Surgery,
State University of New York at Buffalo,
Sisters of Charity Hospital and Erie County Medical Center

8:50 A.M. **New Developments In Treatment of Thromboembolic Disorders**

Julian L. Ambrus, Ph.D., Buffalo

Professor, Internal Medicine and Experimental Pathology,
State University of New York at Buffalo
Roswell Park Memorial Institute

9:10 A.M. **Controversies in Present Day Breast Surgery**

Alfred A. Fracchia, M.D., New York City

Attending Breast Surgeon, Memorial Sloan-Kettering Cancer Center

9:30 A.M. **Rehabilitation in Breast Surgery**

Guy F. Robbins, M.D., New York City

Consultant to Breast Service, Department of Surgery, and Former Director of Cancer Control, Memorial Sloan-Kettering Cancer Center

9:50 A.M. **Oxygen Transport During Anesthesia and Surgery**

Kinichi Shibutani, M.D., Valhalla

Director of Anesthesiology,
Westchester County Medical Center;
Professor of Anesthesiology,
New York Medical College

10:25 A.M. **Coffee Break to View Exhibits**

10:40 A.M. **Obesity Surgery**

H. David Stein, M.D., The Bronx

Associate Professor of Surgery,
Albert Einstein College of Medicine of Yeshiva University;
Attending Surgeon, Montefiore Hospital and Bronx Municipal Hospital Center

(*continued*)

11:00 A.M. **End Results in Treating Colorectal Cancer to the Liver by Combination Surgery and Chemotherapy**

JOSEPH G. FORTNER, M.D., New York City

Professor of Surgery,
Cornell University Medical College;
Attending Surgeon, Gastric and Mixed Tumor Services,
Memorial Sloan-Kettering Cancer Center

11:20 A.M. **Use of I.D.A. (Technetium-99M Iminodiacetic Acid) Scanning for the Biliary Tract Surgeon**

MARVIN GLIEDMAN, M.D., The Bronx

Professor and Chairman, Department of Surgery,
Albert Einstein College of Medicine of Yeshiva University;
Surgeon and Chief, Combined Department of Surgery,
Montefiore Hospital and Medical Center
Albert Einstein College of Medicine

11:45 A.M. **Discussion and Questions**

Chest Diseases
Joint Meeting with the New York Chapter of the American College of Chest Physicians

2:00 P.M.-5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3 Hours, Category 1; AAFP, 3 Hours, Prescribed

CONTROVERSIES IN MEDICINE

ROY H. CLAUSS, M.D., New York City, *Moderator*

Professor of Surgery, New York Medical College

Objective: Attendance at this program will update the physician in various aspects of therapy of diseases of the chest. The Annual Howard M. Lilienthal Lecture will be presented by John P. Utz, M.D., Professor of Medicine at Georgetown University Hospital. His topic will be "The Management of Pneumonias."

EXECUTIVE SESSION

12:30 P.M. **LUNCHEON:**
speaker:

ROBERT S. LITWAK, M.D., New York City

Governor, American College of Chest Physicians;
Professor of Surgery and Chief,
Division of Cardiothoracic Surgery,
Mount Sinai Medical Center

HOWARD M. LILIENTHAL, M.D.: A VIGNETTE

2:00 P.M. **Lung Cancer and Chemotherapy**

ROBERT B. GOLBEY, M.D., New York City

Chief, Solid Tumor Service,
Memorial Sloan-Kettering Cancer Center

2:30 P.M. **Endarterectomy of Left Coronary Arteries**

GEORGE E. REED, M.D., Valhalla

Chief, Thoracic and Cardiovascular Surgery,
Westchester County Medical Center

3:00 P.M. **Coffee Break to View Exhibits**

3:45 P.M. **THE 32nd ANNUAL HOWARD LILIENTHAL MEMORIAL LECTURE:**
The Management of Pneumonias

JOHN P. UTZ, M.D., Washington, D.C.

Professor of Medicine,
Georgetown University Hospital

4:15 P.M. **Treatable Aspects of Environmental Lung Diseases in City Dwellers**

EDWARD M. CORDASCO, M.D., Cleveland, Ohio

Director, Respiratory Therapy Department,
Pulmonary Medicine, Cleveland Clinic Foundation;
Former Vice Chairman, Environmental Section,
American College of Chest Physicians

(*continued*)

Dermatology and Syphilology
Joint Meeting with the
New York State Society of Dermatology

2:00 P.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3 Hours, Category 1; AAFP, 3 Hours, Prescribed

CONTROVERSIES IN DERMATOLOGY

LEE R. LUMPKIN, M.D., Albany, *Chairman*

Clinical Professor and Head of Division of Dermatology,
Albany Medical College;
Dermatologist-in-Chief, Albany Medical Center Hospital

Objective: Physicians attending this symposium will become informed on the pros and cons of various aspects of treatment of dermatological diseases.

EXECUTIVE SESSION

2:00 P.M. **Pathobabel: Confusion from a Profusion of Imprecise Words, Terms and Phrases in the Language of Dermatopathology**

A. BERNARD ACKERMAN, M.D., New York City

Professor of Dermatology and Pathology,
Director of the Department of Dermatopathology,
New York University School of Medicine

2:30 P.M. **Treatment of Sexually Transmitted Diseases: Understandings and Misunderstandings**

YEHUDI M. FELMAN, M.D., Brooklyn

Clinical Associate Professor of Dermatology, State University of New York Downstate Medical Center;
Director, Bureau of Venereal Disease Control,
New York City Health Department

3:15 P.M. **Coffee Break to View Exhibits**

3:30 P.M. **Risks vs. Benefits in Psoralin Therapy**

D. MARTIN CARTER, M.D., New York City

Professor, The Rockefeller University; Professor of Medicine (Dermatology),
Cornell University Medical College

4:00 P.M. **Controversies in Cutaneous Cryosurgery**

SETRAG A. ZACARIAN, M.D., Springfield, Massachusetts

Associate Clinical Professor of Dermatology (Medicine),
Albany Medical College

4:30 P.M. **Discussion**

Obstetrics and Gynecology

8:30 A.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 7 Hours, Category 1; AAFP, 6½ Hours, Prescribed
This course has been approved for 7 cognates formal learning by the American College of Obstetricians and Gynecologists.

PERINATAL ASPECTS OF THE VERY LOW BIRTH WEIGHT INFANT

WILLIAM P. DILLON, M.D., Buffalo, *Moderator*

Assistant Professor of Obstetrics and Gynecology,
Division of Maternal-Fetal Medicine,
State University of New York at Buffalo School of Medicine

Objective: This one-day scientific session is designed for physicians providing perinatal health care. The emphasis is directed towards the presentation of current knowledge in care of the pregnancy complicated by premature labor and in the management of the very low birth weight infant. This session will provide the clinician an opportunity to update knowledge relating to: (a) the pathophysiology of premature labor, (b) the obstetrical management of the patient in premature labor and (c) the latest trends in the care of the very low birth weight infant. Opportunities for interaction with faculty who are expert in the field of neonatal, perinatal and internal medicine will be provided. It is anticipated that the application of such knowledge will be useful in reducing perinatal and neonatal morbidity and mortality.

EXECUTIVE SESSION

8:30 A.M. **Prematurity: Is it an Infectious Disease?**

HOWARD MINKOFF, M.D., Brooklyn

(*continued*)

Assistant Professor of Obstetrics and Gynecology,
Division of Maternal-Fetal Medicine,
State University of New York at Downstate Medical Center

9:15 A.M. **The Pathophysiology of Preterm Labor**

DEBABRATA MAULIK, M.D., Rochester

Assistant Professor of Obstetrics and Gynecology,
Division of Maternal-Fetal Medicine,
University of Rochester School of Medicine

10:00 A.M. **Management of Birth of the Premature Infant: Experience at College of Physicians and Surgeons**

HAROLD E. FOX, M.D., New York City

Associate Professor of Clinical Obstetrics and Gynecology-Pediatrics,
Columbia University College of Physicians and Surgeons;
Medical Director, Western and Upper Manhattan Perinatal Network

10:45 A.M. **Coffee Break to View Exhibits**

11:00 A.M. **Management of Threatened Early Premature Delivery: The Albany Experience**

E. JAMES BROWN, M.D., Albany

Associate Professor of Obstetrics and Gynecology,
Albany Medical College;
Director of Obstetrical Service, Albany Medical Center Hospital

11:45 A.M. **Selected Aspects of Perinatal Regionalization**

RICHARD H. AUBRY, M.D., Syracuse

Professor of Obstetrics and Gynecology,
Co-Director of Perinatal Center,
State University of New York Upstate Medical Center

1:30 P.M. **A Bull in a China Shop: Role of the Internist in the Management of High Risk Pregnancy**

RICHARD V. LEE, M.D., Buffalo

Professor of Internal Medicine,
State University of New York at Buffalo;
Head of Department of Internal Medicine,
Children's Hospital of Buffalo

2:15 P.M. **Resuscitation of the Very Low Birth Weight Infant**

RALPH WYNN, M.D., Buffalo

Assistant Professor of Pediatrics,
Division of Neonatology,
State University of New York at Buffalo

3:00 P.M. **Coffee Break to View Exhibits**

3:15 P.M. **Potentially Debilitating Factors in the Intensive Care of the Very Low Birth Weight Infant**

WILLIAM TOPPER, M.D., Buffalo

Assistant Professor of Pediatrics,
Division of Neonatology,
State University of New York at Buffalo

4:00 P.M. **Intensive Neonatal Care: Is It Cost Effective?**

EDMUND A. EGAN, M.D., Buffalo

Associate Professor of Pediatrics,
Head of Division of Neonatology,
State University of New York at Buffalo

4:45 P.M. **Panel Discussion**

Orthopedic Surgery

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 4 Hours, Prescribed

EMERGENCY TREATMENT AND FOLLOW-UP SURGERY OF ACUTE SPINAL TRAUMA

JOSEPH F. GIATTINI, M.D., New York City, *Moderator*

Associate Professor of Orthopedic Surgery,
New York Medical College;
Chief of Service, Metropolitan Hospital Center;
Attending Surgeon, St. Vincent's Hospital and Medical Center of New York

Objective: All physicians faced with the problems of acute spinal trauma and chronic ankle injuries will be rewarded by attendance at this symposium. Answers to questions about surgical or nonsurgical treatment of the unstable spine will be provided. Troublesome ankle injuries and their management involve serious diagnostic and therapeutic dilemmas which the physician will learn to resolve.

EXECUTIVE SESSION

8:30 A.M. **What Constitutes Spinal Stability**

STANLEY HOPPENFELD, M.D., New York City

Director of Scoliosis Services, and Associate Clinical Professor of the Department of Orthopedic Surgery,
Albert Einstein College of Medicine of Yeshiva University

(*continued*)

9:00 A.M. **Treatment of the Unstable Spine**

STANLEY HOPPENFELD, M.D., New York City

9:30 A.M. **Alternative Methods of Early and Late Stabilization of Thoracic-Lumbar Fractures**

RUDOLPH TADDONIO, M.D., Valhalla

Clinical Assistant Professor,
Department of Orthopedic Surgery,
New York Medical College

10:15 A.M. **Neurosurgical Indications for Surgery in Acute Lumbo-Spine Injuries**

JOSEPH RANSOHOFF, M.D., New York City

Professor and Chairman, Department of Neurosurgery,
New York University-Bellevue Hospital Center

10:45 A.M. **Treatment of Acute Atlantoaxilla Dislocation**

J. WILLIAM FIELDING, M.D., New York City

Director of Orthopedic Surgery, St. Luke's Hospital;
Clinical Professor of Orthopedic Surgery,
Columbia University College of Physicians and Surgeons

10:00 A.M. **Coffee Break to View Exhibits**

TREATMENT OF CHRONIC ANKLE INJURIES

11:15 A.M. **The Lateral Instability of the Ankle: Parameters of Diagnosis and Method of Reconstruction**

JOSEPH F. GIATTINI, M.D., New York City

11:45 A.M. **Arthrodesis or Arthroplasty in Reconstruction of the Posttraumatic Ankle Secondary to Chronic Instability**

THEODORE WAUGH, M.D., New York City

Professor and Chairman,
Department of Orthopedic Surgery,
New York Universtiy-Bellevue Hospital Center

Gastroenterology, Colon, and Rectal Surgery

2:00 P.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3 Hours, Category 1; AAFP, 3 Hours, Prescribed

DISEASES OF THE LOWER BOWEL

MARTIN S. KLEINMAN, M.D., Rochester, *Moderator*

Clinical Associate Professor of Medicine,
University of Rochester School of Medicine and Dentistry;
Associate Physician, Strong Memorial Hospital

Objective: Updated diagnosis and management of various diseases of the large bowel. Both surgical and medical aspects will be discussed. The symposium will be informative for both the specialist and the primary care physician.

EXECUTIVE SESSION

2:05 P.M. **Introduction**

2:10 P.M. **Office Diagnosis and Management of Common Causes of Anorectal Bleeding**

GREGORY W. BRABBEE, M.D., New York City

Clinical Associate Professor of Surgery, Columbia University College of Physicians and Surgeons;
Co-Chief of Colon-Rectal Clinic, St. Luke's-Roosevelt Hospital Center

2:50 P.M. **Contemporary Concepts In the Therapy of Perineal Crohn's Disease**

MICHAEL FRANK, M.D., The Bronx

Clinical Assistant Professor of Medicine, Albert Einstein College of Medicine of
Yeshiva University;
Attending Physician, Albert Einstein College Hospital and
Montefiore Hospital and Medical Center

(*continued*)

(*FRIDAY continued*)

3:30 P.M. **Discussion**

3:45 P.M. **Coffee Break to View Exhibits**

4:00 P.M. Peter Wilk, M.D., The Bronx, *Moderator*

Assistant Professor, Department of Surgery, Albert Einstein College of Medicine of Yeshiva University

4:03 P.M. **Precursors of Malignant Neoplastic Bowel Disease: The Polyp-Cancer Sequence**

Gerald H. Bezahler, M.D., The Bronx

Assistant Professor of Pathology,
Albert Einstein College of Medicine of Yeshiva University;
Attending Pathologist, Montefiore Hospital and Medical Center, and North Central Bronx Hospital

4:45 P.M. **Discussion**

SATURDAY, JUNE 26, 1982

GENERAL SESSION
Cancer Update 1982

9:00 A.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 7 Hours, Category 1; AAFP, 6 Hours Prescribed

CURRENT CONTROVERSIES IN CANCER MANAGEMENT

Martin Lipkin, M.D., New York City, *Moderator*

Associate Chairman, Scientific Program Committee,
Medical Society of the State of New York;
Attending Physician, Department of Medicine,
Memorial Sloan-Kettering Cancer Center;
Professor of Medicine, Cornell University Medical College

Objective: In this session, important topics related to the management of a variety of cancers will be discussed. These include problems in the treatment of breast cancer, Hodgkin's disease, colon cancer, and pediatric neoplasms. New advances in cancer prevention, supportive psychiatric and medical care, and percutaneous biopsy in diagnoses will be reviewed. Controversial, as well as complementary, modalities will be covered.

9:00 A.M. **Surgical Management of Breast Cancer**

Michael Osborne, M.D., New York City

Assistant Attending Surgeon, Breast Service,
Memorial Sloan-Kettering Cancer Center;
Assistant Professor of Surgery,
Cornell University Medical College

9:30 A.M. **Conservative Treatment of Localized Breast Cancer: An Alternative to Mastectomy**

Nemetallah Ghossein, M.D., The Bronx

Professor of Radiotherapy, Albert Einstein College of Medicine of Yeshiva University

10:00 A.M. **Coffee Break to View Exhibits**

10:15 A.M. **Combined Modality Treatment of Hodgkin's Disease with Chemotherapy and Radiation Therapy**

David Strauss, M.D., New York City

Assistant Attending Physician, Department of Medicine,
Memorial Sloan-Kettering Cancer Center;
Assistant Professor of Medicine,
Cornell University Medical College

10:45 A.M. **Radiation Therapy in Hodgkin's Disease**

Alvin M. Panahon, M.D., Buffalo

Associate Chief, Department of Radiation Medicine,
Roswell Park Memorial Institute

11:15 A.M. **Chemotherapy of Colorectal Carcinoma Including Adjuvant Therapy**

Nancy Kemeny, M.D., New York City

Assistant Attending Physician, Department of Medicine,
Memorial Sloan-Kettering Cancer Center;
Assistant Professor of Medicine,
Cornell University Medical College

11:45 A.M. **Value of Postoperative Radiation on Treatment of Adenocarcinoma of the Rectum and Rectosigmoid Colon**

Stephen Alderman, M.D., New York City

Director, Radiation Oncology,
Catholic Medical Center of Brooklyn and Queens, Inc.;
Assistant Professor of Radiology (Therapeutics),
New York University Medical Center

(*continued*)

2:00 P.M.–5:00 P.M.

2:00 P.M. **Life Style Smoking and Nutrition In Human Cancer Causation**

JOHN WEISBURGER, M.D., Valhalla

Vice President for Research,
American Health Foundation

2:30 P.M. **Early Identification of Populations with Inherited Predisposition to Cancer**

MARTIN LIPKIN, M.D., New York City

3:00 P.M. **Coffee Break to View Exhibits**

3:15 P.M. **The Family of the Cancer Patient**

STEPHEN NORDLICHT, M.D., New York City

Chairman, Scientific Program Committee,
Medical Society of the State of New York;
Consulting Psychiatrist, Memorial Sloan-Kettering Cancer Center

3:45 P.M. **Controversies in the Treatment of Neuroblastoma**

LAWRENCE HELSON, M.D., New York City

Head, Pediatric Center Research Laboratory,
Memorial Sloan-Kettering Cancer Center;
Associate Professor, Cornell University Medical College

4:15 P.M. **Percutaneous Fine Needle Biopsy in Carcinoma of the Pancreas and Other Organs**

JOHN TRAIN, M.D., New York City

Assistant Professor of Radiology,
Mount Sinai School of Medicine
City University of New York

4:45 P.M. **Discussion**

Cardiovascular Diseases
Jointly Sponsored by
the New York Cardiological Society

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 4 Hours Prescribed

ADVANCES AND CONTROVERSIES IN EMERGENCY MANAGEMENT OF CARDIOVASCULAR PROBLEMS

LESLIE A. KUHN, M.D., New York City, *Moderator*

Clinical Professor of Medicine, Mount Sinai School of Medicine of the City University of New York; Consultant to the Coronary Care Units, Mount Sinai Hospital

Objective: Recent advances and current controversies in the emergency management of certain cardiovascular problems are presented. To this end, clinical aspects of sudden death are analyzed with attention to certain risk factors the modification of which may determine prognosis.

Emergency use of pacemakers for control of cardiac arrhythmias will also be discussed and indications for their use in emergency management. The medical management of life-threatening ventricular arrhythmias with particular reference to newer antiarrhythmic agents will be analyzed and, finally, the role of surgical intervention in the prophylaxis of ventricular arrhythmias will be detailed.

EXECUTIVE SESSION

8:30 A.M. **Clinical Aspects of Sudden Death**

ARTHUR J. MOSS, M.D., Rochester

Clinical Associate Professor of Medicine,
University of Rochester School of Medicine

9:15 A.M. **Advances and Controversies In Use of Pacemakers**

ALVIN GORDON, M.D., New York City

Clinical Professor of Medicine, Mount Sinai School of Medicine of the City University of New York;
Attending Cardiologist, Mount Sinai Hospital

10:00 A.M. **Coffee Break to View Exhibits**

10:15 A.M. **Prophylaxis and Medical Management of Life-Threatening Ventricular Arrhythmias**

THOMAS BIGGER, M.D., New York City

Professor of Medicine and Pharmacology,
Columbia University College of Physicians and Surgeons

11:00 A.M. **Surgical Approach to Therapy of Ventricular Arrhythmias**

ALDEN H. HARKEN, M.D., Philadelphia, Pennsylvania

Associate Professor of Surgery,
University of Pennsylvania School of Medicine

11:45 A.M. **Panel Discussion:** The Above Speakers

(continued)

Ophthalmology
Joint Meeting with the
New York State Ophthalmological Society

8:30 A.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 7½ Hours, Category 1; AAFP, 7½ Hours, Personal Interest

KERATOREFRACTIVE SURGERY

PETER G. KANSAS, M.D., Albany, *Moderator*

Associate Clinical Professor of Ophthalmology, Albany Medical College of Union University

Objective: To bring participants up-to-date on technical and technological aspects of the subjects outlined. Each topic will be open for participation and discussion as controversial areas will be fully explored. The topics included represent rapidly changing areas of ophthalmology, and are expected to be of clinical usefulness to every practicing ophthalmologist.

EXECUTIVE SESSION

8:30 A.M. **Introduction**

8:40 A.M. **Radial Keratotomy**

RICHARD SMITH, M.D., Albany

Professor and Chairman,
Department of Ophthalmology,
Albany Medical College of Union University

9:20 A.M. **Discussion**

9:30 A.M. **Radial Keratotomy**

PETER KANSAS, M.D., Albany

10:10 A.M. **Discussion**

10:20 A.M. **Coffee Break to View Exhibits**

10:40 A.M. **Wedge Resection—Indications and Technique**

JAY H. KRACHMER, M.D., Iowa City, Iowa

Professor, Department of Ophthalmology and
Director of the Cornea Service,
University of Iowa Hospitals and Clinics

11:20 A.M. **Discussion**

11:30 A.M. **Thermo-Keratoplasty Indications**

JAMES AQUAVELLA, M.D., Rochester

Professor and Director,
Department of Ophthalmology,
Park Ridge Hospital

12:10 P.M. **Discussion**

1:30 P.M.–5:00 P.M.

1:30 P.M. **Extended Wear of Soft Contact Lenses (Update)**

JAMES AQUAVELLA, M.D., Rochester

2:05 P.M. **Discussion**

2:15 P.M. **Keratorefractive Surgery (Update)**

JAY H. KRACHMER, M.D., Iowa City, Iowa

2:50 P.M. **Discussion**

3:00 P.M. **Coffee Break to View Exhibits**

3:15 P.M. **Radial Keratotomy Complications**

RICHARD SMITH, M.D., Albany

3:50 P.M. **Discussion**

4:00 P.M. **Corneal Surgery Overview: Past and Present**

ARTHUR G. DE VOE, M.D., New York City

Professor and Chairman, Emeritus,
Department of Ophthalmology,
Columbia University College of Physicians and Surgeons

4:35 P.M. **Panel Discussion: The Above Speakers**

(continued)

Internal Medicine Joint Meeting with the New York State Society of Internal Medicine

8:30 A.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 7 Hours, Category 1; AAFP, $6\frac{1}{2}$ Hours Prescribed

THE MANAGEMENT OF PAIN: CONCEPTS, CONTROVERSIES, AND CONTEMPLATIONS

PETER STERNLIEB, M.D., New Hyde Park, *Moderator*

Chairman, Section on Internal Medicine, Medical Society of the State of New York; Past President, New York State Society of Internal Medicine; Chief Attending Physician, Department of Internal Medicine, Nassau Hospital, Mineola

Objective: To give internists, other primary and secondary care generalists and specialists, and allied health professionals (1) a better understanding of basic scientific aspects of pain mechanisms, (2) an overview of various therapeutic modalities, (3) an insight into the current concepts and even some of the controversies about pain control, and (4) a preview of future directions of analgesic therapy.

8:30 A.M. **EXECUTIVE SESSION**

9:00 A.M. **An Overview of Pain Management, including Neurophysiologic and Pathologic Aspects of Acute and Chronic Pain and Description of the Multidisciplinary Approach to Pain Control**

KATHLEEN FOLEY, M.D., New York City

Associate Professor, Neurology and Pharmacology,
Cornell University Medical College;
Research Associate, Laboratory of
Neuro-Oncology,
Sloan-Kettering Institute for Cancer Research

9:40 A.M. **Pharmacologic Considerations in Pain Management**

THOMAS KANTOR, M.D., New York City

Professor of Clinical Medicine,
Clinical Coordinator of Rheumatic Disease Study Group,
Head of Division of Clinical Pharmacology,
New York University School of Medicine

10:20 A.M. **Coffee Break to View Exhibits**

10:35 A.M. **Psychologic Aspects of Pain and History of the Placebo Effect in Medical Treatment**

ARTHUR K. SHAPIRO, M.D., New York City

Clinical Professor of Psychiatry,
Mount Sinai School of Medicine of the City
University of New York;
Attending Psychiatrist and Director,
Tourette and Tic Laboratory and Clinic,
Mount Sinai Hospital

11:15 A.M. **Nonpharmacologic Pain Control: Biofeedback/Hypnosis**

HERBERT LANDAU, Ph.D., Mineola

Director, Nassau Pain and Stress Center;
Adjunct Medical Staff, Department of Psychiatry,
Nassau Hospital

11:55 A.M. **Panel Discussion and Response to Questions from the Audience:** The Above Speakers

KATHLEEN FOLEY, M.D., New York City, *Moderator*

1:30 P.M.–5:00 P.M.

MAXWELL SPRING, M.D., The Bronx, *Moderator*

Associate Chairman, Scientific Program Committee,
Medical Society of the State of New York;
Clinical Associate Professor of Medicine,
College of Medicine and Dentistry of New Jersey
Medical School

1:30 P.M. **Outpatient Management of Pain: The Anesthesiologist's Holistic Viewpoint**

HAROLD CARRON, M.D., Charlottesville, Virginia

Professor of Anesthesiology; Organizer,
Director, and Consultant of Pain Clinic,
University of Virginia Medical Center;
President, American Society of Regional
Anesthesia

2:10 P.M. **Neurosurgical/Surgical Approaches In Pain Management**

I. MELBOURNE GREENBERG, M.D., Freeport

Associate Professor, Clinical Neurosurgery, State University of New York at Stony Brook; Assistant Attending, Neurosurgery, Nassau Hospital

2:50 P.M. **The Role of Acupuncture in Pain Control**

DANIEL S. J. CHOY, M.D., New York City

Associate in Medicine, Columbia University
College of Physicians and Surgeons;
Associate Physician, Department of Medicine,
Lenox Hill Hospital

3:30 P.M. **Coffee Break to View Exhibits**

(continued)

3:45 P.M. **Frontiers In Pain Research**

AGU PERT, Ph.D., Bethesda, Maryland

Senior Staff Psychopharmacologist,
National Institute of Mental Health

4:25 P.M. **Panel Discussion and Response to Questions from the Audience:** The Above Speakers

HAROLD CARRON, M.D., Charlottesville, Virginia, *Moderator*

GENERAL SESSION
Neurosurgery
Neurology

9:00 A.M.–12:00 NOON

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3 Hours, Category 1; AAFP, 3 Hours, Prescribed

CEREBROVASCULAR DISEASE: CONTROVERSIES IN THE 1980s

A. JOHN POPP, M.D., Albany, *Moderator*

Associate Professor, Division of Neurosurgery,
Albany Medical College;
Chief, Section of Neurosurgery,
Veterans Administration Medical Center

Objective: The conjoined meeting of the sections of Neurosurgery and Neurology will discuss controversial issues relating to cerebrovascular disorders, particularly stroke. The topics selected for discussion represent a broad spectrum of problems found in the diagnosis and treatment of cerebrovascular disease.

EXECUTIVE SESSIONS

9:00 A.M. **Controversies in the History of Stroke**

DAVID GREEN, M.D., Albany

Clinical Professor of Neurology,
Albany Medical College of Union University

9:15 A.M. **An Overview of New Diagnostic Modalities In Cerebrovascular Disease**

GLENN H. ROBESON, M.D., Albany

Professor and Chairman, Department of
Radiology, Albany Medical Center Hospital

9:45 A.M. **Evaluation and Treatment of TIAs (Transient Ischemic Attacks)**

RICHARD SATRAN, M.D., Rochester

Professor of Neurology, University of Rochester
School of Medicine and Dentistry

10:05 A.M. **The Asymptomatic Cervical Bruit and Incidental Intracranial Aneurysm—What to do?**

DAVID O. MARSH, M.D., Rochester

Associate Professor of Neurology, University of
Rochester School of Medicine and Dentistry

10:25 A.M. **Coffee Break to View Exhibits**

10:40 A.M. **Extracranial Carotid Disease—Surgical Considerations**

ROBERT G. OJEMANN, M.D., Boston, Massachusetts

Professor of Surgery and Visiting Neurosurgeon,
Massachusetts General Hospital;
Professor of Surgery, Harvard Medical School

11:15 A.M. **Pseudo-Occlusion of the Internal Carotid Artery**

RICHARD A. R. FRASER, M.D., New York City

Associate Professor, Department of Surgery
(Neurosurgery),
Cornell University Medical College;
Associate Attending Surgery (Neurosurgery),
The New York Hospital

11:30 A.M. **Vertebral-Carotid Transposition**

JACK FEIN, M.D., The Bronx

Associate Professor of Neurosurgery,
Department of Neurosurgery,
Albert Einstein College of Medicine of Yeshiva
University

11:45 A.M. **Revascularization of the Rostral Brain Stem**

L. NELSON HOPKINS, M.D., Buffalo

Assistant Clinical Professor of Neurosurgery,
State University of New York at Buffalo

(continued)

Otolaryngology and Maxillofacial Surgery

2:00 P.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3 Hours, Category 1; AAFP, 3 Hours
Prescribed

TUMORS OF THE HEAD AND NECK

Steven M. Parnes, M.D., Albany, *Moderator*

Associate Professor of Otolaryngology,
Albany Medical College

Objective: Attendance at this program will familiarize the practitioner with the diagnostic and therapeutic problems associated with head and neck tumors. Proper identification of the origins of these tumors, especially that of the unknown primary, leads to improved therapeutic outcome.

EXECUTIVE SESSION

2:00 P.M. **Thyroid Tumors**

Jerome C. Goldstein, M.D., Albany

Professor and Chairman of Otolaryngology,
Albany Medical College

2:30 P.M. **Parathyroid Tumors**

James Cinberg, M.D., The Bronx
Associate Professor of Otolaryngology,
Albert Einstein College of Medicine of Yeshiva University

3:00 P.M. **Malignant Neck Cysts**

Danuta Rozycki, M.D., The Bronx

Associate Professor of Otolaryngology,
Albert Einstein College of Medicine of Yeshiva University

3:30 P.M. **Coffee Break to View Exhibits**

3:45 P.M. **Glomus Tumors of the Head and Neck**

William Lawson, M.D., New York City

Professor of Otolaryngology,
Mount Sinai School of Medicine
of the City University of New York

4:10 P.M. **Other Vascular Tumors of the Head and Neck**

Hugh Biller, M.D., New York City

Professor and Chairman of Otolaryngology,
Mount Sinai School of Medicine
of the City University of New York

4:35 P.M. **The Unknown Primary**

Daniel Rabuzzi, M.D., New York City

Professor and Chairman, Department of
Otolaryngology,
New York Medical College

Urology
Joint Meeting with the New York State Urological Society, Inc.

8:30 A.M.–12:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 3½ Hours, Category 1; AAFP, 3½ Hours,
Prescribed

APPROACHES TO UROLITHIASIS IN THE 80s

E. Darracott Vaughan, Jr., M.D., New York City, *Moderator*

Chairman, Division of Urology, The New York Hospital-Cornell University Medical Center

Objective: To inform the practicing physician of the most recent approaches in the etiological investigation, diagnosis, and treatment of Urolithiasis.

EXECUTIVE SESSION

8:30 A.M. **Metabolic Evaluation to Determine Underlying Mechanisms of Recurrent Stone Disease**

David Zackson, M.D., New York City

Co-Director, Rogosin-Brady Stone Unit,
The New York Hospital-Cornell University
Medical Center

(continued)

9:15 A.M. **Management of Struvite (Infection) Urolithiasis**

John J. Williams, M.D., New York City

Co-Director, Acetohydroxamic Acid Stone Study, Rockefeller University and Cornell University Medical Center

9:45 A.M. **Discussion**

10:15 A.M. **Coffee Break to View Exhibits**

10:30 A.M. **Introduction to Surgical Approaches to Urolithiasis**

E. Darracott Vaughan, Jr., M.D., New York City

10:45 A.M. **Intraoperative Adjuncts to Renal Stone Surgery and the Status of Endourologic Procedures**

Bernard Lytton, M.D., New Haven, Connecticut

Chairman, Department of Urology, Yale University

11:30 A.M. **Discussion**

Pathology, Clinical Pathology, and Blood Banking

2:00 P.M.–5:00 P.M.

CONTINUING MEDICAL EDUCATION CREDIT: AMA, PRA, 3 Hours, Category 1; AAFP, 3 Hours Prescribed

RECENT DEVELOPMENTS IN LABORATORY MEDICINE

Nathan S. Taylor, M.D., Rochester, *Moderator*

Pathologist, Rochester General Hospital;
Assistant Clinical Professor of Pathology,
University of Rochester School of Medicine and Dentistry

Objective: Physicians attending this program will be updated on new developments by which the clinical laboratory is able to assist in the diagnosis and management of current medical problems.

EXECUTIVE SESSION

2:00 P.M. **Updated Enzyme Diagnosis of Myocardial Infarcts**

S. Raymond Gambino, M.D., New York City

Director of Laboratories, St. Luke's-Roosevelt Hospital Center;
Professor of Pathology,
Columbia University College of Physicians and Surgeons

2:30 P.M. **Discussion**

2:40 P.M. **New Frontiers in Therapeutic Drug Monitoring: Free Drug Levels and Other Advances**

Charles E. Pippenger, Ph.D., New York City

Associate Professor, Clinical Neuropharmacology; Director, Therapeutic Drug Monitoring Section, Clinical Chemistry Service, The Presbyterian Hospital in the City of New York

3:10 P.M. **Discussion**

3:20 P.M. **Coffee Break to View Exhibits**

3:35 P.M. **Immunoperoxidase Staining Methods in Diagnostic Pathology**

Cecelia M. Fenoglio, M.D., New York City

Professor and Co-Chairperson,
Department of Surgical Pathology,
Columbia University College of Physicians and Surgeons

4:05 P.M. **Discussion**

4:15 P.M. **HLA (Human Leukocyte Antigen) Typing and Its Significance in Diagnostic Medicine**

Daniel Baieve, Ph.D., Rochester

Research Associate, The American Red Cross Blood Services;
Lecturer, Department of Biological Sciences,
University of Rochester School of Medicine and Dentistry

4:45 P.M. **Discussion**

(continued)

SUNDAY, JUNE 27, 1982

GENERAL SESSION
Physical Medicine and Rehabilitation
Plastic, Reconstructive and Maxillofacial Surgery

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 3½ Hours, Prescribed

THE CURRENT MANAGEMENT OF DECUBITUS ULCERS

DAVID G. WELCH, M.D., Glens Falls, *Moderator*

Chairman, Section on Physical Medicine and Rehabilitation,
Medical Society of the State of New York;
Chairman, Department of Physical Medicine and Rehabilitation,
Glens Falls Hospital;
Clinical Assistant Professor of Physical Medicine and Rehabilitation, Albany Medical College

Objective: To provide an update on the care and treatment of decubitus ulcers.

EXECUTIVE SESSIONS

8:55 A.M. **Introduction**

9:00 A.M. **Identification, Early Diagnosis Epidemiology of Decubitus Ulcers**

DAVID G. WELCH, M.D., Glens Falls

9:15 A.M. **Diagnosis and Classification of Decubitus Ulcers**

CATALINO C. DAROY, M.D., Schenectady

Clinical Instructor, Department of Physical Medicine and Rehabilitation,
Albany Medical College;
Chief, Hemiplegia Clinic, Sunnyview Hospital

9:30 A.M. **Management: The Prevention of Decubitus Ulcers**

MARION E. MURPHY, M.D., Schenectady

Clinical Assistant Professor,
Department of Physical Medicine and Rehabilitation,
Albany Medical College;
Chief, Department of Physical Medicine and Rehabilitation,
Sunnyview Hospital

9:45 A.M. **Odd Facts About Medical Management**

ROBERT H. CRESS, M.D., Albany

Professor of Physical Medicine and Rehabilitation,
Albany Medical College;
Attending Physician,
Physical Medicine,
Albany Medical Center Hospital

10:15 A.M. **Coffee Break to View Exhibits**

10:30 A.M. **Nonoperative Surgical Management of Decubitus Ulcers**

DANIEL C. MORELLO, M.D., White Plains

Attending Plastic Surgeon and Co-chairman of Microsurgical Team, White Plains Hospital;
Assistant Professor Plastic Surgery (Clinical),
New York University Medical Center

10:45 A.M. **Traditional Surgical Management of Decubitus Ulcers**

ROBERT W. BERNARD, M.D., White Plains

Chief, Plastic Surgery, White Plains Hospital;
Assistant Professor, Plastic Surgery (Clinical),
New York University Medical Center

11:00 A.M. **Current Surgical Management of Small Decubitus Ulcer**

JAMES G. HOEHN, M.D., Albany

Chairman, Section on Plastic Reconstructive and Maxillofacial Surgery,
Medical Society of the State of New York;
Assistant Professor of Surgery (Plastic),
Albany Medical College

11:15 A.M. **Current Surgical Management of Large Decubitus Ulcer**

ANTHONY R. PISANI, M.D., White Plains

Attending Physician, Department of Plastic Surgery,
St. Agnes Hospital;
Clinical Assistant Professor, Department of Surgery (Plastic),
New York Medical College

11:30 A.M. **Future Surgical Consideration on the Horizon for the Treatment of Decubitus Ulcer**

AVRON DANILLER, M.D., The Bronx

Associate Professor of Plastic Surgery,
Hospital of Albert Einstein College of Medicine;
Director of Plastic Surgery,
Bronx Municipal Hospital Center

(continued)

11:45 A.M. **Prognosis**

David G. Welch, M.D., Glens Falls

12:00 NOON **Panel Discussion**

Preventive Medicine and Public Health

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 3½ Hours Prescribed

CHALLENGES IN THE PROVISION OF HEALTH SERVICES FOR THE ELDERLY

Arthur G. Baker, M.D., Utica, *Moderator*

Commissioner of Health,
Oneida County Department of Health

Objective: The burgeoning size of the U.S. population over 65 years and the escalating cost of medical care in this age group are the most critical issues facing the health care industry. Our speakers will examine various aspects of this controversial issue.

EXECUTIVE SESSION

8:45 A.M. **Geriatric Health Care: Whose Responsibility; a Review of Medical Practice in England, Sweden, and the United States**

Raymond Vickers, M.D., Albany

Associate Commissioner for Mental Health,
Chief, Bureau of Geriatric Services,
Office of Mental Health

9:30 A.M. **The New Public Health Challenge — Adding Life to Years**

Clara Nicholson, Ph.D., Albany

Director of Geriatric Planning and Programs,
Office of Mental Health

10:15 A.M. **Coffee Break to View Exhibits**

10:45 A.M. **Preventive Health Services for the Elderly; a Review of Some Current Health Department Programs, with Emphasis on the Role of the Nurse Practitioner**

Betty Reynolds, R.N., Utica

Assistant Professor, Nursing Department,
State University of New York
College of Technology

Arthur G. Baker, M.D., Utica

11:30 A.M. **There Are Alternatives to Institutional Care for the Disabled Elderly**

Ron Lucchino, Ph.D., Utica

Director, Institute of Gerontology and
Associate Professor of Biology,
Utica College

12:15 P.M. **Questions and Panel Discussion**

Allergy and Immunology

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 4 Hours Prescribed

CONTROVERSIAL TOPICS IN ALLERGY AND IMMUNOLOGY IN 1982

William E. Hermance, M.D., White Plains, *Moderator*

Chief, Allergy Section,
White Plains Hospital Medical Center;
Associate Physician, Allergy Section,
Lenox Hill Hospital

Objective: To present topics in Allergy and Immunology which may be little known or not well understood. Certain topics and techniques will be discussed which are controversial, which lie at the borders of conventional thought in the field, and which may have implications for the future.

(*continued*)

EXECUTIVE SESSION

8:30 A.M. Theophyllin vs. Beta-Adrenergic Stimulators

William J. Davis, M.D., New York City

Associate Professor of Pediatrics,
Columbia University College of Physicians and Surgeons;
Director, Division of Allergy,
Department of Pediatrics,
Columbia Presbyterian Medical Center.

9:05 A.M. Discussion

9:15 A.M. Controversial Techniques in Allergy

Earl B. Brown, M.D., New York City

Assistant Clinical Professor of Medicine,
Columbia University College of Physicians and Surgeons;
Chief, Allergy Section,
Lenox Hill Hospital

9:50 A.M. Discussion

10:00 A.M. Foods: Yes, They Do Alter Activity and Behavior

Doris J. Rapp, M.D., Buffalo

Clinical Assistant Professor of Pediatrics,
State University of New York at Buffalo,
Children's Hospital, and Erie County Medical Center

10:35 A.M. Discussion

10:45 A.M. Coffee Break to View Exhibits

11:00 A.M. Controversies in Immunology

Michael H. Grieco, M.D., New York City

Professor of Clinical Medicine,
Columbia University College of Physicians and Surgeons;
Director, Robert A. Cooke Institute of Allergy,
St. Luke's-Roosevelt Hospital Center

11:35 A.M. Discussion

11:45 A.M. Interferons: Scientific Background and Prospects for Medical Applications

* Mathilde Krim, Ph.D., New York City

Associate Member and Head,
Interferon Evaluation Program,
Sloan-Kettering Institute for Cancer Research
* By Invitation

12:20 P.M. Discussion

GENERAL SESSION
Psychiatry
Pediatrics
School Health
Family and General Practice

8:30 A.M.–12:30 P.M.

CONTINUING MEDICAL EDUCATION CREDIT:
AMA, PRA, 4 Hours, Category 1; AAFP, 4 Hours, PRESCRIBED

CONTROVERSIAL ISSUES IN CHILD/ADOLESCENT/ADULT PSYCHIATRY

Jerome S. Silverman, M.D., New York City,
Moderator

Chairman, Section on Psychiatry, Medical Society of the State of New York;
Associate Professor of Clinical Psychiatry, New York University School of Medicine

Objective: Doctors who attend this Section will gain information on certain theories, their controversial elements and the consequent therapeutic potentialities for specific psychiatric phenomena including anorexia, depression, and aspects of the therapeutic alliance. It is manifest that the constant inter-relatedness of body and mind must be taken into account diagnostically and therapeutically.

8:30 A.M. Introduction

(*continued*)

EXECUTIVE SESSIONS

8:40 A.M. **How Food Alters Behavior: Immunologic and Film Documentation**

DORIS J. RAPP, M.D., Buffalo

Clinical Assistant Professor of Pediatrics,
State University of New York at Buffalo,
Children's Hospital, and Erie County Medical Center

9:15 A.M. **Discussion and floor discussion led by:**

THOMAS S. BUMBALO, M.D., Alden

Emeritus Clinical Professor of Pediatrics, State University of New York at Buffalo School of Medicine

Floor Discussion

9:30 A.M. **Controversies About the Therapeutic and Working Alliances**

MARK KANZER, M.D., New York City

Clinical Professor Emeritus of Psychiatry,
State University of New York-Downstate Medical Center

10:15 A.M. **Discussion**

10:30 A.M. **Coffee Break to View Exhibits**

10:45 A.M. **Treatment Choice for Anorexia Nervosa: The Psychoanalytic Approach**

IRA MINTZ, M.D., New Jersey

Supervising Child Psychoanalyst,
Columbia Psychoanalytic Training Center,
Columbia University College of Physicians and Surgeons

11:15 A.M. **Discussion and floor discussion led by:**

ANDREA MARKS, M.D. Manhasset

Chief, Division Adolescent Medicine, North Shore Hospital; Assistant Professor, Pediatrics, Cornell University Medical College

Second Discussant:

GARY J. GRAD, M.D., Manhattan

President, Council on Child Psychiatry

Floor Discussion

11:30 A.M. **Depression in Childhood and Adolescence: Diagnosis and Treatment**

JOAQUIM PUIG-ANTICH, M.D., New York City

Director, Child and Adolescent Depression Clinic,
New York State Psychiatric Institute;
Assistant Professor of Clinical Psychiatry,
Columbia University College of Physicians and Surgeons

12:15 P.M. **Discussion and floor discussion led by:**

HENRY SCHNEER, M.D., Lido Beach

President, New York State Hospitals Medical Alumni Association
Professor, Clinical Psychiatry SUNY

Floor Discussion

ABOUT THE RYE TOWN HILTON

Try to imagine a country manor surrounded by 60 wooded acres. The kind of place that's as beautiful inside as it is outside. The result is a unique comfort and beauty in an unspoiled natural setting. Here are some of the attractions at the Rye Town Hilton.

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Front Office Manager
Rye Town Hilton
699 Westchester Ave.
Port Chester, N.Y. 10573

Phone:
914-939-6300

Name______________________________

Confirm to (Address)________________________

City________________State________Zip______

Arr. Date________Hour______a.m./p.m. Dep. Date________

For more than 2 rooms, contact reservation Mgr.

PLEASE CIRCLE RATE REQUESTED

SINGLE:	$69	$74	$79	$84	$89
DOUBLE/TWIN:	$79	$84	$89	$94	$99
SUITES:	$175 and up				

MEDICAL SOCIETY OF THE
STATE OF NEW YORK
1982 CME ASSEMBLY
JUNE 25-27, 1982
SUITES ON REQUEST TO HOTEL

☐ CONFIRMATION REQUESTED
If two or more to occupy room, name of joiner(s)________________

If a range of rates is offered and the rate requested is not available, the next available rate will be assigned. Reservation requests must be received no later than June 4, 1982, and will be held until 6:00 p.m. on the date of arrival unless otherwise specified.

If reservations are made by telephone, you must identify the Medical Society meeting for the special rate to apply. Rates subject to applicable sales tax.

RESTAURANTS

Penfield's for gracious dining—an adventure in gourmet food, and Penfield's Patio for informal lunches and cocktails. Also the Tulip Tree for casual meals and buffet surrounded by the greenery of ferns and flowers.

GUEST ROOMS

Each has color TV with AM/FM radio, refrigerator and coffee maker. Rooms are beautifully appointed with large windows overlooking the wooded grounds and gardens.

TRANSPORTATION

Convenient regularly scheduled ground transportation is available from LaGuardia and Kennedy Airports. On arrival, go to the baggage claim area and look for Airport Transportation Services free courtesy phone (it's red). From airports, service is throughout the day and evening with departures every hour (½ hour service during peak travel times). Last departure leaves Kennedy at 11:30 p.m. and LaGuardia at 11:15 p.m. One-way fare: $11.00. Round-trip fare: $21.00. By train from Manhattan (Grand Central Station), take the New Haven line to Rye, New York (about 45 minutes). From the Rye Station, it is a 5 minute taxi ride to the Rye Town Hilton.

HOTEL RESERVATIONS

Physicians must make their own hotel reservations no later than June 4, 1982, direct with the Rye Town Hilton. In order to take advantage of the special rates for sleeping rooms, please mention that you will be attending the Medical Society CME Assembly.

BROADWAY SHOW & SUPPER

Friday, June 25th. Round trip transportation by private bus. Supper at the Tavern on the Green. Per person: $90.00. See this section for details and reservation form.

RECEPTION & DINNER DANCE

All physicians and their guests are invited to attend the Medical Society dinner dance on Saturday, June 26th. Ronald Dougherty, M.D., Chairman, MSSNY Committee on Drug Abuse, will be the guest

speaker. A reception sponsored by the Medical Society of the State of New York will begin at 7:00 p.m. Dinner will be served at 8:00 p.m. $39.00 per person.

MEETING & EXHIBIT HOURS

Friday, June 25: 8:30 a.m.–5:00 p.m.
Saturday, June 26: 8:30 a.m.–5:00 p.m.
Sunday, June 27: 8:30 a.m.–12:30 p.m.

INTERMISSIONS

There will be morning and afternoon intermissions for coffee, and to allow time to visit the exhibits.

REGISTRATION

Registration is open to MSSNY members and their guests, nonmember physicians, medical students, and members of the allied professions. There is no registration fee. Registration hours will be: Thursday, June 24 from 4:00 p.m. to 8:00 p.m., Friday & Saturday, June 25 & 26, from 8:00 a.m. to 5:00 p.m., and Sunday, June 27, from 8:00 a.m. to 12:00 Noon. All meetings and exhibits will close at 12:30 p.m. on Sunday.

PRE-REGISTRATION

Please fill out the pre-registration form and mail to the Medical Society address as indicated on the form. Your badge and tickets will be held at the MSSNY Registration Desk located in the Grand Ballroom exhibit area.

PRE-REGISTRATION FORM

1982 Annual CME Assembly, June 25–27
RYE TOWN HILTON

(please print)

Name____
(last) (first) (initial)

Address____

City & State______________________________Zip______________

Member of MSSNY: Yes________No________Specialty______________________

Note: There is no registration fee.

Saturday Reception & Dinner/Dance________tickets @ $39.00. Total______________

Please make checks payable to: Medical Society of the State of New York, clip and mail to Division of Advertising & Meeting Services, Medical Society of the State of New York, 420 Lakeville Rd., P.O. Box 5404, Lake Success, New York 11042.

TECHNICAL EXHIBITS

GRAND BALLROOM

THE TECHNICAL EXHIBITS will be located in the Grand Ballroom of the Rye Town Hilton. Exhibit hours are 8:30 a.m.–5:00 p.m. on Friday, June 25th and Saturday, June 26th; and from 8:30 a.m. to 12:30 p.m. on Sunday, June 27th.

Our exhibitors look foward to the pleasure of meeting and serving members and guests of the Medical Society of the State of New York.

Abbott Laboratories North Chicago, Illinois	**Booth 1**
A.I.S. Corporation Basking Ridge, New Jersey	**Booth 20**
Ayerst Laboratories New York City	**Booth 24**
Bio-Cell Technology Corporation New York City	**Booth 37**
Blue Cross/Blue Shield of Greater New York New York City	**Booth 47**
Bristol Laboratories Syracuse, New York	**Booth 14**
Cryomedics Bridgeport, Connecticut	**Booth 29**
Datamedic Corporation Plainview, New York	**Booth 33**
Encyclopaedia Britannica Chicago, Illinois	**Booth 38**
Endo Laboratories, Inc. Wilmington, Delaware	**Booth 4**
Doctors Office Computer Systems New York City	**Booths 26 & 27**
Foster Medical Corporation Guilderland, New York	**Booth 5**
Gerber Products Company Paramus, New Jersey	**Booth 35**
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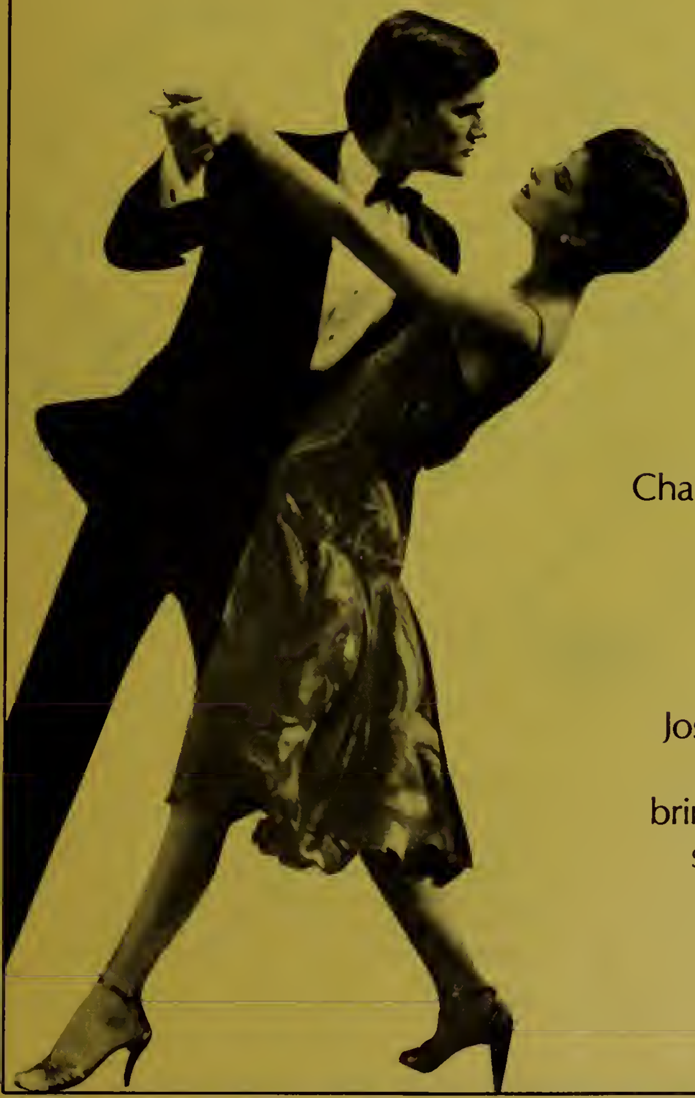
DOCTOR . . . while attending the CME

Assembly, why not join us!

RECEPTION and DINNER DANCE

at the Rye Town Hilton's beautiful Westchester Ballroom

SATURDAY, JUNE 26, 1982



The Reception, sponsored by the Medical Society of the State of New York, will take place at 7:00 p.m., and Dinner at 8:00 p.m.

Per Person: $39.00

GUEST SPEAKER:
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Chairman, MSSNY Committee
on Drug Abuse

We can assure you of gourmet food, wine, and fine music by Joseph Trongone and his musicians. Doctor, may we suggest that you bring your wife and enjoy a pleasant summer weekend together at the Rye Town Hilton.

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Directions to the Rye Town Hilton

699 Westchester Avenue   Town of Rye   Port Chester, New York

from major New York Metropolitan Airports

FROM LAGUARDIA AIRPORT
Take the Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave. following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

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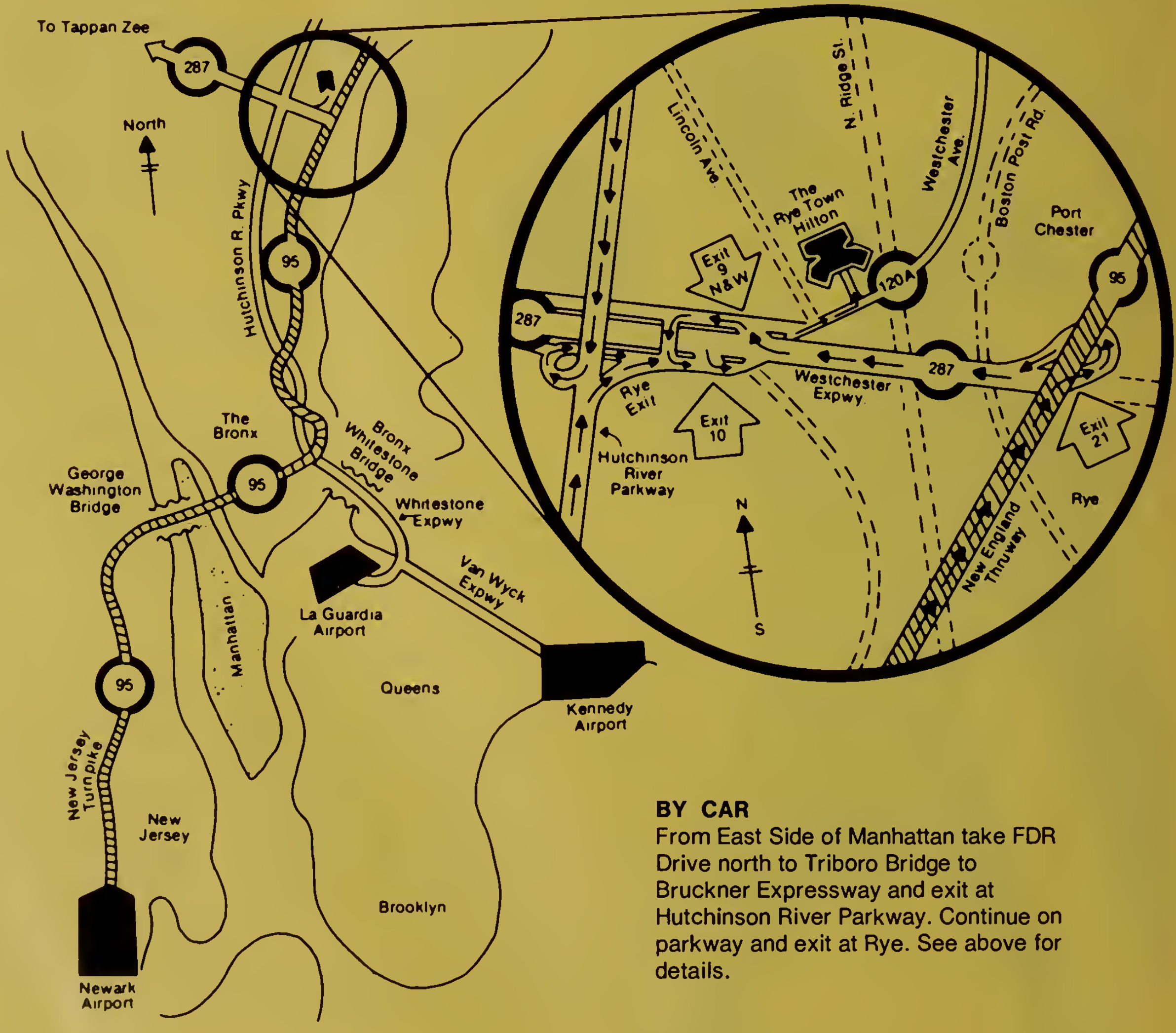
Take Van Wyck Expressway to Whitestone Expressway. Proceed on Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

FROM NEWARK AIRPORT
Take New Jersey Turnpike (95) to the George Washington Bridge. Proceed on U.S. 95 to Cross Westchester Expressway Exit 21. Proceed west on Cross Westchester Expressway (287) to Exit 9NS. Turn left at first traffic light onto Kennilworth Road. Turn left immediately at second traffic light onto Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).



BY CAR
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notes·memos·

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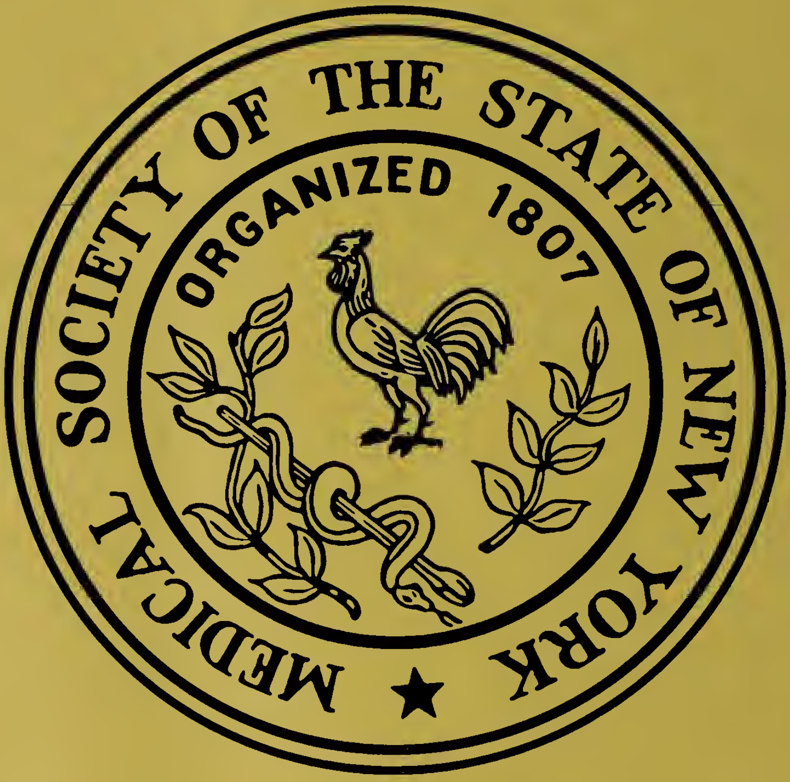
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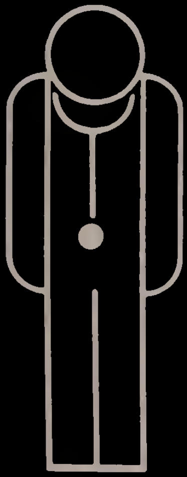

For relief of

☐ **impairment of recent memory**

☐ **confusion**

☐ **disorientation**

and other signs and symptoms of idiopathic decline in mental capacity in patients over 60...

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HYDERGINE® ORAL TABLETS, 1 mg

(ERGOLOID MESYLATES)

Each 1 mg Hydergine tablet contains dihydroergocornine mesylate 0.333 mg, dihydroergocristine mesylate 0.333 mg, and dihydroergocryptine (dihydro-alpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.333 mg, representing a total of 1 mg.

Before prescribing Hydergine therapy, the possibility that the patient's signs and symptoms arise from a potentially reversible and treatable condition should be excluded. In addition, because the presenting clinical picture may evolve to suggest an alternative treatment, the decision to use Hydergine therapy should be continually reviewed. Hydergine (ergoloid mesylates) is not indicated in the treatment of acute or chronic psychosis.

Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, self-care, apparent motivation) in patients over sixty. Before prescribing Hydergine therapy, exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis, regardless of etiology (see **Contraindications**).

Use of Hydergine (ergoloid mesylates) therapy should be continually reviewed, since presenting clinical picture may evolve to allow specific diagnosis and specific alternative treatment, and to determine whether any initial benefit persists. Modest but statistically significant changes observed at the end of twelve weeks of Hydergine therapy include: mental alertness, confusion, recent memory, orientation, emotional lability, self-care, depression, anxiety/fears, cooperation, sociability, appetite, dizziness, fatigue, bothersome(ness), and an overall impression of clinical status.

Contraindications: Hypersensitivity to the drug; psychosis, acute or chronic, regardless of etiology.

Precautions: *Because the target symptoms are of unknown etiology, careful diagnosis should be attempted before prescribing Hydergine therapy.*

Adverse Reactions: Serious side effects have not been found. Some transient nausea and gastric disturbances have been reported, and sublingual irritation with the sublingual tablets.

Dosage and Administration: 1 mg three times daily. Alleviation of symptoms is usually gradual and results may not be observed for 3-4 weeks.

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NEW YORK STATE JOURNAL OF MEDICINE

MAY 1982

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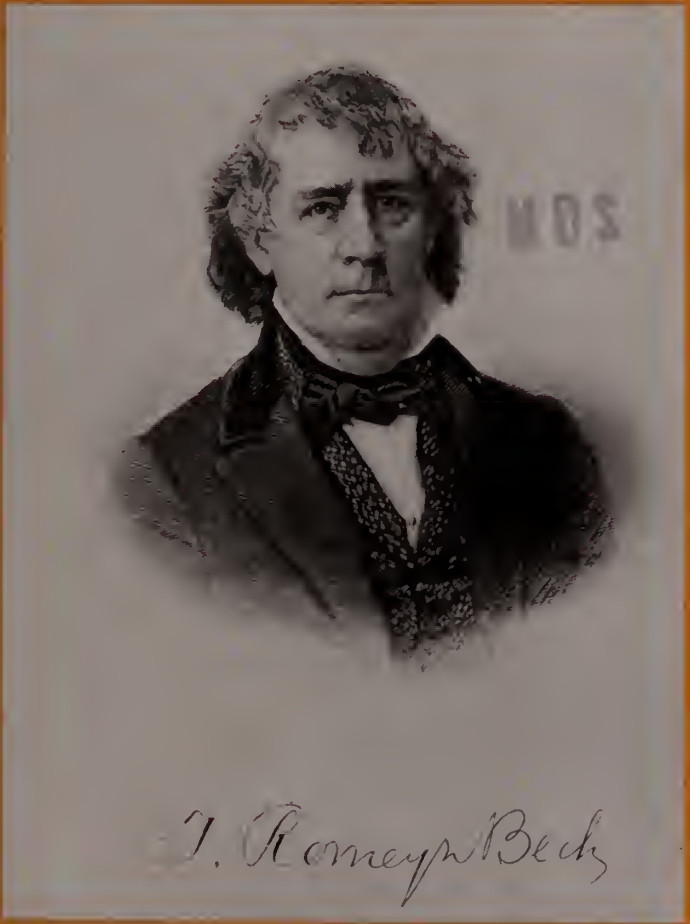

MDS

Theodoric Romeyn Beck, M.D., Albany County. President, Medical Society of the State of New York, 1827–29.

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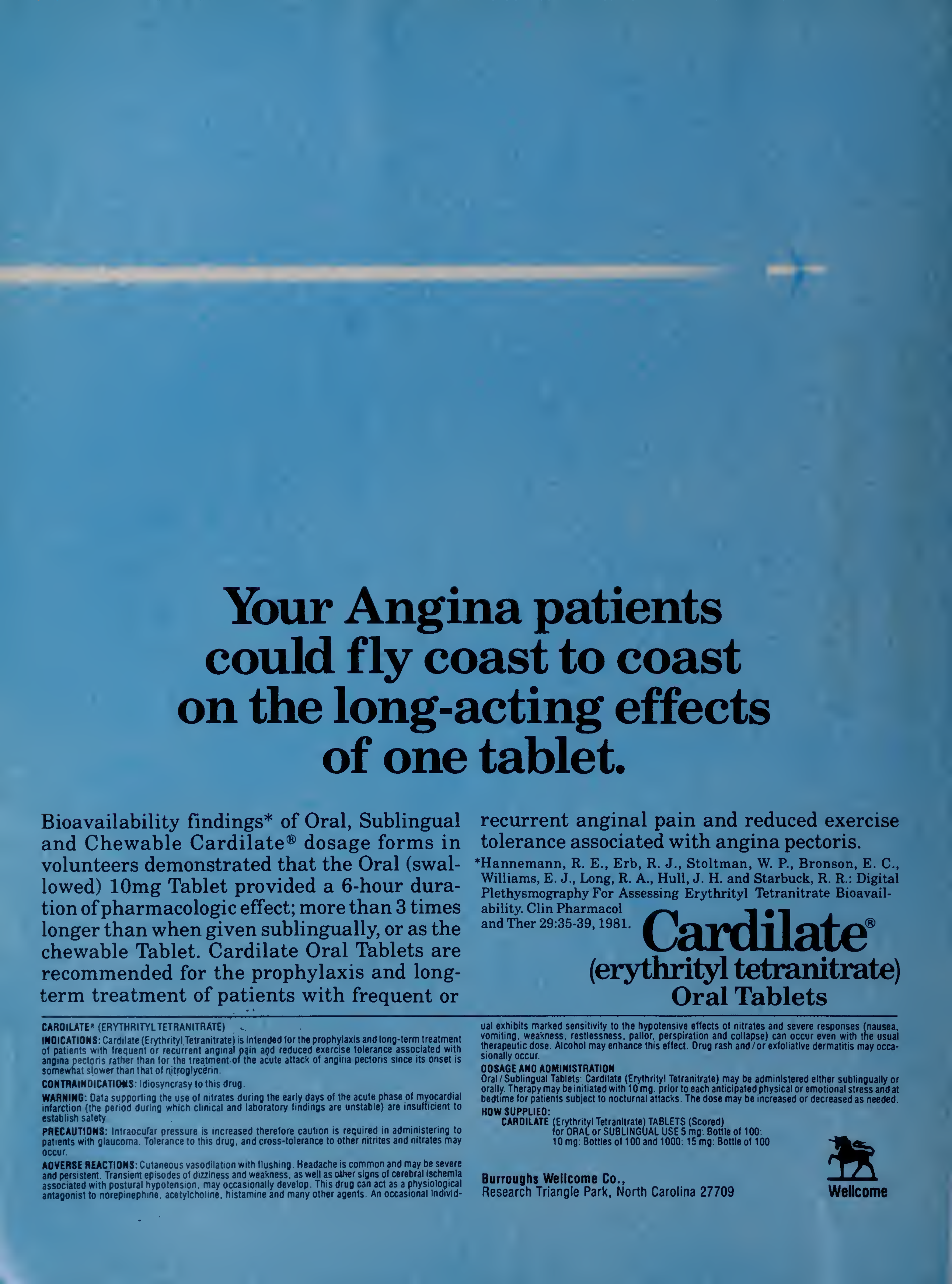
ANNUAL CME ASSEMBLY • June 25–27, 1982 • RYE TOWN HILTON



Your Angina patients could fly coast to coast on the long-acting effects of one tablet.

Bioavailability findings* of Oral, Sublingual and Chewable Cardilate® dosage forms in volunteers demonstrated that the Oral (swallowed) 10mg Tablet provided a 6-hour duration of pharmacologic effect; more than 3 times longer than when given sublingually, or as the chewable Tablet. Cardilate Oral Tablets are recommended for the prophylaxis and long-term treatment of patients with frequent or recurrent anginal pain and reduced exercise tolerance associated with angina pectoris.

*Hannemann, R. E., Erb, R. J., Stoltman, W. P., Bronson, E. C., Williams, E. J., Long, R. A., Hull, J. H. and Starbuck, R. R.: Digital Plethysmography For Assessing Erythrityl Tetranitrate Bioavailability. Clin Pharmacol and Ther 29:35-39, 1981.

Cardilate®
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Oral Tablets

CARDILATE® (ERYTHRITYL TETRANITRATE)

INDICATIONS: Cardilate (Erythrityl Tetranitrate) is intended for the prophylaxis and long-term treatment of patients with frequent or recurrent anginal pain and reduced exercise tolerance associated with angina pectoris rather than for the treatment of the acute attack of angina pectoris since its onset is somewhat slower than that of nitroglycerin.

CONTRAINDICATIONS: Idiosyncrasy to this drug.

WARNING: Data supporting the use of nitrates during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety

PRECAUTIONS: Intraocular pressure is increased therefore caution is required in administering to patients with glaucoma. Tolerance to this drug, and cross-tolerance to other nitrites and nitrates may occur.

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop. This drug can act as a physiological antagonist to norepinephine, acetylcholine, histamine and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and / or exfoliative dermatitis may occasionally occur.

DOSAGE AND ADMINISTRATION
Oral / Sublingual Tablets: Cardilate (Erythrityl Tetranitrate) may be administered either sublingually or orally. Therapy may be initiated with 10 mg. prior to each anticipated physical or emotional stress and at bedtime for patients subject to nocturnal attacks. The dose may be increased or decreased as needed.

HOW SUPPLIED:
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10 mg: Bottles of 100 and 1000: 15 mg: Bottle of 100

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New York State Journal of Medicine (ISSN 0028-7628)

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BECAUSE A THIAZIDE ALONE CAN ONLY DO SO MUCH...
AND YET CAN DO TOO MUCH.
E. M. I.

INCREASE CONTROL WITHOUT INCREASING POTASSIUM PROBLEMS.

A dependable means to long-term blood pressure control.

Many times, a diuretic alone can't keep hypertension in check. INDERIDE, however, can pick up where thiazide therapy leaves off.

The combination of propranolol HCl, the world's most trusted beta blocker, and hydrochlorothiazide, the standard among diuretics, enables INDERIDE to exert an additive antihypertensive effect.[1,2] *In fact, a propranolol/hydrochlorothiazide regimen maintained blood pressure below 90 mm Hg in 81.8% to 86.4% of patients followed for 6 to 18 months of therapy.*[1]

Low thiazide dosage means reduced risk of hypokalemia.

When thiazides are prescribed in doses greater than 50 mg/day, the potential for hypokalemia increases substantially. What's more, the greater the fall in serum K+, the greater the risk of hypokalemia-induced PVCs.[3,4]

With INDERIDE, the additive hypotensive effect of propranolol HCl allows the effective dose of hydrochlorothiazide to be kept low (25 mg b.i.d.). And by lowering the daily dose of diuretic, INDERIDE also lowers the potential for diuretic-induced side effects. Potassium problems are less likely to occur—yet blood pressure can be controlled consistently.

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When you know you need more than a thiazide.

Please see Brief Summary of Prescribing Information on following page.

BRIEF SUMMARY
(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

INDERIDE®

BRAND OF
propranolol hydrochloride
(INDERAL®)
and hydrochlorothiazide

No 474—Each INDERIDE®-40/25 tablet contains	
Propranolol hydrochloride (INDERAL®)	40 mg
Hydrochlorothiazide	25 mg
No 476—Each INDERIDE®-80/25 tablet contains	
Propranolol hydrochloride (INDERAL®)	80 mg
Hydrochlorothiazide	25 mg

WARNING: This fixed combination drug is not indicated for initial therapy of hypertension Hypertension requires therapy titrated to the individual patient If the fixed combination represents the dosage so determined, its use may be more convenient in patient management The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant

DESCRIPTION: INDERIDE combines two antihypertensive agents. INDERAL (propranolol hydrochloride), a beta-adrenergic blocking agent, and hydrochlorothiazide, a thiazide diuretic-antihypertensive

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning)

CONTRAINDICATIONS: **Propranolol hydrochloride (INDERAL®):** Propranolol hydrochloride is contraindicated in 1) bronchial asthma; 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e* , that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect The effects of propranolol and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e g* , isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g* , CHRONIC BRONCHITIS EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma

Thiazides may add to or potentiate the action of other antihypertensive drugs Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult

Nursing Mothers Thiazides appear in breast milk If the use of the drug is deemed essential the patient should stop nursing

PRECAUTIONS: **Propranolol hydrochloride (INDERAL®)**: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks or orthostatic hypotension

As with any new drug given over prolonged periods laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH

Interference with adequate oral electrolyte intake will also contribute to hypokalemia Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (*e.g* , increased ventricular irritability) Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease) Dilutional hyponatremia may occur in edematous patients in hot weather, appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged Diabetes mellitus which has been latent may become manifest during thiazide administration

Thiazide drugs may increase the responsiveness to tubocurarine

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient Thiazides may decrease arterial responsiveness to norepinephrine This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy

Thiazides may decrease serum PBI levels without signs of thyroid disturbance

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular* bradycardia; congestive heart failure; intensification of AV block, hypotension, paresthesia of hands; arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory bronchospasm.

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase lactate dehydrogenase

Hydrochlorothiazide: *Gastrointestinal* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System. dizziness, vertigo, paresthesias, headache, xanthopsia

Hematologic leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics)

Hypersensitivity purpura, photosensitivity, rash urticaria necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions

Other hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn

DOSAGE AND ADMINISTRATION: The dosage must be determined by individual titration (see boxed warning).

Hydrochlorothiazide is usually given at a dose of 50 to 100 mg per day The initial dose of propranolol is 40 mg twice daily and it may be increased gradually until optimum blood pressure control is achieved The usual effective dose is 160 to 480 mg per day

One to two INDERIDE tablets twice daily can be used to administer up to 320 mg of propranolol and 100 mg of hydrochlorothiazide. For doses of propranolol greater than 320 mg, the combination products are not appropriate because their use would lead to an excessive dose of the thiazide component.

When necessary, another antihypertensive agent may be added gradually beginning with 50 percent of the usual recommended starting dose to avoid an excessive fall in blood pressure

OVERDOSAGE OR EXAGGERATED RESPONSE: The propranolol hydrochloride (INDERAL) component may cause bradycardia, cardiac failure, hypotension, or bronchospasm

The hydrochlorothiazide component can be expected to cause diuresis. Lethargy of varying degree may appear and may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function, and in the absence of significant serum electrolyte changes or dehydration. The mechanism of central nervous system depression with thiazide overdosage is unknown Gastrointestinal irritation and hypermotility can occur; temporary elevation of BUN has been reported, and serum electrolyte changes could occur, especially in patients with impairment of renal function.

TREATMENT: The following measures should be employed GENERAL - If ingestion is, or may have been, recent, evacuate gastric contents taking care to prevent pulmonary aspiration BRADYCARDIA Administer atropine (0 25 to 1 0 mg) If there is no response to vagal blockade, administer isoproterenol cautiously CARDIAC FAILURE – Digitalization and diuretics HYPOTENSION – Vasopressors, *e.g* , levarterenol or epinephrine BRONCHOSPASM Administer isoproterenol and aminophylline STUPOR OR COMA – Administer supportive therapy as clinically warranted GASTROINTESTINAL EFFECTS Though usually of short duration, these may require symptomatic treatment ABNORMALITIES IN BUN AND/OR SERUM ELECTROLYTES Monitor serum electrolyte levels and renal function, institute supportive measures as required individually to maintain hydration, electrolyte balance, respiration, and cardiovascular-renal function

HOW SUPPLIED: *No 474* – Each INDERIDE®-40/25 tablet contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000 Also in unit dose package of 100.

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References: 1 Veterans Administration Cooperative Study Group on Antihypertensive Agents. J A M A *237* 2303 (May 23) 1977. 2 Bravo, E L , Tarazi, R C and Dustan, H P N Engl J Med 292 66 (Jan 9) 1975 3 Hollifield, J W , and Slaton, P E Acta Med Scand [Suppl] *647* 67 1981 4 Holland, O B Nixon, J V , and Kuhnert, L Am J Med 70 762 (Apr) 1981

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Medical Controversies of the 80s

Join these Professors and many other speakers at the Medical Society of the State of New York's 1982 Annual CME Assembly, June 25–27, at the Rye Town Hilton.

A. Bernard Ackerman, M.D.

Professor of Dermatology & Pathology, & Director, Department of Dermatopathology, New York University School of Medicine, New York City. *Diseases in Dermatology That Don't Exist.*

Thomas Bigger, M.D.

Professor of Medicine & Pharmacology, Columbia University College of Physicians & Surgeons, New York City. *Prophylaxis & Medical Management of Life-Threatening Ventricular Arrhythmias.*

Robert E. Carroll, M.D.

Professor of Orthopedic Surgery, Columbia University College of Physicians & Surgeons; Director, Hand Surgery, Columbia-Presbyterian Medical Center, New York City. *Primary or Secondary Repair of Flexor Tendon Injuries in the Hand.*

Harold Carron, M.D.

Professor of Anesthesiology; Organizer, Director & Consultant of Pain Clinic, University of Virginia Medical Center, Charlottesville. President, American Society of Regional Anesthesia. *Outpatient Management of Pain: The Anesthesiologist's Holistic Viewpoint.*

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Robert S. Litwak, M.D.

Governor, American College of Chest Physicians; Professor of Surgery & Chief, Division of Cardiothoracic Surgery, Mount Sinai Medical Center, New York City. *Howard M. Lilienthal, M.D.: A Vignette.*

Joseph Ransohoff, M.D.

Professor & Chairman, Department of Neurosurgery, New York University-Bellevue Medical Center, New York City. *Neurosurgical Indications for Surgery in Acute Lumbo-Spine Injuries.*

Guy F. Robbins, M.D.

Consultant to Breast Service, Department of Surgery, & Former Director of Cancer Control, Memorial Sloan-Kettering Cancer Center, New York City. *Rehabilitation in Breast Surgery.*

Richard Smith, M.D.

Professor & Chairman, Department of Ophthalmology, Albany Medical College, Albany. *Radial Keratotomy.*

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Books Reviewed

Cerebral Death. Second edition. By A. Earl Walker, M.D. Baltimore, Maryland, Urban and Schwarzenberg, 1981. Illustrated, 212 pages. Hardcover, $32.50.

This excellent book offers a comprehensive review of the subject of brain death. The author is a highly regarded neurosurgeon who coordinated a large multicenter study on cerebral death in the early 1970s.

Dr. Walker's extensive knowledge of this subject results in superb treatment of medical, philosophic, religious, and legal aspects of brain death. Clinical, laboratory, and pathologic findings in cerebral death are presented clearly and concisely. All sides of controversial issues are fairly and forthrightly examined. The data and analysis needed by the reader to reach his own conclusions on these issues are readily available in the text and accompanying tables. The various criteria which have been proposed for the diagnosis of brain death are presented in a most straightforward manner. Dr. Walker commendably emphasizes the clinically reversible situations (such as drug overdose, hypothermia, systemic shock) that can mimic irreversible cerebral death and the importance of adhering to strict criteria before making the diagnosis of a dead brain.

This book will be of value to all physicians. The fundamental principles on which the concept of cerebral death is based, as well as detailed information on the latest developments in the field, are presented in an eminently readable format. **Ira R. Casson, M.D.**

Segmental Neurology: A Guide to the Examination and Interpretation of Sensory and Motor Function. By John K. Wolf, M.D. Baltimore, Maryland, University Park Press, 1981. Illustrated, 160 pages. Paperback, $9.95.

This handbook is ostensibly for the clinical neurologist, residents in neurology, and medical students. The author appears qualified enough to write another guideline and has taken special care in providing a clearly written and well-illustrated text. However, the obvious "meat" of the book, Chapters 2 (Atlas of Muscle Testing), 3 (Sensory Examination), and 5 (Segmental Anatomy of Man), has been more than adequately covered in several publications including those that are already popular with the intended audience of the book (Clinical Examination in Neurology by the Mayo Clinic and Mayo Foundation; Aid to the Investigation of the Peripheral Nerve Injuries by the Medical Research Council; The Anatomical Correlate of Clinical Electromyography by Joseph Goodgold). This guideline does not offer any significant advantage over these publications except for its reasonable price. **Leonardo B. Martinez, M.D.**

Methods and Impact of Controlled Therapeutic Trials in Cancer, Parts I and II. Geneva, Switzerland, International Union Against Cancer, Volumes 36 (1978) and 59 (1981). UICC Technical Report Series. Paperback, $16 (Volume 36), $19 (Volume 59).

(continued on page 964)

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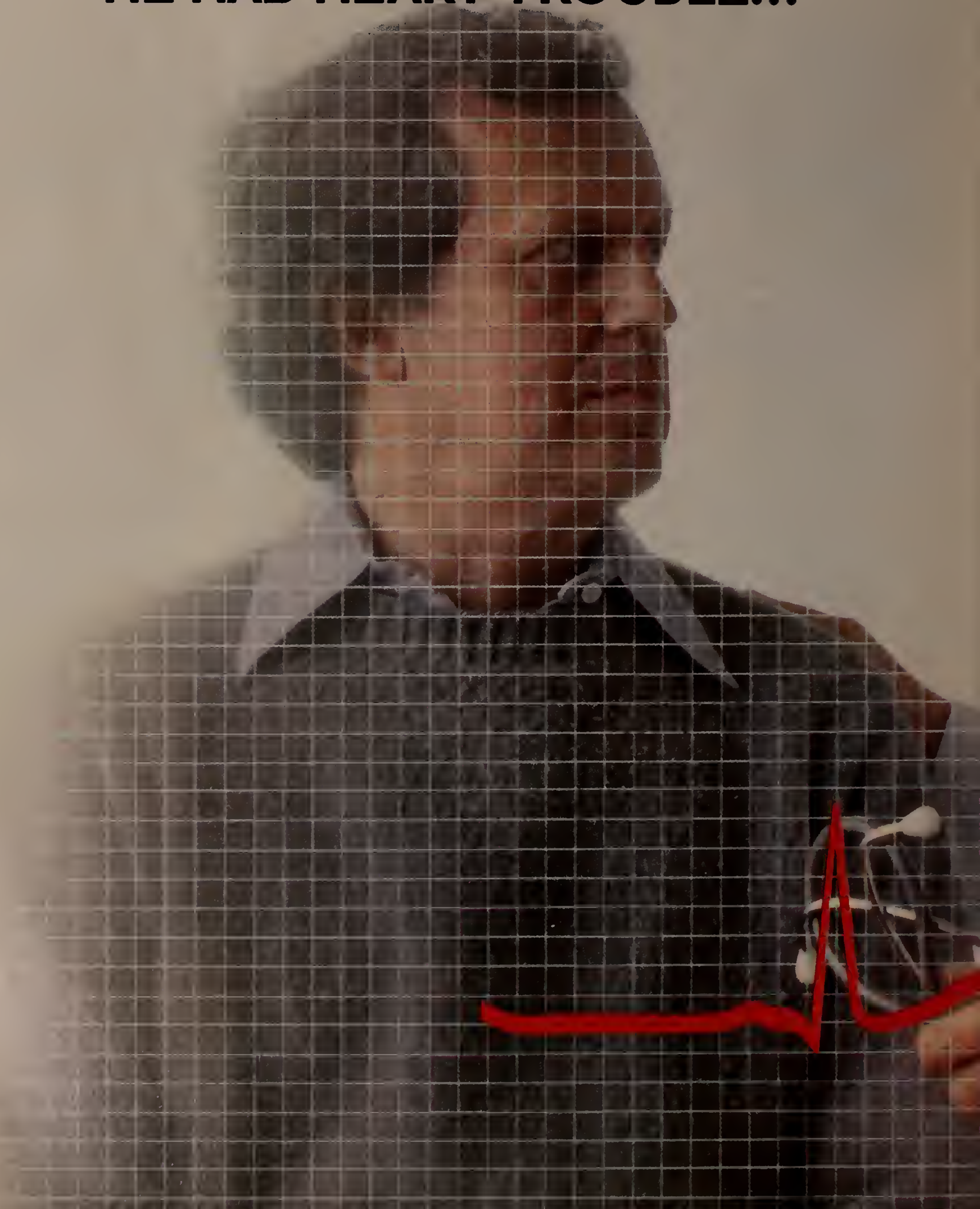

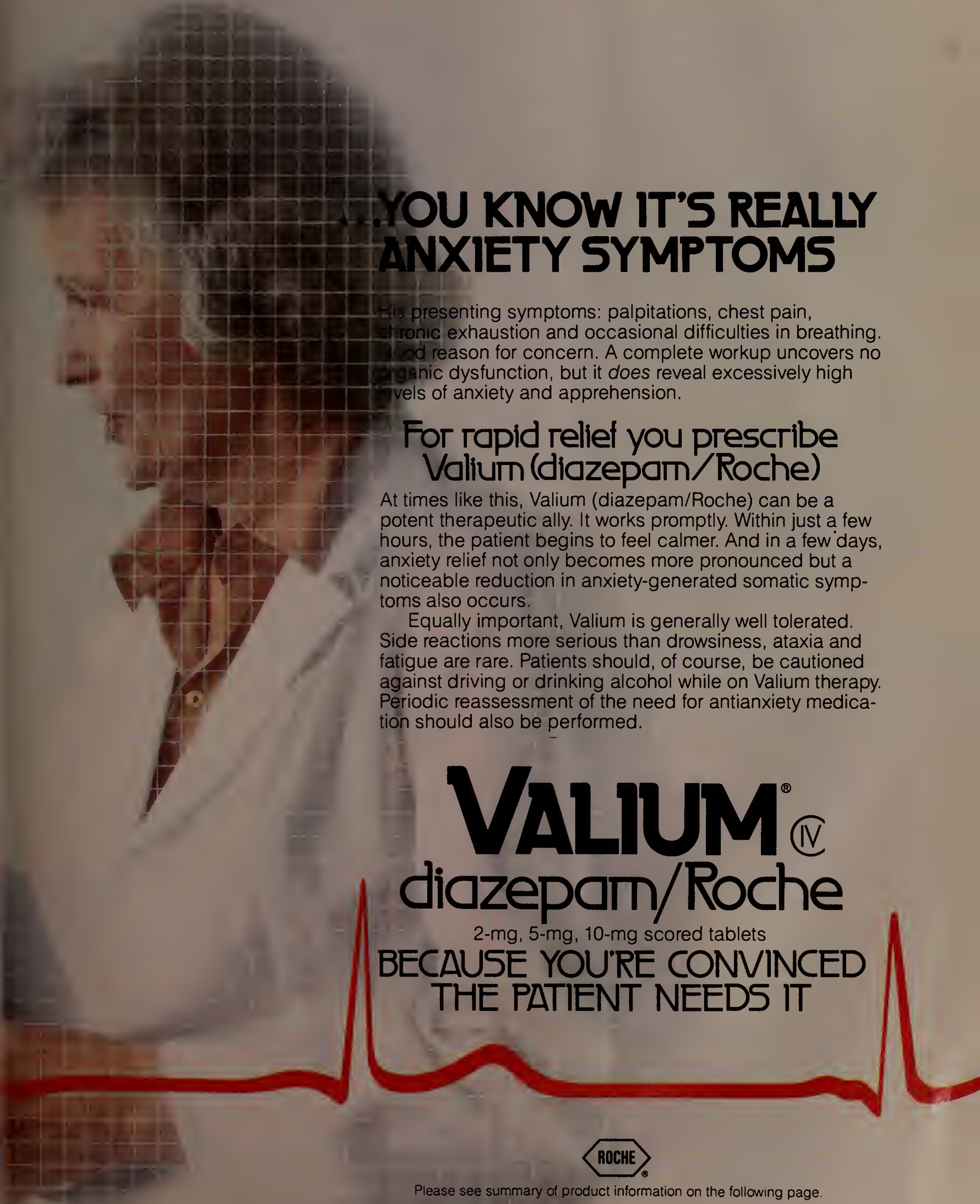

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Warnings: Not of value in psychotic patients Caution against hazardous occupations requiring complete mental alertness When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication, abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence

> ***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

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Dosage: Individualize for maximum beneficial effect *Adults* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b i d to q i.d , alcoholism, 10 mg t i d. or q i d. in first 24 hours, then 5 mg t i d or q i d as needed, adjunctively in skeletal muscle spasm, 2 to 10 mg t i d or q i d , adjunctively in convulsive disorders, 2 to 10 mg b i d to q i.d *Geriatric or debilitated patients* 2 to 2½ mg 1 or 2 times daily initially, increasing as needed and tolerated (See Precautions) *Children* 1 to 2½ mg t i d or q i d initially, increasing as needed and tolerated (not for use under 6 months)
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Pediatricians reaffirm need for pertussis vaccine

The American Academy of Pediatrics today reaffirmed its recommendation that young children should receive immunizations against pertussis (whooping cough), and said that the risk of death and suffering caused by this highly infectious disease of infancy is far greater than the possible side effects of the vaccine.

The Academy was responding to this morning's NBC-TV "Today" program which reported that dangerous reactions to pertussis immunizations are common. The Academy charged that the frequency and severity of side effects to the vaccine was disproportionately magnified in relation to the danger of this disease.

Said AAP President Glenn Austin, M.D., FAAP: "The Today Show statement that 'serious reactions from the whooping cough vaccine are common . . . as low as one in 700 children' is untrue.

"In fact, the number of children innoculated with pertussis vaccine who have side effects such as high fever or convulsions is approximately 1 in 7,000. The number of cases of permanent brain damage is about 1 in 310,000 injections."

Dr. Austin said while it is true that side effects to children, including serious reactions, do occur in rare cases after innoculation, the use of pertussis vaccine is responsible for the decline in the incidence of disease from 265,000 cases and 7,000 deaths per year forty years ago to 1,000–3,000 cases and 5–20 deaths per year now. He pointed to the dramatic rise in pertussis infections in England after 1974 when that country made administration of the vaccine voluntary.

Dr. Austin also noted that in this country pertussis is still a killer, "and is itself a cause of brain damage and severe lung disease."

The Academy said that parents should be informed of the possible side effects of all vaccines and of the risk of the diseases by their physicians.

The American Academy of Pediatrics is an organization of 23,000 pediatricians in North and South America dedicated to the health, safety and well-being of infants, children and young adults.

Letters to the Editor

Fungus balls in renal pelvis

To the Editor: Leiter and colleagues reported two interesting cases of *Candida* fungus balls in the renal pelvis requiring surgical therapy.[1]

I would like to make two general comments on the diagnosis and management of this disorder. Primary renal candidiasis has been defined as a rather unusual situation where the upper urinary tract is invaded by *Candida albicans*, involving the urothelium, renal parenchyma, or both without candidemia. It may be that once renal parenchyma is involved, success with irrigation by amphotericin B via retrograde catheters is limited. In a case I recently encountered, the gallium-67 radionuclide scan was a quite useful, noninvasive study which aided determining the extent of renal parenchyma that was involved by the *Candida* infection.[2] We actually even utilized the scan to monitor results of therapy.

Secondly, because *C. albicans* is a most sensitive organism to amphotericin B, initial therapy of primary renal candidiasis and systemic candidiasis not involving the central nervous system or endocardium should be with low, relatively nontoxic doses of intravenous amphotericin B.[3] This may prevent the need for surgery in a majority of these patients.

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To the Editor: While we have had no experience with the use of the gallium-67 radionuclide scan for determining the extent of renal parenchyma involvement or to monitor the results of therapy for *Candida* infection, Dr. White's observation is certainly an interesting one that deserves further evaluation. We are glad that he agrees with our feelings that medical therapy should be successful in most patients. As demonstrated, however, by case 1, massive involvement with fungus balls may respond neither to systemic treatment nor to local irrigation and may require surgical removal for the relief of obstruction.

ELLIOT LEITER, M.D.
Director of Urology
Beth Israel Medical Center

Musicotherapy

To the Editor: A paper in the May, 1981 issue, "Healing Power of Chants," is an expression of the author's fundamentalist religious faith, and is neither medical history nor science. It is religious, miracle medicine that exerted a paralyzing affect on rational medicine and science in the Middle Ages, and brought in its wake torture and death at the stake of many courageous physicians and scientists.

The author contends that "Reaching the patient's soul is equally critical," and "How healthy can the body be when the soul suffers."

He extolls miracle medicine in his pseudo-scientific claims for the healing powers of "liturgic and religious music" and "sounds of bells" from a church. This he illustrates with the following:

1. Health promptly improved when wind direction carried sounds of church bells.
2. Patients adjacent to the chapel of a convent hospital show a "degree of recovery far superior" to those in a distant wing.
3. A chaotic situation in a medical clinic was miraculously resolved when a nurse sang the Lord's Prayer.

I believe the reviewer should inform the readers of the *Journal* how he concluded that this paper, which I believe belongs in a local church paper, constitutes medical history.

HARRY BLOCH, M.D.
49 Crest Drive
South Orange, N.J. 07079

Dr. Leonidas's reply

To the Editor: It is unfortunate that Dr. Bloch's remark pertains only to the prelude of the article presented under the heading of "Personal observation and anecdote." He uses excerpts and illustrations which he baptizes "pseudo-scientific," when they were already classified as "personal" and "anecdotal." Where is the problem?

However, it is distressing that he completely ignores the core of the paper that deals with "facts" and scientific "data from the medical literature" with 15 references.

Furthermore, the very point of the article has been missed. Our attempt was neither to "paralyze" science nor overthrow "rational medicine" from its pinnacle. We merely meant to underline that musicotherapy can be a useful adjunct to standard medical treatment and perhaps constitute an avenue for future research.

In the name of science, let us keep an open mind!

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Brooklyn, N.Y. 11226

Editorial

In this issue the Editors of the New York State Journal of Medicine publish a Symposium on *DIABETIC AUTONOMIC NEUROPATHY*, edited by Dr. Max Ellenberg. It is a clarifying presentation of this all too common condition.

Observance of pain and suffering continues to leave us standing mute, for lack of knowledge and the understanding necessary to treat the underlying causes of this perplexing yet persistent entity. Experiments and findings point-up the remarkable amount of study and communication that is needed to enable our answering the basic questions involving the pathogenic mechanisms that differ, yet have similarities and why some people get certain diseases, yet others do not. Involvement of the autonomic nervous system in diabetics may prove to be a fundamental approach to the understanding of many facets of this complicated disease.

Hopefully future studies will provide some important answers concerning the etiology and pathogenesis of such an important human disease as diabetes.

The range of topics in these articles is wide and varied. This variance brings to mind something Goethe said somewhere in his discourses on light and vision: "We see what we know."

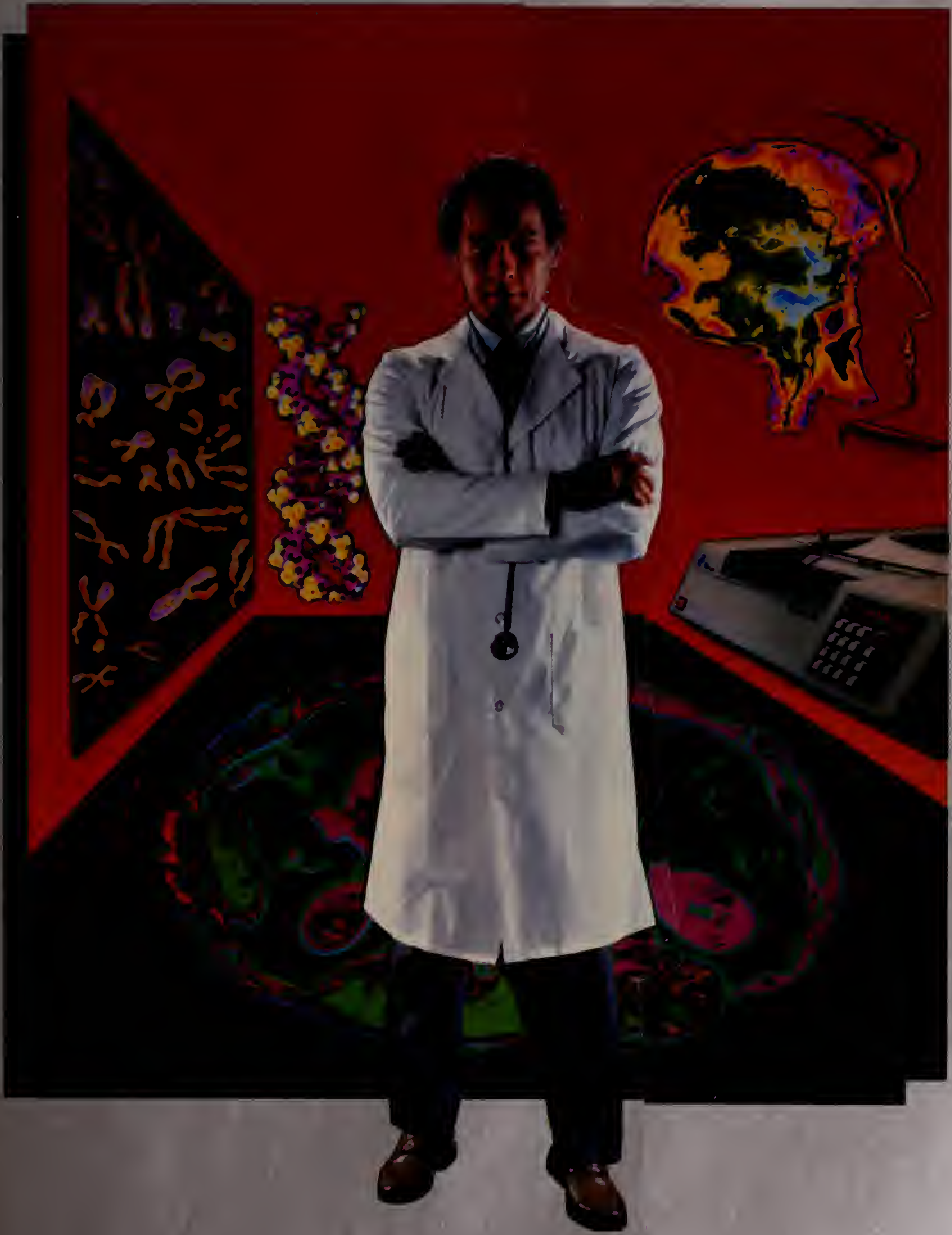
It is our hope that through publishing articles like the ones presented at gatherings such as this symposium, held at the Mount Sinai Hospital and Medical School in March 1981, our knowledge will be increased and more will be seen.

Dr. Ellenberg has gathered together an outstanding series of articles. We highly commend them to you and thank him for providing us the opportunity to publish them.

ALFRED A. ANGRIST, M.D. Editor

In an era of change,

An Agent of Change...



Your patients are changing

. . . the population is getting older, more people are holding a second job, patients are more concerned about the medications they take.

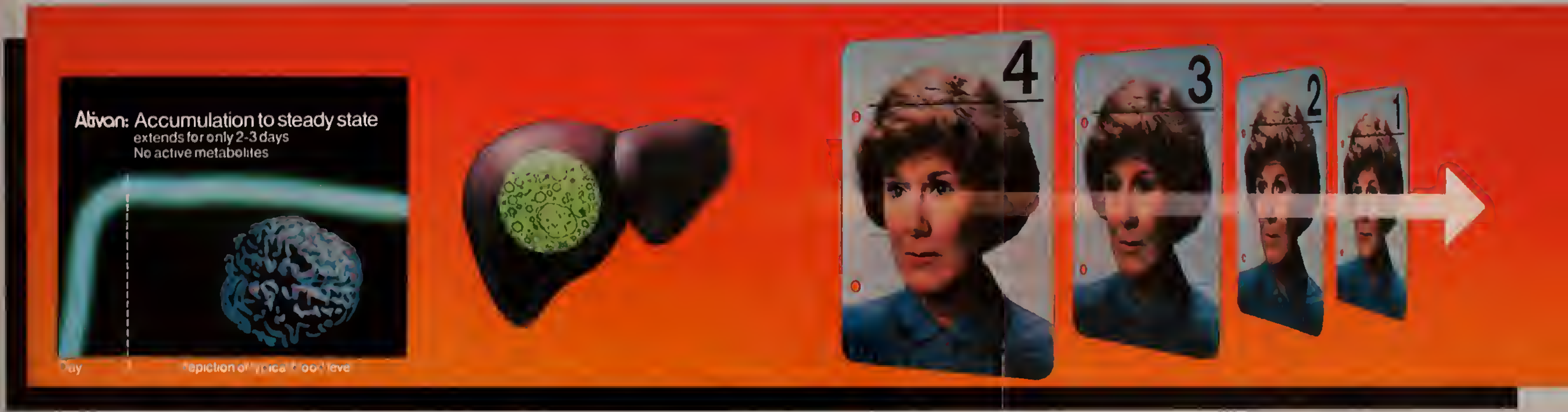
Medical knowledge is changing

. . . there are diagnostic resources and surgical techniques undreamed of only a few years ago, biomedical engineering, new insights also into the action of drugs.

In this changing environment, the way you are practicing medicine is changing too...

Twenty years ago, the benzodiazepines represented a real step forward in the management of anxiety and tension states. In recent years, however, concern about drug accumulation and clearance has led physicians to re-evaluate their use of these agents. In light of current knowledge, many clinicians are changing from multi-metabolite benzodiazepines to Ativan® (lorazepam)—a metabolically and pharmacokinetically distinctive agent that offers clinical advantages which more closely meet the expectations of a modern anxiolytic.

Ativan®: Agent of Change
(lorazepam)


Ativan: Accumulation to steady state
extends for only 2-3 days
No active metabolites
Day
3
Depiction of typical blood level
4
3
2
1

because...

it's shorter acting, with less accumulation*

In contrast to long-acting benzodiazepines, Ativan has a short, 12-hour half-life, and no active metabolites. In multiple-dose therapy, Ativan accumulates for only two to three days before reaching steady state, the long-acting benzodiazepines—diazepam CIV, chlordiazepoxide CIV, clorazepate CIV and prazepam CIV—with their active metabolites—accumulate for as long as 20 days, increasing the likelihood of excessive sedation

it doesn't interact with drugs metabolized by P450 microsomal enzymes

Most benzodiazepines undergo oxidative metabolism and thus utilize the hepatic microsomal enzyme system. Ativan® (lorazepam), however, is metabolized by glucuronidation and does not compete with other drugs for cytochrome P450. Thus, when Ativan is given with Tagamet® (cimetidine), for example, clearance is not delayed, nor sedation increased†—unlike reported observations with patients on other benzodiazepines[1-5]

it gives you greater control of therapy

The short half-life of Ativan® facilitates more rapid response to dosage adjustments, allowing you to titrate therapy to patients' changing needs. Also, once you decide to discontinue Ativan, it will be out of your patient's system four days after the final dose—in contrast to long-acting benzodiazepines and their active metabolites which take as long as two weeks to be totally eliminated

Ativan®
for (lorazepam)ⒸIV
Anxiety

See important information on following page

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2 Desmond PV Patwardhan RV Schenker S et al Ann Intern Med 93 266-268 1980
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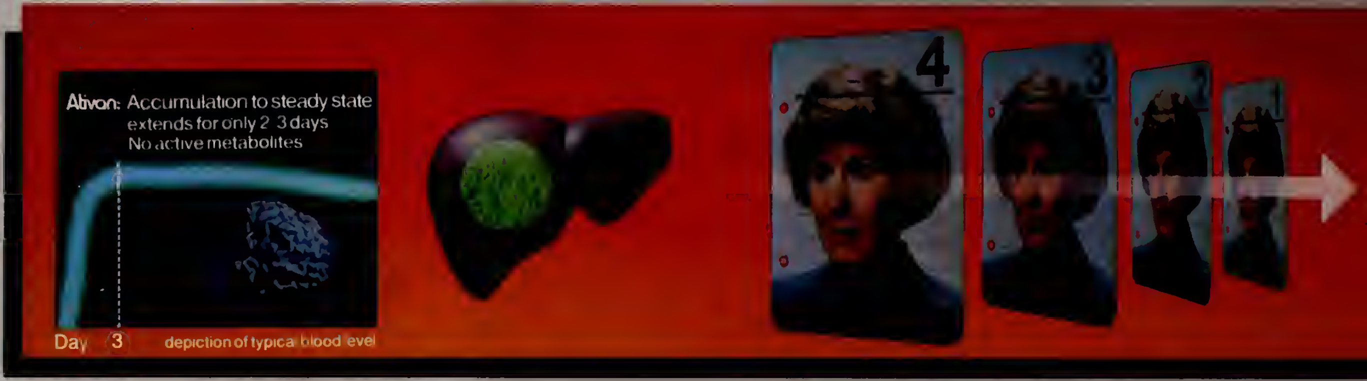
5 Ruffalo RL Thompson JF Segal JL South Med J 74 1075-1078 1981

*Pharmacokinetics cannot as yet be directly related to efficacy

†All benzodiazepines produce additive effects when given with CNS depressants such as barbiturates or alcohol

Ativan®: Agent of Change

(lorazepam) Ⓒ


Ativan: Accumulation to steady state
extends for only 2 3 days
No active metabolites
Day 3
depiction of typical blood level
4
3
2
1

- Little accumulation lessens likelihood of excessive sedation
- Unlike most benzodiazepines, Ativan does not compete with other drugs, such as Tagamet® (cimetidine), for th microsomal enzyme system during biotransformation
- Metabolism not affected by age or liver dysfunction
- Short half-life provides greater control of therapy
- Promptly eliminated from patient's system after discontinuation
- Specifically evaluated and found effective for anxiety associated with cardiovascular and gastrointestinal disorders
- A distinctive change from long-acting benzodiazepines, all of which have active metabolites and are much the same

Brief Summary of Prescribing Information.

Indications and Usage: Management of anxiety disorders or short-term relief of symptoms of anxiety or anxiety associated with depressive symptoms. Anxiety or tension associated with stress of everyday life usually does not require treatment with an anxiolytic.

Effectiveness in long-term use, i.e., more than 4 months, has not been assessed by systematic clinical studies. Reassess periodically usefulness of the drug for the individual patient.

Contraindications: Known sensitivity to benzodiazepines or acute narrow-angle glaucoma.

Warnings: Not recommended in primary depressive disorders or psychoses. As with all CNS-acting drugs, warn patients not to operate machinery or motor vehicles, and of diminished tolerance for alcohol and other CNS depressants.

Physical and Psychological Dependence: Withdrawal symptoms like those noted with barbiturates and alcohol have occurred following abrupt discontinuance of benzodiazepines (including convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Addiction-prone individuals, e.g. drug addicts and alcoholics, should be under careful surveillance when on benzodiazepines because of their predisposition to habituation and dependence. Withdrawal symptoms have also been reported following abrupt discontinuance of benzodiazepines taken continuously at therapeutic levels for several months.

Precautions: In depression accompanying anxiety, consider possibility for suicide.

For elderly or debilitated patients, initial daily dosage should not exceed 2mg to avoid oversedation. Terminate dosage gradually since abrupt withdrawal of any antianxiety agent may result in symptoms like those being treated: anxiety, agitation, irritability, tension, insomnia and occasional convulsions. Observe usual precautions with impaired renal or hepatic function. Where gastrointestinal or cardiovascular disorders coexist with anxiety, note that lorazepam has not been shown of significant benefit in treating gastrointestinal or cardiovascular component. Esophageal dilation occurred in rats treated with lorazepam for more than 1 year at 6mg/kg/day. No effect dose was 1.25mg/kg/day (about 6 times maximum human therapeutic dose of 10mg/day). Effect was reversible only when treatment was withdrawn within 2 months of first observation. Clinical significance is unknown; but use of lorazepam for prolonged periods and in geriatrics requires caution and frequent monitoring for symptoms of upper G.I. disease. Safety and effectiveness in children under 12 years have not been established.

ESSENTIAL LABORATORY TESTS: Some patients have developed leukopenia; some have had elevations of LDH. As with other benzodiazepines, periodic blood counts and liver function tests are recommended during long-term therapy.

CLINICALLY SIGNIFICANT DRUG INTERACTIONS: Benzodiazepines produce CNS depressant effects when administered with such medications as barbiturates or alcohol.

CARCINOGENESIS AND MUTAGENESIS: No evidence of carcinogenic potential emerged in rats during an 18-month study. No studies regarding mutagenesis have been performed.

PREGNANCY: Reproductive studies were performed in mice, rats, and
strains of rabbits. Occasional anomalies (reduction of tarsals, tibia, metatar
sals, malrotated limbs, gastroschisis, malformed skull and microphthalmia
were seen in drug-treated rabbits without relationship to dosage. Although a
these anomalies were not present in the concurrent control group, they hav
been reported to occur randomly in historical controls. At 40mg/kg an
higher, there was evidence of fetal resorption and increased fetal loss in rab
bits which was not seen at lower doses. Clinical significance of these finding
is not known. However, increased risk of congenital malformations associate
with use of minor tranquilizers (chlordiazepoxide, diazepam and meproba
mate) during first trimester of pregnancy has been suggested in several stud
ies. Because use of these drugs is rarely a matter of urgency, use c
lorazepam during this period should almost always be avoided. Possibility tha
a woman of child-bearing potential may be pregnant at institution of therap
should be considered. Advise patients if they become pregnant to commun
cate with their physician about desirability of discontinuing the drug. I
humans, blood levels from umbilical cord blood indicate placental transfer c
lorazepam and its glucuronide.

NURSING MOTHERS: It is not known if oral lorazepam is excreted in huma
milk like other benzodiazepines. As a general rule, nursing should not b
undertaken while on a drug since many drugs are excreted in milk

Adverse Reactions, if they occur, are usually observed at beginning c
therapy and generally disappear on continued medication or on decreasin
dose. In a sample of about 3,500 anxious patients, most frequent advers
reaction is sedation (15.9%), followed by dizziness (6.9%), weakness (4 2%
and unsteadiness (3.4%). Less frequent are disorientation, depression, nau
sea, change in appetite, headache, sleep disturbance, agitation, dermatolog
cal symptoms, eye function disturbance, various gastrointestinal symptom
and autonomic manifestations. Incidence of sedation and unsteadines
increased with age. Small decreases in blood pressure have been noted bu
are not clinically significant, probably being related to relief of anxiety.

Overdosage: In management of overdosage with any drug, bear in min
multiple agents may have been taken. Manifestations of overdosage includ
somnolence, confusion and coma. Induce vomiting and/or undertake gastri
lavage followed by general supportive care, monitoring vital signs and clos
observation. Hypotension, though unlikely, usually may be controlled wit
Levarterenol Bitartrate Injection U.S.P. Usefulness of dialysis has not bee
determined.

***Dosage:* Individualize for maximum beneficial effects. Increas**
dose gradually when needed, giving higher evening dose befor
increasing daytime doses. Anxiety, usually 2-3mg/day given b.i.d. o
t.i.d.; dosage may vary from 1 to 10mg/day in divided doses. Fo
elderly or debilitated, initially 1-2mg/day; insomnia due to anxiety o
transient situational stress, 2-4mg h.s.

***How Supplied:* 0.5, 1.0 and 2.0mg tablets.**

Wyeth Laboratories Philadelphia, PA 19101

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SYMPOSIUM

Diabetic Autonomic Neuropathy

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Diabetic Autonomic Neuropathy

Although perhaps the most common complication of diabetes, diabetic neuropathy has been the least studied and explored. This applies even more to autonomic than to peripheral neuropathy.

Many clinical syndromes associated with autonomic neuropathy in diabetes have been recognized. These include esophageal involvement, gastropathy, diarrhea, neurogenic vesical dysfunction, retrograde ejaculation, impotence, gustatory sweating, pupillary abnormalities, and cardiorespiratory involvements manifested by resting tachycardia, orthostatic hypotension, painless myocardial infarction, and respiratory arrest.

Although the precise nerve pathology or location of the nerve pathology is still uncertain, much progress has been made. Objective documentation of disruption of the nerve endings of autonomic nerve fibers surrounding terminal vessels explains the impairment of cardiovascular reflexes.

Much impetus has been given recently to studies in the area of cardiovascular function, as a result of the development of several noninvasive, nonpainful, simple, and readily reproducible methods. In addition, the ability to measure catecholamines has opened up new vistas. The postsynaptic neurons in the sympathetic system liberate norepinephrine as a neurotransmitter at the effector organ. The physiologic actions that result from norephinephrine and epinephrine release involve alpha-adrenergic and beta-adrenergic effects. The efferent parasympathetic pathway liberates acetylcholine via the post-ganglionic fibers at the terminal synapse.

The anatomic and biochemical differences of the components of the autonomic nervous system allow diseases and drugs to produce isolated effects. The localization of a defect to one component of the reflex arc is, therefore, possible with a series of autonomic tests. Such differential tests allow precise assessment of the location and extent of many autonomic deficits.

Obviously then, many new approaches and much basic information may be attainable. Studies of hormonal interrelationships and secretion now become more readily feasible. The presence of an extensive network of sympathetic and parasympathetic fibers surrounding the pancreas and connected to the brain via the vagus nerve, hypothalamus, and thalamus indicates that a significant role in the elaboration and secretion of pancreatic hormonal components, especially under conditions of stress, can be influenced by nerve involvement.

It is becoming more apparent that diabetic autonomic neuropathy, particularly when it involves the cardiovascular system, may be a grave prognostic sign and probably is at the basis of acute respiratory arrest. It has already been shown that those patients with clinical features of autonomic neuropathy have a far higher mortality rate than the general diabetic population. Unexplained deaths, some attributed to painless myocardial infarction, may actually represent interference with respiratory control or failure of cardiac reflex control.

Understanding and recognition of cardiovascular involvement as mediated by the autonomic nervous system involving the brain, heart, and extremities should lead to earlier diagnosis and more adequate therapy. This applies as well to the extensive visceral involvement with diabetic autonomic neuropathy.

MAX ELLENBERG, M.D.

Neurophysiology

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ELLIOT J. RAYFIELD, M.D.[b]
JOHN C. THORNTON, Ph.D.[c]
New York City

From the Mount Sinai School of Medicine
[a] Department of Neurology
[b] Department of Medicine
[c] Department of Statistics

The autonomic nervous system is classically divided into two groups of primarily efferent pathways, which have specific anatomic and biochemical characteristics.[1] The sympathetic group is located in the thoracolumbar area and norepinephrine (NE) is its primary postganglionic neurotransmitter. The parasympathetic group is located in cranial nerve nuclei and in the sacral spinal cord; its primary neurotransmitter is acetylcholine. The hypothalamus is thought to centrally regulate sympathetic and parasympathetic function, but knowledge of central regulation of autonomic function in humans is still rudimentary. In the past ten years it has become clear that many more neurotransmitters are involved in peripheral autonomic system action[2,3] and that several types of preganglionic and postganglionic synaptic receptors modulate the system.[4] In addition, numerous recent studies indicate that the enteric nervous system is an embryologically and physiologically distinct system.[5]

Autonomic failure: Documentation and evaluation

Documentation of the site and extent of peripheral autonomic failure may be obtained by utilizing a combination of histochemical, pharmacologic, and physiologic techniques. Falck-Hillarp catecholamine histofluorescence of perivascular noradrenergic fibers in skeletal muscle may document peripheral catecholamine depletion concomitant with destruction of sympathetic nerve terminals in peripheral autonomic neuropathy (AN). We demonstrated lack of histofluorescence in amyloid AN,[6] familial dysautonomia,[7] and Vacor AN.[8] Evaluation of peripheral noradrenergic terminals by electron microscopy is technically more difficult; Bannister has done this in the Shy-Drager syndrome.[9]

Infusion of dilute NE (5–45 ng/kg/min) will induce a supersensitive blood pressure response in autonomic failure; the degree of response is much greater in patients with postganglionic AN than in those with dysfunction of preganglionic sympathetic efferents, as occurs in some cases of the Shy-Drager syndrome.[10]

Plasma NE is primarily derived from overflow at the synaptic cleft of neurons forming sympathetic nerve terminals. The variability in human subjects requires insertion of an indwelling catheter prior to sampling. Plasma NE normally rises with a change in position from supine to standing and with exercise. In autonomic failure, plasma NE fails to rise appropriately; in peripheral AN, plasma NE at rest is also low.[11] Figure 1 illustrates extremely low plasma NE levels in a patient with severe Vacor peripheral autonomic neuropathy.

Infrared pupillography

None of the previously described techniques have been demonstrated to be useful in the early diagnosis of AN. For that reason, we studied a group of adult insulin-dependent diabetics (not selected for the presence of neuropathy) with infrared pupillography in the hope of finding a subtle abnormality in pupillary responses to light and pharmacologic agents that would correlate with peripheral autonomic and sensory dysfunction elsewhere in the nervous system (Table I).[12]

None of the subjects had cataracts and all had visual acuity of 20/40 or better. There were no differences between diabetics ($N = 42$) and normal controls ($N = 78$) in pupil size in light or darkness, pupil asymmetry, or in constriction to a 1-second light flash. No differences were noted in dilation to a direct sympathomimetic (phenylephrine 2.5%) or in constriction to a cholinomimetic (pilocarpine 0.125%). Diabetic pupils dilated significantly less to cocaine 5% than did normal pupils (0.4 mm ± 0.2 vs 1.6 mm ± 0.2, $p > .0001$). Dilation to cocaine in diabetes did not correlate with age, duration of disease, or HbA$_1$c levels but did inversely correlate with vibratory perception threshold, measured with a biothesiometer ($p > .05$). A diminished cocaine response in the absence of sympathetic supersensitivity suggests that this phenomenon is functional rather than due to degeneration of the sympathetic neuron. It may reflect decreased axonal transport of neurotransmitter to the nerve terminal in diabetes. As it correlates with the degree of sensory dysfunction, the cocaine test may also be useful in longitudinal studies of the natural history of sensory and autonomic neuropathy in diabetes mellitus.

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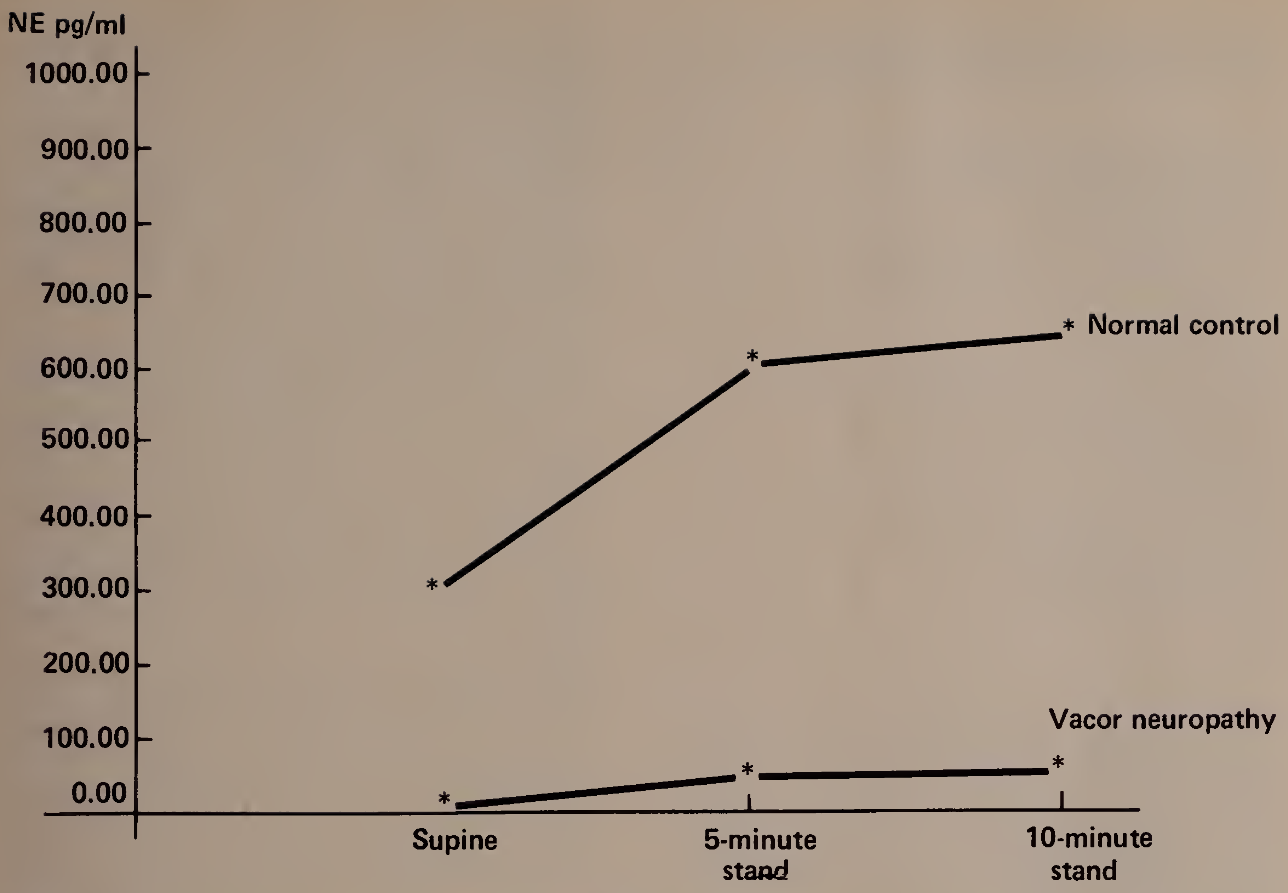

FIGURE 1. Plasma NE levels in normal control and in patient with orthostatic hypotension due to severe AN caused by ingestion of the rat poison Vacor.

Table I. Pupillary Testing in Diabetes Mellitus

	Diameter (mm)		
	Normals	Diabetics	
Ambient light	5.5 ± 0.1	5.4 ± 0.2	N.S.
Darkness	6.2 ± 0.1	6.0 ± 0.1	N.S.
1-sec light flash	4.1 ± 0.1	4.2 ± 0.1	N.S.
Asymmetry	0.3 ± 0.03	0.3 ± 0.05	N.S.
Phenylephrine 2.5%	6.8 ± 0.3	6.9 ± 0.3	N.S.
Pilocarpine 0.125%	4.5 ± 0.2	4.6 ± 0.2	N.S.
Cocaine 5%	6.8 ± 0.2	5.7 ± 0.2	P > .0001

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■

Neuropathology in Diabetes

General aspects with emphasis on the autonomic nervous system

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F. GREGORY BAUMANN, Ph.D.[b]
New York City

From the New York University Medical Center
[a] Department of Pediatrics
[b] Department of Surgery

The frequency with which the nervous system is affected in diabetes mellitus was no doubt responsible for the earlier view that diabetes was caused by disease of the nervous system. That the converse is true was initially recognized by Marchal de Calvi in 1864.[1] Estimates of the incidence of diabetic neuropathy differ considerably between the various reported series, ranging from less than 5%[2] to nearly 60%.[3] Although some of the variation may be due to differences between the series, such as the severity and duration of the diabetes and the age of the patients, difficulty in defining diabetic neuropathy is certainly the most important factor.

A useful classification of diabetic neuropathy is that suggested by Thomas,[4] who advocated a broad subdivision into symmetric polyneuropathies (comprising sensory neuropathy and autonomic neuropathy), mononeuropathies, and multiple neuropathies.

Characteristic features

The earliest reports on the pathology of diabetic neuropathy drew attention to degenerative changes in the peripheral nerves.[5–7] Lesions were observed to be maximal distally.[8] Light microscopic studies of the peripheral nerves in diabetics show segmental demyelination to be a characteristic feature.[9] Electron microscopic examination of the sural nerve of diabetics has demonstrated evidence of demyelination, disintegration of axons, cytoplasmic inclusions in Schwann cells, thickening of the basement membrane of Schwann cells, and microangiopathy of endoneurial vessels.[10,11] Axonal loss in the peripheral nerves is also evident,[9,12] particularly in the chronic or insidious type of case.[13] Quantitative studies have demonstrated abnormal nerve fiber densities and abnormal ratios of small and large fibers.[11,13–16] "Onion bulb" formation is also a feature of diabetic neuropathy.[9] These hypertrophic changes are formed by repeated segmental demyelination and remyelination occurring in conjunction with axonal regeneration and sprouting.

The degenerative changes are most marked peripherally, but also involve the spinal roots, particularly the dorsal.[17] Loss of dorsal root ganglion cells and anterior horn cells also has been documented.[12]

Vessels affected by diabetic microangiopathy are characterized by thickening of the basal lamina.[18–20] Electron microscopy has shown a multilaminar appearance of both the basal lamina of endothelial cells[21,22] and that surrounding vascular smooth muscle cells.[23]

Previous light microscopic studies have demonstrated thickening of the walls of the vessels by accumulation of para-aminosalicylic acid (PAS)-positive material of the endoneurial capillaries of peripheral nerves from diabetic patients, causing narrowing and complete occlusion of the lumen of these vessels.[17,24–26] Such pathologic alterations in vasa nervorum are confirmed in our own findings. We find that in sural nerves from diabetics with peripheral vascular disease, both epineurial arterioles and endoneurial capillaries show evidence of basal lamina thickening and replication, as well as lesions, which in some cases occlude the lumen.

Autonomic neuropathy. Symptoms related to autonomic involvement in diabetic patients have been recognized since the last century, but the frequency with which the autonomic nervous system is affected in diabetes has been increasingly realized since the studies of Rundles[2] and Martin.[14] Autonomic neuropathy clinically comprises the following features: pupillary and vasomotor abnormalities and disturbances of sweating, alimentary tract function, and genitourinary function.[27]

Histologic studies of the autonomic nervous system, mostly derived from necropsy material, show direct evidence of structural change in diabetic subjects. In diabetes, segmental demyelination and axonal degeneration similar to that seen in the peripheral nerves have been reported in vagal preganglionic fibers to the heart,[28] in the esophagus,[29] and in postganglionic fibers to the intestine[11] examined by light microscopy. Loss of unmyelinated axons in the sural nerve has been related to alterations in autonomic functions.[14,30] Unusually large nerve cells in the thoracic sympathetic ganglia in patients with diabetic polyneuropathy[31] have been reported to exhibit various degenerative changes, including displacement and pyknosis of the nucleus, and an accumulation of PAS-positive material, but were

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absent in ganglia from diabetic subjects in whom there was no clinical evidence of polyneuropathy. Similar findings of degeneration of neuronal processes and proliferation of capsular cells have been recorded by other investigators.[16,32] Electron microscopy has revealed dilated endoplasmic reticulum with formation of large vacuoles, some neurons filled with membranous bodies,[33] and blood vessels with replicated basal lamina.

In our own study of sympathetic ganglia taken from diabetic patients at lumbar sympathectomy for the relief of peripheral vascular disease, electron microscopy also demonstrated enlarged endoplasmic cisterna, occasional vacuoles, and large amounts of lipofuscin. Capillaries are sometimes extremely thickened and have replicated subendothelial basal lamina. The same appearance was occasionally seen, however, in ganglia from patients with peripheral vascular disease who had no history of diabetes.

Denervation. Studies describing pathologic changes in the autonomic nervous system of diabetics include few reports on the pathology of end-organ innervation. That end-organ denervation occurs in diabetics is, however, suggested by the clinical signs of autonomic disturbance, such as sweating irregularities, impotence, bladder disturbance,[2,34,35] esophageal hypersensitivity,[36] hypersensitivity of the heart to catecholamines,[37] and other cardiovascular abnormalities, such as vasomotor dysfunction and hypersensitivity responses of peripheral vessels.[38] In fact, morphologic studies have demonstrated terminal denervation of the bladder wall in diabetics.[39]

Despite clinical signs which suggest that terminal denervation has affected the autonomic vasomotor nerves supplying vascular smooth muscle of diabetic subjects (such as the vasomotor abnormalities and hypersensitivity reactions that are consistent with a postganglionic sympathetic lesion), a morphologic examination of autonomic nerves of diabetic blood vessels has not previously been conducted. Recent measurement of the density of adrenergic innervation indirectly, by analysis of catecholamine levels in the cardiovascular system, has shown decreased levels of norepinephrine and increased levels of dopamine in vascular smooth muscle in diabetics.[40] Morphologic evidence of denervation in skin arterioles and epineurial vessels has already been shown, however, in patients with familial dysautonomia who exhibit many of the vasomotor abnormalities in diabetics described earlier.[41]

Quantitative comparison

In our own work, a quantitative ultrastructural investigation was undertaken to establish whether vascular denervation is also a component of the autonomic neuropathy in diabetes mellitus.[42] A quantitative comparison was made of sural nerve epineurial arteriole innervation between diabetics and nondiabetics. Sural nerve biopsies were obtained during below-knee amputation performed because of end-stage peripheral vascular disease in six diabetic and six nondiabetic patients of comparable age (mean ± SD: 68 ± 9 nondiabetic, 65 ± 16 diabetic). None of the patients had undergone previous surgical sympathectomy and none had any other diagnosed disease or was receiving drugs other than antidiabetic therapy. No patient showed signs of gangrene in the area of the sural nerve biopsy. The lower-limb region was chosen for biopsy since diabetics are subject to earlier and more severe vascular problems involving the lower limb than are nondiabetics.[43] Tissue was processed for electron microscopic examination. In random sections, epineurial arterioles were identified between the nerve fascicles and were subjected to a quantitative study. In order to make a representative sampling of each specimen, series of thin sections were cut at five different levels 10μ apart in each tissue block. Counts were made from the electron micrographs of the total number of axon profiles present around the epineurial vessels. In addition, the distance between each axon and the smooth muscle cell of the media nearest to it was measured. All data from these series of thin sections taken from five different levels of the block were combined for each tissue specimen.

The results demonstrated specific differences, identifiable morphometrically, in the pattern of innervation of epineurial vessels of diabetics compared with nondiabetics. The differences were as follows: (1) In the diabetic group, the proportion of perivascular axons found less than 7μ from the nearest smooth muscle cell was significantly less than in the nondiabetic group ($p < .001$); (2) the mean distance of the axons from their effector sites, the vascular smooth muscle cells, was nearly twice as far in the diabetic group as in the nondiabetic group ($p < .05$); and (3) the mean absolute number of axons less than 7μ from the arteriole in the diabetic group was significantly less than in the nondiabetic group ($p < .01$).

These results demonstrate that the neuropathy associated with diabetes mellitus involves the autonomic terminal innervation of some blood vessels. In addition, this neuropathy preferentially affects the vasomotor nerves closer than 7μ to the media. The study indicates that those vasomotor axons that are primarily affected in diabetes are the population near the media. These axons are those considered most important for vasomotor function.[44] Therefore, the presumed functional implications of the altered pattern of distribution of axon profiles reported here, with decreased frequency of close neuromuscular intervals in diabetic epineurial blood vessels, include an alteration in the vasomotor activity and arteriolar tone.

Autosympathectomy. A seventh pair of cases has now been analyzed and addition of these new data to the previous findings has demonstrated that the mean total number of axons surrounding the sural nerve arterioles is also significantly reduced in

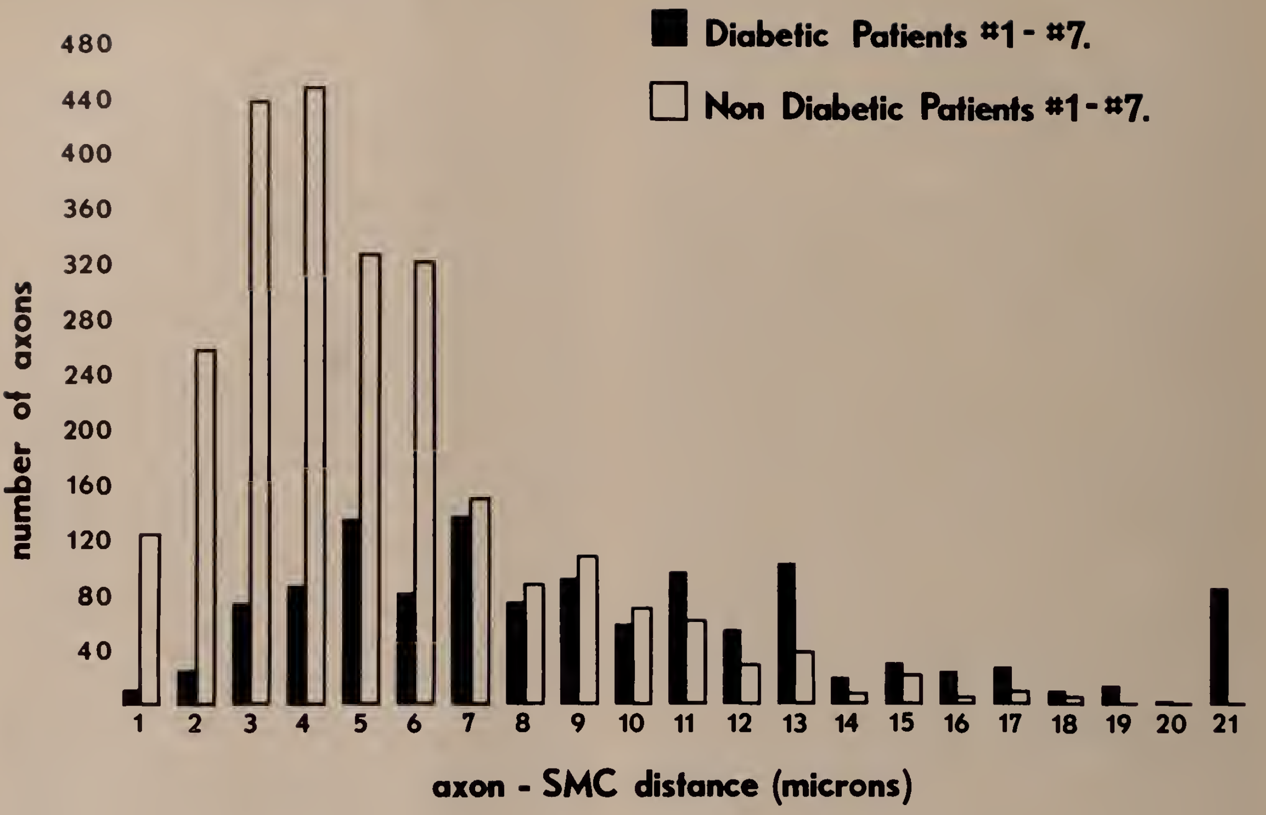

FIGURE Histogram compiled from 14 cases (seven diabetic, seven nondiabetic) represents the combined total frequency and distribution of axons at 1μ intervals of increasing distance from the outermost medial smooth muscle cell of epineurial blood vessels. The number of axons in each individual diabetic patient (black) is reduced, and axons are found at relatively greater distances from smooth muscle cells (SMC) of the media than in nondiabetic controls (white).

diabetics compared with nondiabetics ($p < .05$) (See Fig.). These findings are anatomic evidence of a lack of end-organ innervation in the peripheral blood vessels and indicate that autosympathectomy occurs in diabetes mellitus.

The previous study offers quantitative morphologic evidence to support the concept that at least some vessels in diabetics are partially or fully autosympathectomized. In addition, it may explain why many of the abnormal cardiovascular responses seen in diabetics mimic the effects of surgical sympathectomy.

In order to further examine this, a similar quantitative comparison was made of sural nerve arteriole innervation between sympathectomized diabetics and nonsympathectomized diabetics.[45] Sural nerve biopsies were obtained during below-knee amputation performed because of end-stage peripheral vascular disease in six additional patients with a history of diagnosed diabetes mellitus. All six of the patients had undergone a standardized surgical lumbar sympathectomy on the side of the biopsy at intervals ranging from one week to nine years prior to the amputation procedure during which biopsy tissue was retrieved.

Results. The results demonstrated no statistically significant difference between the two groups of diabetic patients in the number of vasomotor axons present, the average axon–smooth muscle cell distance, or the axon distribution pattern in the adventitia ($p > .1$). Since the number of vasomotor nerves in these autosympathectomized diabetic vessels is not further reduced by surgical sympathectomy, little additional vasodilatation of these vessels can be expected after the procedure.

Lumbar sympathectomy. This consideration offers one possible explanation for the relatively limited effectiveness of surgical lumbar sympathectomy in providing relief from lower-limb ischemia in diabetics.[46–48] A clinical study recently completed by our group[49] examines the results of 93 consecutive lumbar sympathectomies performed over a five-year period on 54 diabetic and 39 nondiabetic patients, compared in terms of subsequent amputation using life-table analysis methods. Cumulative success rates for avoiding amputation were significantly lower in diabetics (19.1%) compared with nondiabetics (51.5%) at five years and at most shorter six-month intervals. Although there are a number of possible explanations for this difference, an important contributing factor may be the prior spontaneous denervation of diabetic blood vessels.

Summary

A question that arises from these studies is whether pathologic processes affecting the vascular system may be related, at least during some stage, to alterations of the sympathetic nervous system. There is a lack of studies in diabetics showing the relationship of vasomotor changes to neuropathy, microangiopathy, peripheral vascular disease, and circulating catecholamines. It has been suggested, however, that diabetic autonomic neuropathy might play a role in the development of lesions in the vessel wall itself,[16] but this requires substantiation. Hypersensitivity in vascular smooth muscle following experimental denervation has been reported.[50] Other evidence suggests that long-term sympathetic denervation of the rabbit ear artery results in structural as well as functional change.[51] It is possible, therefore, that alterations in the innervation of blood vessels in diabetes such as have been demonstrated in the present study might be a factor related to the predisposition of diabetic vessels to pathologic alterations.

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Pathogenesis of Diabetic Neuropathy

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In any discussion of the various biochemical and biophysical mechanisms that have been proposed to give rise to abnormal nerve function, it must be stressed from the outset that the diabetic neuropathies are a heterogeneous group of disorders. Thus, it would be naive to suppose that the various forms of diabetic neuropathy must share a common pathophysiologic basis. It is more reasonable to consider the various neuropathies as a spectrum of disorders in which vascular, mechanical, metabolic, and environmental factors can contribute independently as well as cumulatively to the expression of the various clinically identified syndromes. I will attempt to discuss some of the recognized factors that are thought to contribute to the pathogenesis of diabetic neuropathy, with the full understanding that our knowledge of the precise role of any individual factor in the development of the neuropathies is fragmentary, at best. It is likely that future research will continue to uncover additional mechanisms that will be found to have a more proximate position in the chain of events leading to diabetic neuropathy than do any of the mechanisms that have thus far been proposed.

Largely on the basis of clinical and electrophysiologic obervations, it has been suggested that the underlying mechanisms of the diabetic neuropathies permit the division of these syndromes into categories whose etiologies are thought to be largely due to "vascular" or to "metabolic" phenomena or to a combination thereof.[1] (See Table 1.)

Diabetic neuropathies presumably due to vascular lesions

For nearly 90 years, it has been thought that certain of the diabetic neuropathies are the direct consequence of vascular insufficiency of the involved nerves. With regard to the mononeuropathies, direct morphologic proof of their vascular basis has been obtained.[2] The spontaneous partial reversibility of diabetic amyotrophy and neuropathic cachexia would suggest that they may be due (at least in part) to vascular lesions, but this speculation is not sup-

TABLE I. Classification of diabetic neuropathies according to their presumed pathophysiological basis.

"Vascular" Neuropathies	Cranial neuropathies Radiculopathies Mononeuropathies
"Metabolic" Neuropathies	Distal symmetrical polyneuropathy Autonomic neuropathies
"Vascular" and "Metabolic" Neuropathies	Diabetic amyotrophy Diahetic neuropathic cachexia

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ported by any morphologic evidence. With regard to distal symmetric polyneuropathy and automonic neuropathies, the idea that atherosclerotic disease of the nutrient vessels to the nerves underlies these disorders has been largely discarded.[1] However, the possibility that more subtle changes in the neural capillaries may be a contributing factor is still a topic of considerable interest. A number of recent electron microscopic studies have demonstrated that neural capillary endothelial hyperplasia, capillary basement membrane thickening, and expansion of the perivascular space are consistently observed in the nerves of patients with diabetic polyneuropathy in the absence of concomitant peripheral vascular disease.[3,4] Furthermore, the deposition of platelet plugs in the endoneurial capillaries has been described as a feature of diabetic polyneuropathy,[5] a phenomenon that appears to be exacerbated during or shortly after the initiation of treatment of severely uncontrolled diabetes mellitus.[6]

Clearly, the presence of such microvascular lesions could be speculated to lead to a number of adverse consequences to the nerve. Increased permeability of the thickened capillary basement membrane could permit the exposure of the axon to toxic metabolites that are normally excluded by the blood-nerve barrier. Candidates for such a toxic role include 2,5-hexanedione and the longer-chain diketones, which have not, however, been shown to be elevated in the plasma of neuropathic diabetes.[7] Furthermore, the earlier studies suggesting that the endoneurial capillaries of the alloxan-diabetic rat were abnormally permeable to various substances have recently been rendered suspect by the studies of Jakobsen, which could detect no differences in the permeability of streptozotocin-diabetic rat nerves to molecular markers of various sizes (molecular weights from 12,000 to 70,000).[8] Thus, although significant alterations in the structure (and presumably the function) of the endoneurial capillaries can be observed to antedate the development of peripheral neuropathy, the precise role of these abnormalities in the subsequent development of nerve damage is unclear.

What is becoming increasingly clear, however, is that the earliest morphologic change in both the peripheral nerves and the sympathetic nervous system is that of axonal degeneration that appears to preferentially involve the unmyelinated nerve fibers.[8,9] In association with these changes, there is a decrease in axonal size as well as an increase in the density of axoplasmic fibrillar organelles.[9] Of particular interest is the fact that these morphologic changes can also be demonstrated in the peripheral nerves of animals with spontaneous[10] or chemically induced diabetes,[11] and that they can be prevented by careful insulin treatment.[12] The observation that there is an expansion of the endoneurial space in the nerve of the rat with early streptozotocin diabetes originally described by Jakobsen[13] has not been verified by other workers.[10]

A scant ten years ago, it was generally believed that diabetic neuropathy was a disease that primarily involved the Schwann cell. It was thought that Schwann cell damage with resultant segmental loss of myelin was responsible for the characteristic pattern of demyelination and remyelination that is observed in the teased single fibers obtained from the peripheral nerves of patients with long-standing diabetic neuropathy.[14] It is now generally thought that diabetic peripheral neuropathy represents an axonopathy and that the Schwann cell abnormalities are secondary to the changes in the axon that they support. This shift from the presumed primacy of alterations in the Schwann cell to those of the axon in the pathogenesis of diabetic neuropathy has required a similar shift in our consideration of the biochemical mechanisms what might underlie the subsequent functional and structural changes in this tissue. However, although the Schwann cell has lost its place as the prime target cell in diabetic neuropathy, it is still probable that this cell plays a major role in contributing to the overall process. In the next section, I will consider some of the biochemical mechanisms through which the Schwann cell might contribute to peripheral and autonomic nerve dysfunction in diabetes.

The Schwann cell in diabetic neuropathy

The Schwann cell is not only responsible for the elaboration of the myelin that invests the myelinated fibers, but is also thought to play an important role in the energy metabolism of the axons with which it is associated. In most of the studies that I will be discussing, the experimental data have been generated in animal models of diabetic neuropathy. The animal model appears to be an appropriate one for human neuropathy, since it gives rise to consistent decreases in motor nerve conduction velocities, is characterized by early and progressive decreases in axonal caliber, eventually results in segmental demyelination, and can be prevented by rigid control of hyperglycemia. Thus, although extrapolation from the data gathered in the rodent model to the situation in man is presumptuous, it is obvious that such studies could only have been carried out in the animal model.

Synthesis of myelin. Since the Schwann cell is the site of synthesis of myelin, and since myelin plays an important role in the insulation of the myelinated nerve fiber, it is only logical that the ability of the diabetic peripheral nerve to synthesize this material has been evaluated. Spritz observed that the total myelin content per unit length of the sciatic nerve of the chronic alloxan-diabetic rabbit was decreased compared to that of the nondiabetic rabbit.[15] However, the phospholipid, cholesterol, and protein composition of the diabetic nerve myelin was found to be normal. In part, this defect was thought to result from the effect of hyperinsulinemia upon the synthesis of myelin protein, since the in vitro addition of insulin to the diabetic nerve was found to increase the rate of synthesis of this material.[16] Other workers have described numerous abnormalities in the ability of the diabetic peripheral nerve to synthesize triglycerides, cholesterol esters, and cerebroside fatty acids. While all of these abnormalities may be real, the experiments from which such conclusions have been drawn suffer from a number of flaws. First, a decrease in the content or the synthesis of any of the lipid components of peripheral nerve myelin could simply reflect a decrease in the number of viable Schwann cells in the diabetic peripheral nerve, rather than a specific functional abnormality of this cell type. Second, the peripheral nerve is a heterogenous tissue in which the neural components constitute only a third of the mass.[17] Thus, many of the observed effects (particularly the in vitro effects of insulin) could represent changes in the amount and function of the adipocytes in the adventitia, which constitutes the bulk of this tissue. Finally, the recent studies of Greene and Winegrad have raised serious doubts concerning whether the peripheral nerve is an insulin-sensitive tissue.[18] They observed that whereas insulin in concentrations as great as 1 mU/ml had no effect upon the metabolism of glucose or upon the synthesis of fatty acids and total lipids in the neural elements, insulin did significantly infuence these phenomena in the epineurial elements of the normal rabbit peripheral nerve.

Intramembranous density. Another intriguing abnormality in the structure of the myelin from 14-day streptozotocin rats has been that the density of the intramembranous particles on both the E-face and the P-face of freeze-fractured intranodal myelin is significantly decreased.[19] Furthermore, this decrease could be prevented by the addition of 1% myoinositol to the diet of the diabetic rats. While the functional significance of these findings is not known, such alterations in the integral proteins could lead to a disruption of the normal structure and function of peripheral nerve myelin, or they could be a reflection of altered synthesis of integral proteins by this cell type. Finally, since these morphologic changes could be prevented by the feeding of a high-myoinositol diet, it is possible that they are related to abnormal neural metabolism of the myoinositol-containing phospholipids, which have been thought to serve as boundary phospholipids that anchor a number of proteins in the lipid bilayers of cellular membranes.[20]

Activity increase. A third biochemical abnormality that has been invoked to explain abnormal Schwann cell structure and function in diabetes mellitus has been an increase in the activity of the polyol pathway in this cell resulting from its exposure to hyperglycemia. It has been known for more than 15 years that the intermediates of the polyol pathway—sorbitol and fructose—are normally present in the peripheral nerve in concentrations nearly an order of magnitude higher than those of serum.[21,22] Furthermore, the intraneural concentrations of these intermediates have been found to fluctuate as a direct function of the ambient glucose concentration. Both Wallerian degeneration studies and immunohistochemical studies have indicated that aldose reductase (the first enzyme of the polyol pathway) is localized to the Schwann cell cytoplasm and is not present within the axons or the adventitia of the peripheral nerve.[23,24] When animals are rendered hyperglycemic by the induction of experimental diabetes or by the feeding of a high-galactose diet, a marked increase in the polyol content of the peripheral nerve is observed. In both models, this increase in polyol content is associated with a decrease in nerve conduction velocity. In the diabetic model, both the increase in sorbitol content and the abnormally decreased nerve conduction velocities can be rapidly corrected by careful insulin treatment.[25,26] However, it should be pointed out that the two models differ considerably in that whereas the water content of the peripheral nerve increases in parallel with the increased polyol content in the galactose-fed model, most workers have observed no change in the water content of the peripheral nerve in experimental diabetes.

Since increased polyol pathway activity has been implicated in the pathogenesis of sugar cataracts in the lens, it has been suggested that a similar mechanism may pertain in the peripheral nerve.[25] It was proposed that if all the sorbitol that accumulated in the peripheral nerve of the diabetic animal were to be localized to the Schwann cell, the osmotic consequences would result in edema of this cell, its eventual death, and subsequent loss of myelin. There are experimental data which both support and refute this hypothesis.

First, the use of aldose reductase inhibitors has been shown to substantially delay both the increases in nerve water content and the decrease in nerve conduction velocity that result from galactose feeding.[26] Furthermore, preliminary findings from a number of centers suggest that the use of aldose reductase inhibitors may have a salutary effect upon the course of diabetic peripheral neuropathy in man.[27]

At variance with a primary role of Schwann cell edema in the pathogenesis of diabetic neuropathy is the recent finding that there is a 30% decrease in the cytoplasmic volume of the Schwann cell in the rat with five weeks of streptozotocin diabetes.[13] It should be pointed out, however, that this observation has only been made by one investigation of the rat model and that edema of the Schwann cell has been noted in nerve biopsies of young diabetic patients taken shortly after the onset of their disease.[9]

Thus, although a direct osmotic effect of polyol accumulation in the pathogenesis of diabetic nerve dysfunction is in question, it is possible that increased polyol pathway activity, per se, could lead directly to nerve damage. In the lens, for example, activation of the polyol pathway leads to a decrease in the rate of glycolysis, increased hexose monophosphate shunt activity, a loss of the ability of the tissue to maintain normal intracellular amino acid, myoinositol, sodium and potassium concentrations, as well as progressive decreases in the content of adenosine triphosphate (ATP), reduced glutathione, and the reduced form of nicotinamide-adenine dinucleotide phosphate (NADPH).[28] Furthermore, activation of the polyol pathway in aortic media preparations has been found to increase the rate of aerobic glycolysis and to decrease the oxygen uptake of this tissue.[29] The anatomic arrangement of the Schwann cell, in which a high proportion of the mitochondria appears to be localized to the region of the cell that lies adjacent to the axonal node of Ranvier, suggests that the Schwann cell may provide much of the energy that is required for proper axonal function. Thus, if the multiple metabolic abnormalities secondary to increased polyol pathway activity that have been described in the lens and aorta were to exist in the Schwann cell exposed to chronic hyperglycemia, the resistance of this cell to oxidant stresses and its ability to support the function of the axon that it surrounds might be seriously compromised. Obviously, these mechanisms are speculative, and proof of their existance and potential significance must await the development of experimental data in isolated Schwann cell preparations.

The axon in diabetic neuropathy

The shift in the emphasis from the Schwann cell to the neuron as the putative primary target cell in diabetic neuropathy that took place during the past decade has led to a number of new approaches to the problem of the biochemical basis of diabetic neuropathy. It is now considered that diabetic neuropathy is a form of a "dying-back" neuropathy in which the distal portions of the neurons are initially and eventually more severely affected.[30] Although it has long been known that the electrophysiologic and morphologic abnormalities in the peripheral nerves of human diabetics increase distally, it has only recently been observed that in the rat diabetic model, whereas axonal dwindling is a generalized finding, evidence of active nerve fiber degeneration can only be demonstrated in the most distal twigs of the hind-foot muscles.[31]

In the peripheral neurons, the rough endoplasmic reticulum is localized to the nerve cell bodies of the anterior horns and dorsal root ganglions. There is abundant evidence that there is edema, disorganization, and loss of these cell bodies in established diabetic neuropathy.[30] Therefore, it was only logical that Sidenius and Jakobsen recently evaluated the effect of a four-week period of experimental diabetes upon the protein synthetic capacity of the cells of the dorsal root ganglion of the rat.[32] They observed that there was a 40% reduction in the capacity of the cells of the diabetic animals to incorporate labeled leucine into protein, whereas there was no defect in the ability of these cells to incorporate labeled glucosamine into protein. However, the lag time between incorporation of both of these substances into protein and the initiation of their centrifugal fast axonal transport was significantly prolonged in the diabetic animals. Surprisingly, the rate of antegrade axoplasmic transport of these proteins was similar in the normal and diabetic nerves. Their work did suggest, however, that the rate of retrograde axonal transport may have been decreased in the diabetic nerves.

Tissue alterations

These findings are important in a number of ways. First, the decreased rate of protein synthesis in the nerve cell body can explain the 22% decrease in the protein content of the diabetic rat nerve that has been observed by most workers. Second, since the nerve cell body supplies the structural and cytoplasmic proteins that are contained within the axolemma, a defect in their rate of synthesis could explain the diminution of axonal caliber that is observed in early experimental diabetes. Thirdly, such a defect could explain the decreased neural content of a number of enzymes that has been described in the rodent model of diabetes (eg, acetic thiokinase, aldose reductase, sodium-potassium adenosine triphosphatase (ATPase), malic enzyme, and CDP-diglyceride: inositol phosphotransferase.[1] Finally, such a defect in the provision of cell body–derived substances that are required for the maintenance of the integrity and function of the axon could explain why the distal portions of the axon are the first to suffer from the consequences of the exposure of the organism to hyperglycemia.

Process interference. Another way through which diabetes could influence the function of the axons would be to interfere with the process of axoplasmic transport itself. It is thus of interest that Schmidt and associates have demonstrated that the induction of streptozotocin diabetes in the rat results in a 32% decrease in the rate of fast axonal flow (measured by means of acetylcholinesterase activity) as well as a 41% decrease in the rate of slow flow (measured by means of cholineacetylase).[33] It is possible that such defects in axonal flow are limited to certain classes of proteins, since Jakobsen found that fast axoplasmic transport of unidentified leucine-labeled proteins was normal,[32] and we have observed that the slow axonal transport of CDP-diglyceride : inositol phosphotransferase was also normal in the streptozotocin-diabetic rat model.[34] Despite these discrepant results, it is apparent that both the abnormalities in neuronal protein synthesis and in axonal flow described in the diabetic rat could contribute to the axonal dysfunction that presumably results in diabetic neuropathy.

Metabolic alterations. The final area I wish to touch upon is the possible role of disturbed metabolism of myoinositol and its phospholipid derivatives in the pathogenesis of diabetic neuropathy. Under normal circumstances, the concentration of free myoinositol in the mammalian nerve is maintained approximately 30 times higher than is that of the plasma.[34] Since the myoinositol concentration within the nerve fascicles is roughly twice as high as that of the entire nerve, it can be calculated that the concentration of myoinositol within the perineurium is nearly six times as high as that of the epineurial elements and nearly two orders of magnitude higher than that of the plasma.[35] These in vitro data suggest that there is roughly a tenfold gradient of myoinositol at both the blood-nerve barrier and between the endoneurial and neural elements as well. Although the magnitude of these gradients would suggest that myoinositol is actively accumulated by the components of the peripheral nerve, this problem has not been directly studied. However, the current availability of both the nerve fascicle and endoneurial preparations should permit the rapid resolution of this problem. In view of the very feeble ability of the peripheral nerve to synthesize myoinositol, it is unlikely that the endogenous synthesis of this material contributes substantively to the maintenance of the neural myoinositol gradient.[36] Similarly, the magnitude of the gradient is higher than would be expected if it were to be due simply to the intracellular trapping of this compound.[37]

High intracellular concentrations. The explanation for why certain tissues, such as the nerves, maintain very high intracellular myoinositol concentrations is equally unclear. A possible explanation is that in those tissues that maintain such gradients there is a rapid turnover of the myoinositol-containing phospholipids. Thus, since the majority of studies that have examined the kinetic characteristics of the enzyme responsible for inositol lipid synthesis (CDP-diglyceride : inositol phosphotransferase) have shown it to have a low affinity for myoinositol, it is possible that those tissues must maintain a high intracellular myoinositol concentration in order to facilitate the resynthesis of these phospholipids. It is of interest that in most tissues that are capable of responding to external stimuli, the characteristic response to the stimulus is accompanied by a profound and apparently specific increase in the turnover of the phosphoinositides.[38] This phenomenon has been shown to accompany nerve impulse and synaptic transmission, although its precise function at the molecular level is unknown.

Metabolic perturbation. Thus, it is reasonable to speculate that any metabolic perturbation that interferes with the handling of myoinositol or its phospholipids by the peripheral nerve could result in both functional and structural abnormalities. Diabetes mellitus is one condition that appears to profoundly alter the metabolism of myoinositol both in man and in the experimental animal.

Within weeks of the induction of experimental diabetes in the rat, most workers have observed an approximately 25% decrease in the sciatic nerve content of free myoinositol.[1] This decrease is accompanied by a 22% decrease in the sciatic motor nerve conduction velocity as well as by a 22% decrease in the total nerve protein content.[34] All of these abnormalities can be prevented when the animals are treated with an insulin regimen that maintains their blood glucose concentrations within or below the normal range.[34,39] Of particular interest was the finding that the feeding of streptozotocin-diabetic rats a diet containing 1% myoinositol (by weight) normalized the nerve myoinositol content as well as the abnormally decreased motor nerve conduction velocities in these animals.[39] This diet was also found to increase the density of intranodal membranous particles, but it had no effect upon the plasma glucose or the nerve glucose, fructose, and sorbitol concentrations.[19,39] In contrast, the feeding of a high-myoinositol diet was not found to influence the axonal dwindling that was observed following the induction of experimental diabetes.[31] Obviously, the finding of improved nerve conduction velocity without any increase in the caliber of the axons is difficult to reconcile. Nonetheless, an independent group has studied the effect of dietary myoinositol supplementation in older rats with mild diabetes and has observed a trend toward improved motor nerve conduction velocities that was not statistically significant.[40]

Furthermore, if the decreased neural myoinositol content of the experimentally diabetic rat were to have adverse functional effects, one would suppose that they would be mediated through changes in the metabolism of the inositol phospholipids. Using an in vitro model, Hothersall and McLean found a 42% decline in the rate of incorporation of radioactive myoinositol into diabetic nerve phospholipids.[41] In an in vivo model, we observed a 26% decrease in incorporation.[34] Consonant with these data are the independent observations that the CDP-diglyceride : inositol phosphotransferase activity of diabetic rat sciatic nerve homogenates is decreased by approximately 44%.[34,36] This decrease was not found to be the result of the decreased total nerve protein content in the diabetic rat, nor was it the consequence of impaired axonal flow.[34] Thus, the decrease in the specific activity of this enzyme in the diabetic nerve is either the consequence of a specific decrease in the rate of synthesis of this protein by the nerve cell body or the synthesis of an enzyme whose kinetic characteristics are abnormal. Our most recent evidence suggests that the latter alternative is more likely, since the diabetic nerve enzyme has an increased affinity for CDP-dipalmitate but a decreased maximum velocity when it is the variable substrate.

Evaluation

However, despite these impressive alterations in the capacity of the diabetic nerve to synthesize inositol phospholipids, there is little evidence to suggest that the induction of diabetes results in any alteration in the nerve content of these phospholipids. Hawthorne's group observed a slight but statistically significant decrease in the total inositol phospholipid content in rats that had been given large doses of streptozotocin three days previously.[42] However, no abnormality in the nerve content of these phospholipids could be demonstrated in animals with chronic streptozotocin diabetes. Thus, if abnormal inositol lipid metabolism is involved in the functional abnormalities of the diabetic nerve, it is likely that the involvement consists of a decrease in the rate of turnover of the lipids rather than a decrease in their content within the nerve.

In man, the evidence for a role of abnormal myoinositol metabolism in the pathogenesis of diabetic neuropathy is scant. It is clear that the patient with uncontrolled diabetes mellitus has a decreased myoinositol pool size, impaired oral myoinositol tolerance, and profuse urinary excretion of this compound.[43] The single study of the myoinositol content of peripheral nerves that were removed from three diabetic patients at autopsy revealed it to be normal,[44] and there is no abnormality in the endoneurial myoinositol content of sural nerve fascicle from patients with symptomatic diabetic polyneuropathy.[45] The cerebrospinal fluid (CSF) myoinositol content has, however, been found to be decreased in neuropathic diabetics, and this decrease was unrelated to the CSF content of glucose and sorbitol.[46] Finally, the total acidic phospholipid content of diabetic nerves (ie, phosphoinositides and phosphatidylserine) has been found to be decreased in sural nerve biopsies obtained from patients with diabetic polyneuropathy.[47]

While this evidence for abnormalities in the metabolism of myoinositol and the inositol lipids in the nerves of human diabetics is unimpressive, the intriguing observations of a salutary effect of dietary myoinositol supplementation on the structure and function of the peripheral nerves of the diabetic rat have prompted a number of clinical trials of myoinositol supplementation in human diabetics. When this substance was provided as a supplement to normal subjects[48] or to diabetic subjects who had no evidence of neuropathy,[49] it was found to have no effect upon the measured motor nerve conduction velocities. However, when increased dietary myoinositol was provided, or when oral myoinositol supplementation was given to patients with diabetic polyneuropathy, both electrophysiologic and symptomatic improvement have been observed.[48,50,51] As shown in Table II, whereas myoinositol supplementation for a period as brief as two weeks resulted in increased amplitude of the action potentials in all nerves studied,[50] longer periods of time were required before statistically significant improvement in the conduction velocities of the motor or the sensory nerves could be detected.[48,51] Symptomatic and clinical improvement was observed in the majority of the neuropathic patients treated with an increased myoinositol intake.[48,51] Interestingly, in the study of Greene and associates, 75% of the patients whose diets were supplemented with myoinositol demonstrated subjective and objective improvement during the six-month period of study.[51] In contrast, only one patient (20%) in the placebo group was improved over the same period of time, and that patient was also the only subject whose blood glucose concentrations were normalized during the period of study (105.9 ± 10.3 mg/dl).[51] From the data shown in Table II, it is apparent that, if anything, during the period of oral myoinositol supplementation the mean serum glucose of all the subjects studied was somewhat higher than during the control period. Thus, the objective changes in peripheral nerve function during oral myoinositol supplementation cannot be ascribed to any improvement in "diabetic control." Obviously, the small number of patients studied and the relatively brief duration of

TABLE II. Effect of oral *myo*-inositol supplementation on peripheral nerve function in neuropathic diabetics

Investigators	Clements et al[46]	Greene et al[49]	Salway et al[48]
Number of patients	20	4	7
Myo-inositol intake	High *myo*-inositol diet (~1.6 gm/day)	Diet + 2–3 gm/day	Diet + 1 gm/day
Duration of study	4 months	6 months	2 weeks
Mean serum glucose before study (mg/dl)	156	188	128
Mean serum glucose during study (mg/dl)	168	188	153
Nerve Studied	**Change in nerve conduction velocity (m/sec)**	**(%)**	**Change in amplitude of evoked action potential**
Median motor	+0.8 ± 0.5°	+2.9 ± 2.0	+76*
Median sensory	+1.9 ± 0.4*°	+4.3 ± 2.7°	...
Ulnar motor	...	+5.1 ± 0.7*°	...
Peroneal motor	+1.2 ± 0.5°	0 ± 0.2	+40
Sural Sensory	+6.7 ± 1.3*°	+2.4 ± 0.9	+160*

* p vs initial value <0.05
° p vs placebo or low-*myo*-inositol diet group <0.05

the individual studies make it impossible to draw any firm conclusions concerning the value of oral myoinositol supplementation, either as a form of treatment for diabetic polyneuropathy or as a means by which the natural history of this complication can be altered in the diabetic population at large. For these purposes, large clinical trials of long duration will be required.

Summary

Diabetic neuropathy is the most common of the late complications of diabetes mellitus and constitutes a heterogeneous group of syndromes. While the mononeuropathies (and probably diabetic amyotrophy) are thought to be the consequence of vascular abnormalities, the polyneuropathies are thought to have a metabolic basis. Numerous metabolic abnormalities have been described in the peripheral nerves of animals with experimental diabetes—including defects in neuronal protein synthesis, axonal transport, myoinositol and inositol lipid metabolism, as well as increased polyol pathway activity and altered lipid and protein synthesis in the Schwann cell. While all of these abnormalities might contribute to the pathogenesis of distal symmetric and autonomic neuropathy, their individual or cumulative roles in this process remain to be established.

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Hormonal Secretion in Diabetic Autonomic Neuropathy

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Neuropathy is one of the most common complications of diabetes, and methods are readily available that can directly measure somatic and peripheral sensory nerve function. Peripheral nerves can be biopsied, and somatic motor and sensory nerve function can be evaluated by physical examination.

In contrast, diabetic autonomic neuropathy (AN) is more difficult to quantitate. Symptoms are often vague and nonspecific and, except in advanced cases, signs are difficult to detect on physical examination. Histologic confirmation by biopsy is not practical, as no large autonomic nerves or ganglia lie close to the body surface. Clinical tests of autonomic function are available but have rarely been applied. Hence, the incidence of AN is unknown.

Clinical tests that have been devised over the past two decades indirectly test the function of the autonomic nervous system. Most involve assessing cardiovascular responses to various maneuvers. We have chosen six criteria by which autonomic dysfunction may be evaluated. These are as follows: (1) a fall in systolic blood pressure of greater than 30 mm Hg on assuming the standing from the supine position; (2) a variation in heart rate of less than ten beats per minute during deep inspiration and expiration using continuous electrocardiogram (ECG) monitoring; (3) a rise in diastolic pressure of less than 10 mm Hg in response to sustained handgrip at 30% maximal voluntary contraction for five minutes using a handgrip dynamometer; (4) a ratio of less than 1:10 between the longest R–R interval immediately after, divided by the shortest R–R interval during the Valsalva maneuver (measured by continuous ECG monitoring); (5) a value ≤ 1.03 for the ratio of the R–R intervals of the 30th to the 15th heart beat obtained immediately after standing from the supine position (measured by continuous ECG monitoring); and (6) impaired testicular sensation associated with other evidence of AN in the absence of other causes, eg, carcinoma.[1,2] The presence of three or more of these criteria was required for the diagnosis of AN.

Because of the relative inaccessibility of the autonomic nervous system, studies to determine the site of the lesion in diabetic AN have been few. Faerman[3] and Duchen[4] have described multiple morphologic abnormalities in the autonomic nervous system in diabetics with symptoms of AN. Histologic studies alone, however, do not tell us the functional significance of these lesions, except possibly in retrospect.

Several investigators in recent years have used plasma catecholamine and hormonal responses to various stimuli as a means of assessing AN. Cryer[5] found a decreased rise of plasma norepinephrine (NE) in response to standing in most diabetics with

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For reprints contact: Aaron I. Vinik, M.D., University of Michigan Medical School, Department of Internal Medicine, Ann Arbor, Mi. 48109 postural hypotension. Levitt[6] and Krarup[7] found an impaired pancreatic polypeptide (PP) response to insulin hypoglycemia in diabetics with AN, a response believed to be mediated by the vagus nerve. These studies by themselves, however, do not localize the lesion of diabetic autonomic neuropathy. A lesion in the afferent, central, or efferent limb of the neural pathway that controls blood pressure can produce orthostatic hypotension and a decreased rise in plasma NE on standing. Furthermore, each component of this neural pathway has several subcomponents. Thus, a lesion in the efferent limb may occur in the preganglionic or postganglionic neuron. A lesion in the postganglionic neuron may be in the cell body, the axon, or in the synthesis, storage, or release of NE. Finally, a receptor defect in the effector organ may also occur.

In order to localize the lesion in diabetic AN, stimuli must be applied that activate the autonomic pathways at different levels, and responses must then be measured. Leveston and associates[8] demonstrated that diabetics with postural hypotension who had a decreased rise in plasma NE on standing (hypoadrenergic hypotension) also had a decreased rise in plasma NE after injection of edrophonium, an anticholinesterase that activates postganglionic neurons. The epinephrine (E) response was intact. Since Halter[9] had shown that plasma catecholamines increase normally in response to tyramine in patients with AN, the conclusion was drawn that the lesion of diabetic AN was in the axon of the postganglionic sympathetic neuron.

There are problems in interpreting these studies. The neuropathy of diabetes is a heterogenous entity, with several possible causative factors and lesions at more than one site. Thus, for example, orthostatic hypotension may be the common expression of several different lesions, although one particular type of lesion may predominate. A review of the 100 diabetics described by Leveston's group[8] indicates that diabetics both with and without orthostatic hypotension could be divided into subgroups who had low, normal, or high plasma catecholamine responses to standing, ie, even in patients without AN, responses may be variable. Second, in several studies of diabetic AN, the number of patients has been small and thus generalized interpretations may be inappropriate. Third, if diabetic AN is a heterogenous entity, results obtained in one group cannot be extrapolated to another.

It is important, therefore, to study patients with AN using multiple stimulatory tests of the sympathetic and parasympathetic nervous systems. Once the site of the lesion is determined, more rational therapy for the specific problems may then be devised. The multitude of drugs used to treat orthostatic hypotension (propranolol,[10] indomethacin,[11] metoclopramide,[12] dihydroergotamine,[13] etc), each with some success, indicates a need for some method to guide therapy. For example, hyperadrenergic hypotension may be best treated with propranolol, or even clonidine, and the hypoadrenergic variety of hypotension may be best treated with 9-α fluorohydrocortisone. Furthermore, documentation of the defect is important in assessing the response to intensive diabetes control.

Tests of autonomic function

In this section, tests for autonomic function will be described that can be used, either alone or in combination, to determine the site of the lesion in AN. In these tests, plasma catecholamines are used as an index of activity of the sympathoadrenal system as described by Cryer.[14]

Adrenergic nervous system

Standing-supine plasma catecholamines. Plasma catecholamines increase when one assumes the upright from the supine position.[15] The initial stimulus is a drop in blood pressure as sensed by baroreceptors in the carotid sinus. The final effect is the release of NE by the postganglionic neuron, which in turn activates receptors in blood vessels to produce vasoconstriction. Since, in general, activation of the sympathetic nervous system is a diffuse phenomenon, E levels also rise through activation of the splanchnic nerves.

A rise in plasma catecholamines in response to standing implies integrity of the reflex pathway up to the level of the postganglionic neuron, which in established AN implies a postsynaptic defect in the effector organ, ie, a quantitative or qualitative defect in the receptors or a postreceptor defect. Cryer[5] has shown that some diabetics with orthostatic hypotension have a hyperadrenergic response to standing, ie, an increase in plasma NE more than two standard deviations above the mean, and the hypotension has been attributed to a decreased red cell mass.[16]

Responses to insulin hypoglycemia. Hypoglycemia induced by the administration of insulin is one of the most potent activators of the sympathetic nervous system.[17,18] In normal subjects, a fall in blood glucose to levels of less than 40 mg/dl causes a threefold NE and 100-fold E rise above basal plasma levels.[14] Lesions in the central nervous system, the preganglionic neuron, or the nerve cell body would all be expected to impair the rise in plasma catecholamines in response to insulin hypoglycemia. In primary orthostatic hypotension, a disease that diffusely affects postganglionic neurons, for example, one would expect a decreased response to insulin hypoglycemia. A lesion of the postganglionic axon or nerve terminal would result in a normal increase in plasma E but a truncated NE response. Finally, a lesion in the effector organs would show a normal E and NE response but a lack of clinical signs of catecholamine release (fixed heart rate, unchanged blood pressure, lack of sweating). The catecholamine response to hypoglycemia in combination with that to standing may reveal AN of the afferent and efferent limb.

TABLE I. Standing-Supine Catecholamines (pg/ml)

		Controls[a]	Normal Range[b]	Subjects G.T.	K.P.	M.R.	G.B.
Basal (supine)	E	30± 11	8–52	14	21	26	1.6
	NE	244 ± 72	96–392	59	97	122	82
Standing[c]	E	60 ± 22	16–104	15	34	91	8.4
	NE	488 ± 144	192–784	175	189	495	305

[a] Mean ± standard deviation

[b] Mean ± two standard deviations

[c] Normal standing values defined to be twice basal[14]

As examples, the responses of four subjects—G.T., idiopathic orthostatic hypotension; K.P., M.R., and G.B., insulin-dependent diabetes mellitus (IDDM) with AN—are presented, as well as those of six healthy controls. All subjects had persistent, symptomatic orthostatic hypotension (Table I).

Hypoadrenergic hypotension is defined as hypotension associated with standing catecholamine levels more than two standard deviations below the mean.[5] Since the lower limit of normal E values is close to zero, the NE response is used to define hypoadrenergic hypotension. In the above example, G.T. and K.P. have hypoadrenergic hypotension, while M.R. and G.B. have normal responses.

Insulin hypoglycemia testing performed on the hypoadrenergic subjects and the same six controls showed the following results, shown in Tables II and III:

K.P. (diabetic with AN) had a normal increase in plasma catecholamines while G.T. (idiopathic orthostatic hypotension) had a decreased response in spite of more severe hypoglycemia. Because of the large standard deviation, however, it cannot be determined if G.T. had a significantly decreased response. These data suggest, however, that K.P. has an afferent lesion and impaired response to standing normal. G.T. has an efferent-lesion response to hypoglycemia (no response to either test). However, insulin hypoglycemia may stimulate release of NE from the adrenal medulla, and a rise in NE would, therefore, not preclude a postganglionic neuronal defect.

TABLE II. Insulin Hypoglycemia Catecholamine Responses (pg/ml)

		Controls[a]	G.T.	K.P.
Maximum Response	E	750 ± 525	279	564
	NE	323 ± 155	196	396

[a] Mean ± standard deviation

TABLE III. Glucose Responses (pg/ml)

	Controls[a]	Range[b]	G.T.	K.P.
Basal	99 ± 3.8	95–102	107	160
Nadir	34 ± 7.5	24–46	46	56

[a] Mean ± standard deviation

[b] Minimum-maximum values observed

Responses to phentolamine infusion. Clarke[19] and Halter[9] found a 150% or greater increase in NE above basal levels in response to phentolamine infusion. No change in E levels was observed. Clarke[19] suggests that this response is due to blocking of the alpha receptor on the presynaptic membrane of the postganglionic sympathetic axon terminal. Since activation of this receptor leads to feedback inhibition of NE release, blocking this receptor causes increased basal release of NE. Phentolamine also blocks the uptake of released NE at neural terminals.[20] A decreased response to phentolamine would suggest several possibilities. Halter[9] reported a decreased NE response to phentolamine infusion in six patients with diabetic AN. Of these patients, four had a normal release of NE in response to tyramine, and two had a subnormal release. These data are compatible with a lesion proximal to or at the nerve terminal, respectively.

The release of PP, a hormone secreted by pancreatic islets (see following, under parasympathetic nervous system), is influenced by adrenergic mechanisms.[21] Phentolamine infusion causes a doubling of basal PP levels, which can be abolished by atropine. Phentolamine plus E causes a sevenfold rise in PP concentration, suggesting that PP is stimulated by beta-adrenergic receptor agonists. Thus, this response offers a unique opportunity to simultaneously compare the function of splanchnic nerves to the sympathetic nervous system as a whole.

Phentolamine infusions were performed on G.T. and K.P. (described earlier). In our previous study,[21] we showed that PP levels increase from an average basal value of 189 pg/ml to a peak value of 483 ± 89 pg/ml (mean ± SEM) for an average increment of 294 pg/ml. Although K.P. started from a lower basal level, the increment was similar (basal 82 pg/ml, peak 305 pg/ml, increment 223 pg/ml), while G.T. had a similar basal level to K.P. but a smaller increment (basal 83 pg/ml, peak 153 pg/ml, increment 70 pg/ml). These results suggest that the efferent sympathetic pathways were intact in K.P. and impaired in G.T.

We have recently discovered an important sex difference in autonomic responsiveness as measured by PP responses to various stimuli.[22] Adrenergic beta-receptor stimulation using an epinephrine-phentolamine infusion caused a five- to sixfold greater PP response in healthy males compared with age-matched females. This difference in autonomic sensitivity may be important in terms of the increased risk of cardiovascular disease in males, and studies should be done in diabetics.

Responses to edrophonium injection. Postganglionic neurons are stimulated by the release of acetylcholine in autonomic ganglia. Postganglionic stimulation is terminated when acetylcholine is hydrolyzed by acetylcholinesterase. Tohmeh[16] and Rizza et al[17] showed that both NE and E rise after IV injection of edrophonium. In diabetics with AN, the E response was intact, but the rise in NE was severely blunted. Since Halter[9] had shown that the NE response to tyramine was intact in four out of six diabetics with AN, they suggested the lesion of diabetic AN was in the axon of the postganglionic neuron.

Parasympathetic nervous system

The parasympathetic nervous system has two major sites of origin of preganglionic fibers, the cranial nuclei and the sacral spinal cord. The vagus supplies the only parasympathetic innervation to the stomach, the small intestine, and the pancreas. The relationship of postganglionic elements is more complex than in the sympathetic nervous system. There are about 3,000 preganglionic vagal fibers that supply the gut; however, there are millions of intramural neurons. While the vagus has an obvious effect on gut motility, vagotomy (eg, in operations for peptic ulcer disease) produces motor abnormalities confined mostly to the stomach. In time, even these abnormalities tend to decrease.[23] In autotransplanted segments of pig gut, deprived of an external nerve supply, motility is largely intact. In fact, the intrinsic nerve supply of the gut has been considered a third component of the autonomic nervous system. While gastrointestinal abnormalities in diabetic AN have been attributed to vagal neuropathy, the extent to which the intrinsic nervous system contributes to gastrointestinal dysfunction has not been studied. We have used insulin hypoglycemia as a means of studying cholinergic (vagal and nonvagal) integrity (Fig. 1).

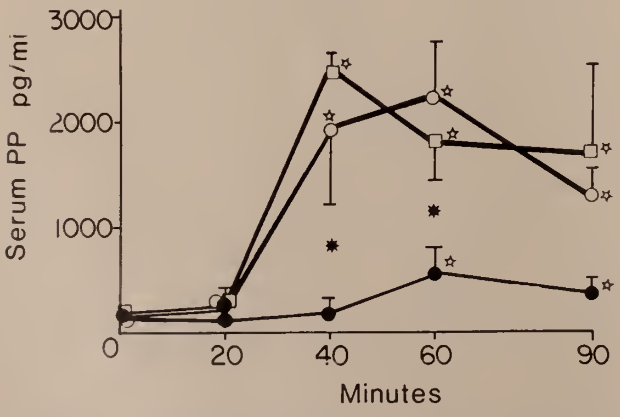


FIGURE 1. Serum PP responses to insulin-induced hypoglycemia in diabetics with AN (●—●), diabetics without AN (O- - -O), and normal controls (□-·-□). Insulin was given at time zero. ☆, $p < .01$ (rise above basal); *, $p < .05$ between the diabetics with AN and the normal controls and diabetics without AN. (Reproduced with permission—J Clin Endocrinol 50:447, 1980.)

Many different stimuli cause release of PP into the general circulation, eg, hypoglycemia, meal ingestion, exercise, and several drugs (metoclopramide, phentolamine, isuprel[24]). Atropine, however, can abolish or markedly inhibit the PP responses to all stimuli. Thus, it appears that PP release is mediated exclusively by neural stimulation.

Insulin hypoglycemia is the most potent stimulus of PP known.[25] The effect, however, can be totally abolished by truncal vagotomy.[26] Diabetics with AN have a decreased PP response to insulin hypoglycemia,[6] suggesting vagal dysfunction. Vagal neuropathy causes a reduction in the gastric acid secretory response to hypoglycemia.[18] Integrity of the parietal cell mass can be tested by using pentagastrin or betazole (Histalog) as the secretory stimulus.

To define parasympathetic neuropathy in G.T. and K.P., PP responses to insulin hypoglycemia were evaluated. Presumptive evidence of vagal neuropathy was present from the results of barium x-rays of the stomach, which showed markedly reduced motility. The results of PP testing in insulin hypoglycemia are shown in Table IV.

These results showed an impaired PP in G.T. and K.P. that is highly significant. In fact, PP levels decreased throughout the test in K.P. Both of these studies suggest severe vagal neuropathy.

The secretin test. Purified porcine secretin in a dose of 2 U/kg (growth-inhibiting hormone secretin, Kobi Diagnostica, Nykoping, Sweden) causes a release of PP that is unaffected by vagotomy but abolished by atropine (Fig. 2),[27] suggesting that secretin causes release of PP by a cholinergic nonvagal mechanism. The PP response to secretin can thus be compared to the response to hypoglycemia. An intact response to secretin suggests a vagal lesion. A decreased response to secretin implies neuropathy of intrinsic gut neurons.

In K.P., PP increased from a normal basal level of 97 pg/ml to a maximum value of 224 pg/ml in response to secretin. A normal response in our lab is an average increase to 260 pg/ml, with a range of 230 to 290 pg/ml. This response suggests that intrinsic gut neuropathy was not present in K.P.

Hormone secretion in diabetic autonomic neuropathy

There is extensive evidence that the hormones of the gastrointestinal-pancreatic axis are under auto-

TABLE IV. Results of PP Testing in Insulin Hypoglycemia

	hPP pg/ml		Glucose mg/dl	
	(Basal)*	Maximum	Basal	Minimum
Controls*	139 ± 42	3,020 ± 390	82 ± 9.3	30 ± 4.3
G.T.	51	174	107	46
K.P.	81	59	160	56
Diabetics with AN*	165 ± 41	654 ± 258	197 ± 37.8	69 ± 23

* Reference,[6] values given as mean ± SEM.

nomic control. Cholinergic and adrenergic nerve endings are applied to the surface of pancreatic islet cells,[28,29] and there is an extensive network of cholinergic, adrenergic, and peptidergic autonomic nerve fibers in close proximity to gut endocrine cells.[30] In this section, autonomic control of gastrointestinal hormones will be reviewed, as well as abnormalities in secretion of gut hormones in autonomic neuropathy.

While the central hormonal disorder in diabetes lies in the secretion and regulation of insulin, abnormalities in the control of other gut hormones have been increasingly recognized. Thus, elevated basal levels of glucagon have been reported in both IDDM,[31,32] and non-insulin-dependent diabetes mellitus (NIDDM).[33,34] Floyd et al[35] showed that the mean basal PP level rose, as did the mean fasting glucose concentration. Introduction of insulin therapy in previously untreated maturity-onset diabetics reduced their basal PP levels to normal.[36] In diabetes secondary to chronic pancreatitis, insulin withdrawal caused a rise in basal glucose-dependent insulin-releasing peptide (GIP), which returned to normal on reinstitution of insulin therapy.[37] Gastrin levels may be raised,[38] somatostatin (somatotropin release-inhibiting factor [SRIF]) concentrations appear to be within normal units,[39] and there are no reports on motilin levels.

In diabetes complicated by AN, gut hormone secretion becomes even more severely deranged. Since the gastrointestinal hormones control the digestion, absorption, and disposal of nutrients—particularly

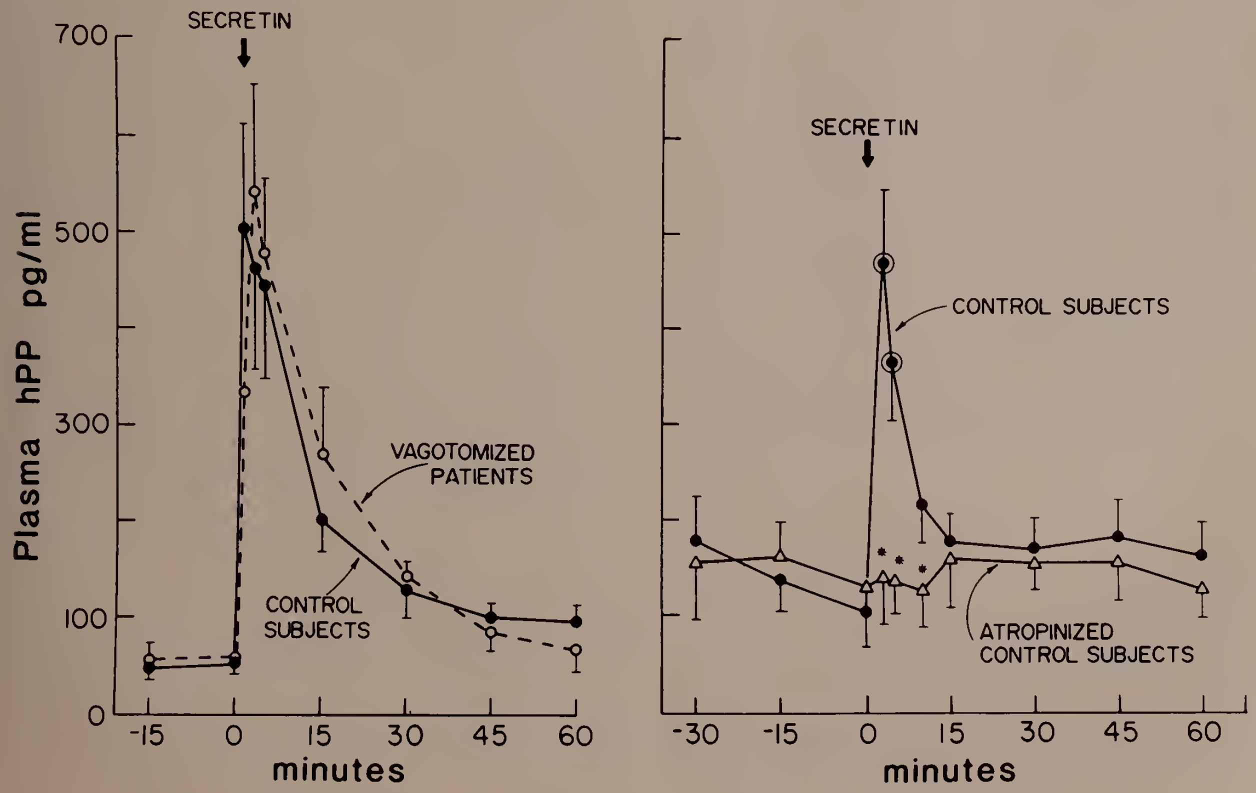


FIGURE 2. Plasma human pancreatic polypeptide (hPP) responses to secretin (0.2 μ/kg IV) in healthy controls, vagotomized subjects, and healthy subjects who had received atropine after the third basal sample (15 μg/kg followed by 17 μg/min for 60 min). (Reproduced with permission—J Clin Endocrinol 50:1097, 1980.)

glucose—one can imagine that the erratic control of blood glucose often found in diabetic AN is at least in part a reflection of disordered secretion of gut hormones.

In the following section, the effects of AN on the secretion of six hormones will be discussed: (1) gastrin; (2) glucagon; (3) GIP; (4) PP; (5) SRIF; and (6) motilin. The effects of disturbed gut motility, nutrient delivery, and the role of dietary fiber in the adjunctive treatment of diabetes will also be presented.

Gastrin. Gastrin is a generic term for a family of polypeptides in man of differing molecular sizes that occur in two major forms: a sulfated and nonsulfated series. Gastrin is secreted by endocrine cells, the G cells, which are found mainly in the mucosa of the antrum and to a lesser extent in the duodenum. Protein meals are the major physiologic stimulus for gastrin release. Its main physiologic effect is stimulation of gastric acid secretion, and a negative feedback loop exists whereby acid inhibits gastrin secretion.[40]

In man, the vagus appears to exert a predominantly inhibitory influence on the secretion of gastrin. Stadil[41] found that insulin hypoglycemia induces a rise in serum gastrin levels in healthy subjects. Vagotomy and atropine administration both enhance the gastrin response to hypoglycemia.[41] Vagotomy caused a greater increase in serum gastrin in response to meals,[42] as does atropine administration.[42,43] The sympathetic nervous system appears to have a small role in modulating gastrin release. Christensen and Stadil[44] showed that the gastrin response to insulin hypoglycemia was reduced by adrenergic beta-receptor blockade.

Feldman and others[38] studied long-standing IDDM with and without nausea and vomiting. In both groups of diabetics, evidence of vagal neuropathy was found as manifested by delayed gastric emptying and decreased acid secretory response to sham feeding compared with healthy controls. Both groups of IDDM had a two- to threefold elevation of the basal serum gastrin as well as a threefold greater increase in serum gastrin in response to meals compared with healthy subjects. The findings were attributed to "autovagotomy" secondary to the diabetes.

We have studied the gastrin response to insulin hypoglycemia in NIDDM and without AN and compared their responses with those in healthy subjects. Diabetics with AN had a plasma glucose nadir of 50 ± 5 mg/dl, and NIDDM without AN had a nadir of 48 ± 3.7 compared with a significantly lower ($p < .02$) nadir of 30 ± 4.3 mg/dl in controls. There was no significant difference in basal gastrin levels between the three groups (NIDDM with AN, 86 ± 9.0; NIDDM without AN, 73 ± 12 pg/ml; controls, 66 ± 10 pg/ml). There was also no significant difference in the peak gastrin responses among the three groups (NIDDM and AN, 134 ± 35; NIDDM without AN, 108 ± 17; controls, 108 ± 24 pg/ml).

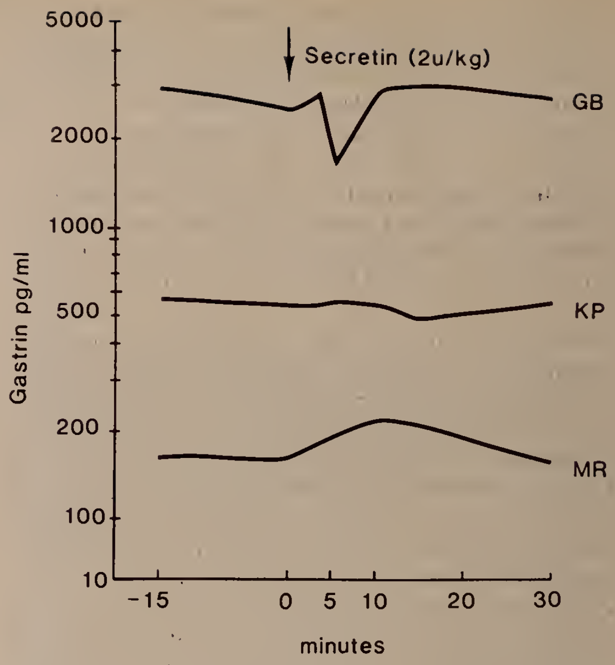


FIGURE 3. Serum gastrin responses to secretin in three insulin-dependent diabetics with autonomic neuropathy and diabetic pseudo-ZE syndrome.

Gastrin responses to meals were studied in NIDDM with and without AN and healthy subjects. Basal levels were 51 ± 5.3 pg/ml in controls; 57 ± 2.9 pg/ml in NIDDM with AN; and 57 ± 4.0 in NIDDM without AN. There were no significant differences in serum gastrin levels after ingestion of a meal between the three groups. For controls, the peak serum gastrin after meals was 95 ± 14 pg/ml; for NIDDM without AN, 90 ± 19 pg/ml; and NIDDM with AN, 108 ± 31 pg/ml.

The discrepancy between Feldman's[38] observations and ours seems to relate to duration of diabetes, insulin dependence, and gastric function. In our studies, basal gastrin levels do appear to be moderately raised in IDDM with AN. The raised gastric levels in IDDM could be confused with the Zollinger-Ellison (Z-E) syndrome. Secretin tests, as described earlier, were therefore performed in IDDM with AN. Figure 3 shows the extreme variations in basal gastrin (normal 0–150 pg/ml) and the lack of a rise with the administration of secretin. All these patients had evidence of autovagotomy, as manifested by severely reduced gastric motility on upper GI, absent gastric acid secretory response to insulin hypoglycemia, and intact response to pentagastrin. The levels found in two of these patients fall into the range of those seen in the Z-E syndrome, which was ruled out by the secretin test. Thus, these patients have a diabetic "pseudo-Zollinger-Ellison syndrome" on the basis of vagal neuropathy. In a 22-year-old patient with IDDM, basal gastrin was 327 and rose to 458 pg/ml after secretin administration. Basal acid secretin was 15.4 mEq/hr; with meal stimulation serum gastrin rose to 576 pg/ml. Percutaneous transhepatic venous sampling revealed a single high level of 800 pg/ml in the gastrocolic trunk. A diagnosis of G-cell hyperplasia was made and antrectomy performed. Gastrin levels returned to normal.

Glucose-dependent insulin-releasing peptide. Glucose-dependent insulin-releasing peptide is a 43-amino-acid peptide secreted by a distinct endocrine cell, the K cell, found in the duodenum and small intestine.[45] GIP is released into the blood when food is ingested, the order of potency of different nutrients being fat, glucose, and amino acids.[45] While originally felt to be responsible for feedback inhibition of gastric acid secretion,[46] this effect now appears to be of minor importance in man.[47] At present, the most important physiologic effect of GIP appears to be its glucose-dependent insulinotropic effect. It has long been recognized that the pancreas secretes more insulin in response to oral glucose than in response to the equivalent amount of glucose given intravenously or when an equivalent rise in blood glucose is produced.[48,49] It was postulated that the gastrointestinal tract releases a factor called "incretin," which is released in response to food and stimulates the pancreas to secrete insulin. GIP is currently a favored candidate incretin.

Elevated basal GIP levels have been reported in obese subjects with abnormal glucose tolerance tests[50] and in obese NIDDM. In contrast, Ross et al[51] found similar basal levels of GIP in control subjects and diet-treated NIDDM, but found greater GIP and impaired insulin responses to oral glucose compared to controls. They suggested decreased responsiveness of the beta cell to GIP as a cause of the decreased insulin levels.

We have recently studied GIP levels in maturity-onset NIDDM with and without AN in response to meals and compared this to controls (Fig. 4).[52] The basal levels of GIP were similar in all three groups. Overnight insulin infusion in the diabetics reduced plasma glucose to the normal range and caused a rise in plasma GIP, which was not significant. Overnight gastric aspiration had no significant effects on GIP levels. The GIP response in NIDDM without AN to ingestion of a mixed meal was similar to that in controls, but was significantly reduced in NIDDM with AN at all times after the meal. Despite the impaired GIP responses, serum-insulin responses were equivalent to NIDDM without AN. The data suggest that GIP is neither the only nor the major incretin. The impaired responsiveness may be due

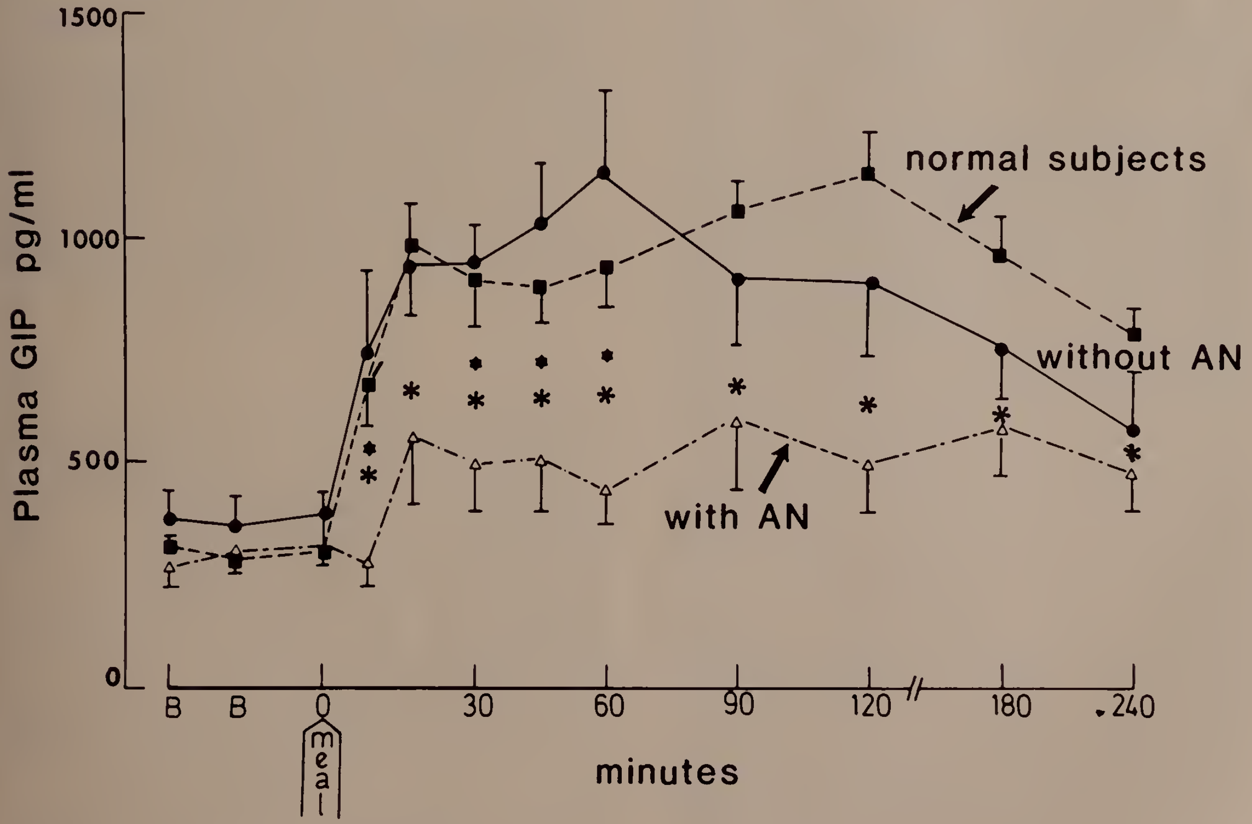


FIGURE 4. Plasma GIP responses to ingestion of a mixed meal containing 36.4 gm fat, 72 gm carbohydrate, and 43 gm protein ingested over 10 min. The ◆ indicates significant differences between diabetics with and without AN, and the ✱ indicates differences in diabetics with AN and normal subjects. (Reproduced with permission—J. Clin. Endocrinol 51:257, 1980.)

to altered gastric emptying, but this was not documented.

The mechanism of GIP release and regulation in response to meals is poorly understood. An attractive hypothesis is that nutrients, either directly or reflexly, stimulate GIP release. GIP then stimulates insulin release during postprandial hyperglycemia. Insulin causes feedback on GIP, decreasing its release and preventing hyperinsulinemia and thus postprandial hypoglycemia.[53] Attempts to suppress GIP by exogenous insulin administration have met with variable success. It has recently been reported that C-peptide, a peptide chain split off proinsulin to form insulin, causes suppression of GIP.[54] Since exogenously administered insulin does not contain C-peptide—and may, in fact, suppress its release—this may account for our failure to show an inhibitory effect of insulin on GIP secretion. Neural control of GIP may also occur. While fasting GIP levels are unaffected by E, alpha-adrenergic stimulation (infusion of E and propranolol) reduced GIP and insulin responses to oral glucose in man,[55] and atropine inhibited GIP release after intraduodenal perfusion of glucose.[56] We have shown that the normal postprandial rise in GIP is blunted in NIDDM with AN, which may thus reflect either defective cholinergic or adrenergic beta-receptor activation of GIP cells.

At present, therefore, the role of GIP in diabetes is still an open question. Our findings of a depressed GIP response to a meal in NIDDM with AN is suggestive of a defect in autonomic regulation of GIP; however, it is not clear whether this is related to autonomic control of GIP cells or delayed gastric emptying. It is feasible that impaired GIP secretion could contribute to poor insulin responsiveness in the event that a dissociation between the effects of AN on GIP cells and gastric emptying were to occur. Studies on the effects of changes in gastric emptying on GIP secretion should help resolve this problem.

Glucagon. Glucagon is a 29-amino acid polypeptide secreted by the alpha cells of the pancreatic islets. It is released by amino acids and suppressed by glucose. An important physiologic role of glucagon is to enhance catabolism with stimulation of hepatic glycogenolysis and gluconeogenesis and inhibition of glycogen synthesis.[57] In normal subjects, hypoglycemia stimulates and hyperglycemia suppresses glucagon secretion. It has been shown that of the many counterregulatory hormones released during insulin hypoglycemia, glucagon is one of the most important for glucose counterregulation,[17,58] and it appears to be important in the hyperglycemia of insulin deficiency.[58]

Numerous contradictory studies have claimed a role of the autonomic nervous system on glucagon release. Thus, vagotomy has been reported to cause a reduced rise in plasma glucagon during hypoglycemia, although basal levels were unaffected,[59] and in another study truncal vagotomy or atropine administration had no effect on plasma glucagon responses to insulin hypoglycemia.[60] Furthermore, cholinergic stimulation using bethanechol and edrophonium had no effect on glucagon levels.[60]

The role of the adrenergic nervous system on glucagon release is also controversial. Adrenergic beta-receptor stimulation with isoproterenol caused a rise in plasma glucagon, an effect blocked by propranolol[61]; methoxamine, an alpha-receptor agonist, reduced and phentolamine increased plasma glucagon levels.[61] However, neither propranolol nor phentolamine altered glucagon levels during insulin-induced hypoglycemia.[62] Although there does appear to be some autonomic regulation of glucagon secretion, blood glucose levels and/or other metabolic parameters may play a more important role.

Diabetes per se is associated with significant alterations in glucagon regulation. Elevated basal levels of glucagon have been reported in IDDM[31,32] and NIDDM,[33,34] which may be a consequence of insulin deficiency.[37] Others, however, found normal basal glucagon levels in IDDM and NIDDM,[63,64] which were nevertheless inappropriately raised for the degree of hyperglycemia. Excessive responses to a variety of stimuli and failure of suppression by glucose[64] of the glucagon hypersecretion have been implicated in the hyperglycemia of diabetes.

Maher et al[65] compared the glucagon response in normals and IDDM with and without AN to insulin hypoglycemia. Basal glucagon levels were similar. Diabetics without AN had a reduced glucagon response, while diabetics with AN had no glucagon response to insulin hypoglycemia. Reynolds [66] made similar observations when comparing NIDDM stable diabetics to IDDM with unstable diabetes, but the presence of AN was not defined.

We have previously reported on glucagon responses in maturity-onset NIDDM with and without AN (Fig. 5).[67] We found that diabetics on the whole

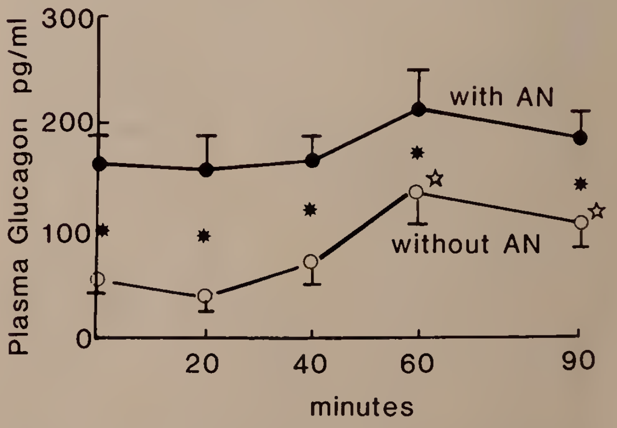
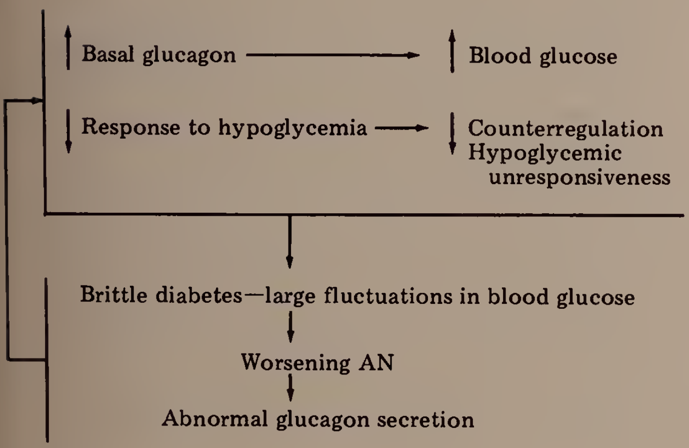


FIGURE 5. Plasma glucagon responses to insulin hypoglycemia in diabetics with and without AN. ★ indicates significant differences between groups and ☆ indicates significant rise above basal. (Reproduced with permission—Diabetes 28:1018, 1979.)

have basal glucagon levels similar to those of healthy subjects, although inappropriately high for the prevailing glucose concentration. However, when subdivided into NIDDM with and without AN, only the diabetics with AN had elevated basal levels. Diabetics with AN had a significantly smaller increase in plasma glucagon response to hypoglycemia compared with diabetics without AN and a more prolonged depression of blood glucose. Both groups were treated with overnight insulin infusion to normalize the fasting blood sugar, and overnight gastric aspiration was also performed. Neither maneuver lowered fasting glucagon levels. Both groups, however, had an increased glucagon response to insulin-induced hypoglycemia after overnight insulin infusion. After insulin infusion, the diabetics with AN had a response similar to controls and a more rapid recovery from hypoglycemia. Thus, in our patients, autonomic dysfunction was associated with elevated basal glucagon levels, impaired glucagon response to hypoglycemia, and slow recovery from hypoglycemia. Thus, these findings are compatible with the following pathogenetic sequence:


↑ Basal glucagon
↑ Blood glucose
↓ Response to hypoglycemia
↓ Counterregulation Hypoglycemic unresponsiveness
Brittle diabetes—large fluctuations in blood glucose
Worsening AN
Abnormal glucagon secretion

Somatostatin. In 1973, Brazeau et al isolated the tetradecapeptide from ovine hypothalami that was capable of inhibiting the release of growth hormone.[68] SRIF is a cyclic 14-amino acid peptide and has subsequently been found in brain, spinal cord, sympathetic ganglia, as well as in the stomach, small intestine, and pancreas.[30] The highest concentration of SRIF is in the gastric antrum. A 28-amino acid peptide that contains the smaller 14-amino acid sequence has been found in gut, which may be a precursor of the smaller peptide.[69] SRIF has widespread biologic effects, mostly inhibitory in nature. SRIF inhibits gastric acid and pepsin secretion (eg, to stimuli such as pentagastrin,[70] histamine,[71] absorption of zylose, glucose,[72] triglyceride,[73] and amino acids.[74] Pancreatic secretion in response to secretin[75] and protein[76] is decreased by SRIF infusion. Motility of the GI tract is decreased by SRIF.[77] SRIF inhibits the release of all GI hormones: gastrin,[78] GIP,[53] motilin,[79] insulin,[80] glucagon,[81] and pancreatic polypeptide.[82]

Somatostatin-like immunoreactivity (SRIF-LI) is found in the endocrine D cells and the densely innervated layers of gut throughout the GI tract from the stomach to colon and in the pancreas. SRIF may exert control at the local level, ie, a paracrine effect on the stomach or pancreas. Abnormal tissue content of SRIF-LI in animal models of diabetes led Unger and Orci[83] to postulate that SRIF is implicated in the abnormal secretory patterns in diabetes. Elevated blood levels were found in alloxan-diabetic dogs; these fell with insulin treatment.[84] We have shown that basal SRIF-LI levels in healthy subjects were similar to those in NIDDM.[39] Overnight insulin infusion in the diabetics insignificantly lowered the fasting SRIF-LI levels. There was a significant increase in plasma SRIF-LI concentration in healthy control subjects in response to insulin hypoglycemia. A similar degree of hypoglycemia, however, failed to produce a rise above basal levels in the NIDDM. Ingestion of a mixed meal by the ten healthy subjects caused a significant biphasic increase of SRIF-LI concentration, with mean increments of 70 and 140 pg/ml at 20 and 120 minutes, and minutes after the meal, values were raised from 5 to 240. In comparison, at no time did the NIDDM demonstrate a significant rise above basal after ingestion of the meal. There were significant differences in responses between the NIDDM and healthy subjects at 15 and 120 minutes. In IDDM, we have found SRIF-LI responsiveness to insulin hypoglycemia to be similar to that in healthy subjects.[85]

There appears to be autonomic modulation of SRIF secretion. In the isolated perfused pancreas, Samols and Weir demonstrated that beta-adrenergic stimuli released SRIF-LI and acetylcholine appears to inhibit pancreatic and gut release of SRIF-LI.[86] Insulin hypoglycemia has been reported to increase plasma SRIF-LI in healthy subjects.[39,87] We have compared the plasma SRIF-LI response to hypoglycemia in healthy subjects with that in subjects who had prior truncal vagotomy.[88] A significant rise in plasma SRIF was found in the normal subjects, but a significant decrease from basal levels was found in patients with truncal vagotomy. There have been no reports on adrenergic effects on circulating SRIF-LI levels. In NIDDM with AN, we found an even greater impairment of SRIF-LI responses to meal ingestion than in NIDDM without AN. Autonomic neuropathy may thus contribute to impaired seretion of SRIF-LI in diabetes.[89] The attendant unbridled absorption of nutrients in the intestine would clearly compromise diabetic control and contribute to the hyperglycemia and hyperlipidemia.

Pancreatic polypeptide. Pancreatic polypeptide secretion is governed by nutrients in the gastrointestinal tract, especially protein,[24] but is also under exquisite control of the vagus,[26] extravagal cholinergic modulation,[27] and adrenergic beta-receptor stimulation.[21] Floyd et al[35] reported that diabetics treated with diet and sulfonylureas had minor elevations of basal PP levels, whereas insulin-treated diabetics had significantly elevated basal PP levels that were positively correlated with blood glucose concentration. Villanueva et al[90] found a similar phenomenon. Insulin treatment of newly diagnosed diabetes[36] and juvenile IDDM[91] lowers basal PP to levels similar to that in controls.

Villanueva et al[90] found an increased PP response to meals in diabetics, although they did not specify the type of diabetes. We have found a decreased response of PP to meals in diabetes secondary to chronic pancreatitis.[92] This effect, however, is probably due to decreased pancreatic exocrine secretion, since instillation of normal pancreatic juice into the duodenum of patients with chronic pancreatitis elicits a normal response.[93] Similarly, the rise in plasma PP concentration found with administration of secretin[27] is blocked by simultaneous duodenal aspiration.[93]

In our studies of diabetic AN in NIDDM, we measured PP responses to insulin hypoglycemia in healthy subjects, in NIDDM with AN, and in NIDDM without AN (Fig. 1). Basal PP levels were similar in all three groups. We found a blunted rise in PP (peak 654 ± 250 pg/ml) in the NIDDM with AN, compared to the diabetics without AN (peak 3,020 ± 397 pg/ml), compared to controls (3,003 ± 793 pg/ml). A 12-hour overnight infusion of insulin in both groups of diabetics normalized fasting blood sugar. Insulin hypoglycemia in this setting did not change the PP response in the diabetics without AN (3,178 ± 460 pg/ml) but significantly increased the response in diabetics with AN (1,248 ± 356 pg/ml) (Fig. 6).

To date, we have been unable to reproduce this study in juvenile diabetics, since most of the subjects studied have had PP antibodies in their serum due to injection of insulin contaminated with PP. In a small group of IDDM with AN, we have found that the PP response to insulin hypoglycemia was also impaired. The mechanism for the decreased PP response is presumably a vagal neuropathy, although some extravagal cholinergic intrinsic gut neuropathy is suggested by the reduced response to secretin found in one diabetic with autonomic neuropathy. The mechanism for the improvement in the PP response in NIDDM with AN after overnight insulin infusion is unclear. A similar effect on the glucagon response was found. With normalization of the fasting blood sugar and improved metabolic milieu of the PP cell, it is possible that it becomes more responsive to vagal stimulation and there is no change in autonomic function. Alternatively, hyperglycemia may further impair neural transmission in diabetics with AN, which is correctable with diabetes control. Since diabetes control seems to lower basal PP levels and truncate the exaggerated response to meals found in uncontrolled diabetes, it seems feasible that insulinisation improves nerve conduction.

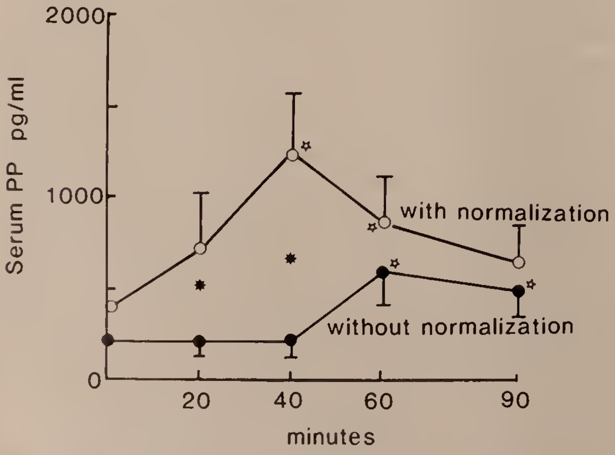


FIGURE 6. Serum PP responses to insulin hypoglycemia in diabetics (NIDDM) with autonomic neuropathy, with and without normalization of blood glucose by infusion of insulin for 14 hr. ☆ indicates significant rise above basal. ✱ indicates significant differences between groups.

This observation has been recorded with the rapid recovery of isolated somatic motor and sensory neuropathies found with treatment of ketoacidosis, but lack of a suitable means of documenting autonomic function has precluded similar observations on recovery of autonomic function. Since PP is so exquisitely sensitive to autonomic modulation, we believe that a biochemical means of monitoring autonomic function is now available, certainly in diabetics who have received only pure insulins, and should prove to be a valuable tool in this regard in the future. Although it is not clear whether impaired PP secretion is a function of impaired cellular metabolism or of impaired nervous function, if it can be shown that rigid diabetes control does improve autonomic function as measured by other indices, then the reversal of AN shown in these studies will have contributed significantly to alleviate the general despair that accompanies the diagnosis of AN. Furthermore, there are clearly many pathogenetic factors of AN and dysfunction, ranging from metabolic changes through axonal degeneration, only the latter being irreversible. It seems, therefore, that every attempt should be made to define the nature and extent of the lesion if meaningful estimates of prognosis are to be made.

Motilin. The coordinated motor function of the gastrointestinal tract is important for the digestion and absorption of nutrients. AN of the gastrointestinal tract results in significant impairment of motility and possibly of nutrient disposal. Rundles, in 1945, first noted prolonged gastric retention in diabetics with symptoms of nausea and vomiting.[94] Kassander used the term "gastroparesis diabeticorum" to describe the lack of propulsive activity observed on barium studies of the stomach in some diabetics.[95] Zitomer described 35 cases of diabetic gastropathy characterized by gastric retention, dilatation, and lack of motility.[96] He speculated that erratic diabetic control seen in some of these patients may be due to delayed or irregular delivery of gastric contents to the duodenum. A small number of these diabetics were treated with ambenonium chloride, an anticholinesterase that stimulates gastric motility, and improvement in nausea and vomiting and in gastric motility was observed.

Evidence exists, however, for humoral substances that can cause or modify intestinal motility. Brown et al[97] showed that infusion of alkaline solutions into the dog duodenum was followed by contraction in denervated and transplanted pouches of the body of the stomach. Brown et al[98] purified a substance from a crude secretin and cholecystokinin (CCK) preparation that stimulated motor activity in stomach pouches. This substance, a 22-amino acid peptide, was named motilin. Motilin occurs in endocrine cells, the EC_1 cells of the gastrointestinal tract, with highest concentration in the duodenum and upper jejunum. Neurons containing motilin-like immunoreactivity (MLI) also occur throughout the gastrointestinal tract.[99] Recently, Christofides et al[100] reported a higher molecular weight motilin-like substance in human tissues and plasma. Peripheral blood, in the fasting state, contains equal quantities of both substances, and both are released in equal amounts to most stimuli.[101] The significance of higher molecular weight component is uncertain.

In the fasting state, cyclic patterns of gastrointestinal contractions occur that begin in the stomach and spread distally to the ileum in about 90 minutes. This cyclic motor activity has been named the interdigestive myoelectric complex. It has been subdivided into four phases, with peak activity occurring during phase III in the dog and man (Fig. 7). You et al[102] have shown that the plasma motilin levels in man cycle every 90 minutes, with peak levels at the end of duodenal phase II activity in man. Atropine abolished both the interdigestive myoelectric complex and the cycle of motilin release in the fasting state. Intravenous motilin in the dog initiates phase III motor activity,[103] and in isolated gastrointestinal muscles motilin produces tonic contractions,[104] an effect not inhibited by ganglionic blockade (hexamethonium) or tetrodotoxin, a blocker of neuronal transmission.

Motilin infusion studies in man[101] have demonstrated that motilin causes an increased gastric emptying rate (measured by ^{99m}technetium tin colloid) of 200 ml of 25% glucose, but had no effect on gastric emptying when 200 ml of double cream (24 gm of fat) was ingested. Thus, motilin appears to have a direct stimulatory effect on gastrointestinal smooth muscle. Thomas et al[105] showed that cyclic motor activity in the proximal dog stomach is dependent upon neither extrinsic innervation nor continuity with the rest of the stomach. Increased gastrin secretion, however, abolished this activity and it was speculated that the normal suppression of the interdigestive motor complex postprandially might be related to gastrin release.[105]

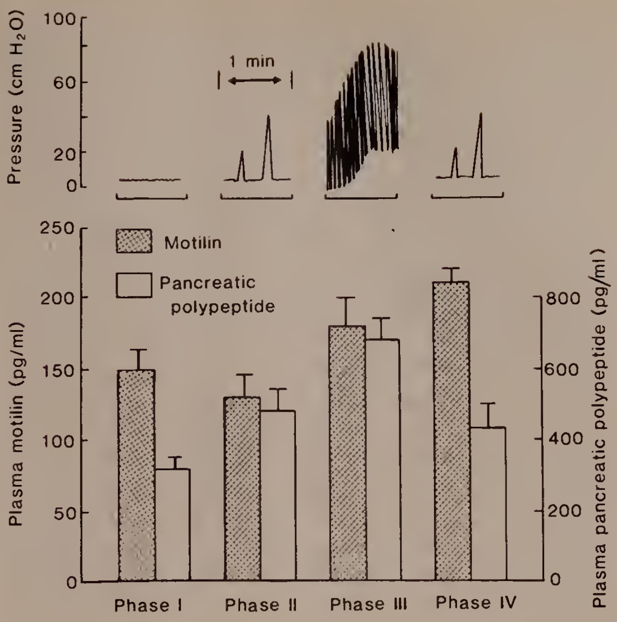


FIGURE 7. Cyclic changes in intraduodenal pressure and corresponding changes in circulating PP and motilin levels. (Reproduced with permission from *Gastroenterology*.[106]

Cyclic hormonal and secretory activity of the gastrointestinal tract also occurs. Pancreatic exocrine and biliary secretion into the duodenum was found to occur in close temporal relationship to plasma MLI and phase III activity in the dog.[106] Taken together, these data imply that motilin may be responsible for or may modify gastrointestinal motility. Christofides et al[107] reported that a standard meal resulted in a significant increase in plasma MLI, while oral glucose, intravenous glucose, or amino acids produced a fall. Thus, uncontrolled diabetes may suppress motilin secretion and elevate gastrin, leading to impaired gastric and intestinal motility.

Motilin levels in diabetics have not been reported. We, therefore, analyzed the MLI responses to hypoglycemia in IDDM with and without AN and compared the responses with those in control subjects and five recently vagotomized subjects (Fig. 8). Basal levels were significantly higher in diabetics with AN and vagotomized subjects. In response to insulin administration, vagotomized subjects and diabetics with AN had a greater fall in plasma MLI and a continuously depressed level throughout the test, while controls and diabetics without AN had a return of MLI to baseline after the initial fall. The integrated MLI response was also significantly decreased in diabetics with AN and in the vagotomized subjects. The greatest depression of plasma MLI occurred before the nadir of plasma glucose. Suppression of MLI was not related to duration of hypoglycemia or rate of recovery from hypoglycemia, since both diabetic groups had prolonged hypoglycemia, and diabetics without AN had a recovery of plasma MLI similar to that in controls. Similarly, vagotomized subjects had a recovery from hypoglycemia similar to controls, but a prolonged suppression of MLI levels. This may imply that insulin is responsible for the fall in plasma MLI. The defective secretion of MLI in diabetics with AN may contribute to disturbances in intestinal motility and hence nutrient delivery to the small intestine. Metoclopramide, a cholinergic agonist and dopaminergic antagonist, has been shown to increase gastric emptying in some diabetics with diabetic gastropathy.[108] Metoclopramide has also been shown to increase plasma MLI in normal subjects,[109] which may account for the usefulness of metaclopramide in diabetics with autonomic neuropathy. Further studies are required on the mechanism of action of cholinergic compounds, the site of the lesion, diagnostic markers, and the changes that occur during remissions and relapses of gastropathy and diabetic diarrhea.

Nutrient absorption in diabetics with autonomic neuropathy. Agents that act within the gastrointestinal tract to change the absorption of nutrients may have an altered function in diabetic autonomic neuropathy secondary to changes in gut motility. Improvement in glucose tolerance has been seen in both healthy subjects and diabetics given dietary fiber.[110] A reduction or elimination of oral hypoglycemic agents or insulin has been documented in diabetics after ingestion of high-fiber, high-carbohydrate diet and diets high in raw food.[111,112]

We have studied the plasma glucose, insulin, glucagon, and GIP levels after a standard breakfast, both with and without fiber (5 gm of guar and 5 gm of pectin) in three groups of subjects: (1) healthy controls; (2) NIDDM without AN; and (3) NIDDM with AN (Fig. 9).[113] In normals, there was a significant reduction of serum glucose responses at 15 and 30 minutes (peak increment before fiber, 16 mg/dl; peak increment after fiber, 4.6 mg/dl) and a marked reduction of area under the glucose curve. Serum insulin responses were unchanged. Plasma glucagon responses were lowered by fiber throughout the meal, and there was a significantly decreased area under the glucagon curve. Although fiber caused a slight lowering of GIP, which reached significance at 15 and 120 minutes, areas under the curve were the same. In diabetics without AN, there was a highly significant decrease in serum glucose in response to the meal after fiber (maximum increment without fiber, 102 ± 9.1 mg/dl; with fiber, 30 ± 13 mg/dl). Although the insulin, glucagon, and GIP responses were lower with fiber, these changes were not significant. The diabetics with AN had basal glucose, GIP, and

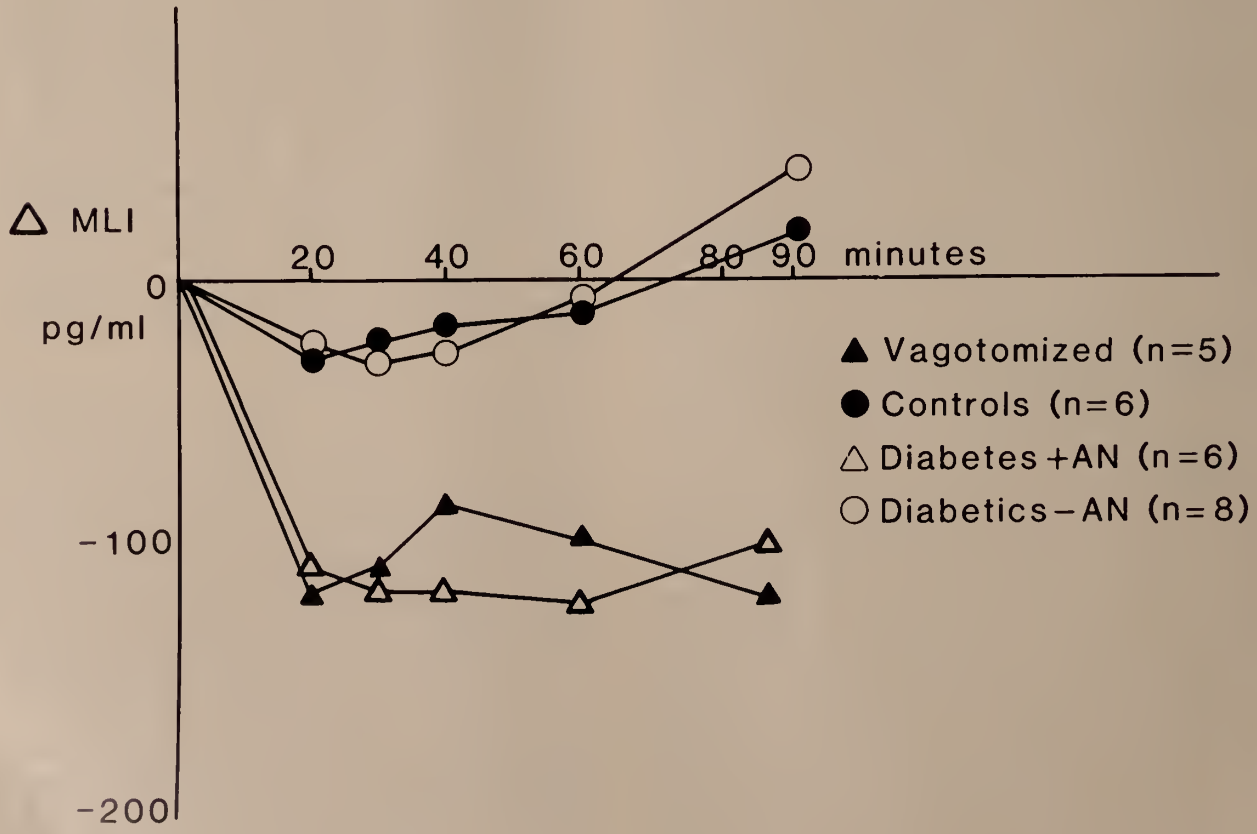


FIGURE 8. Plasma motilin responses to insulin hypoglycemia in controls (0.1–0.2 μ/kg) in controls, vagotomized subjects and insulin-dependent diabetics, with and without AN.

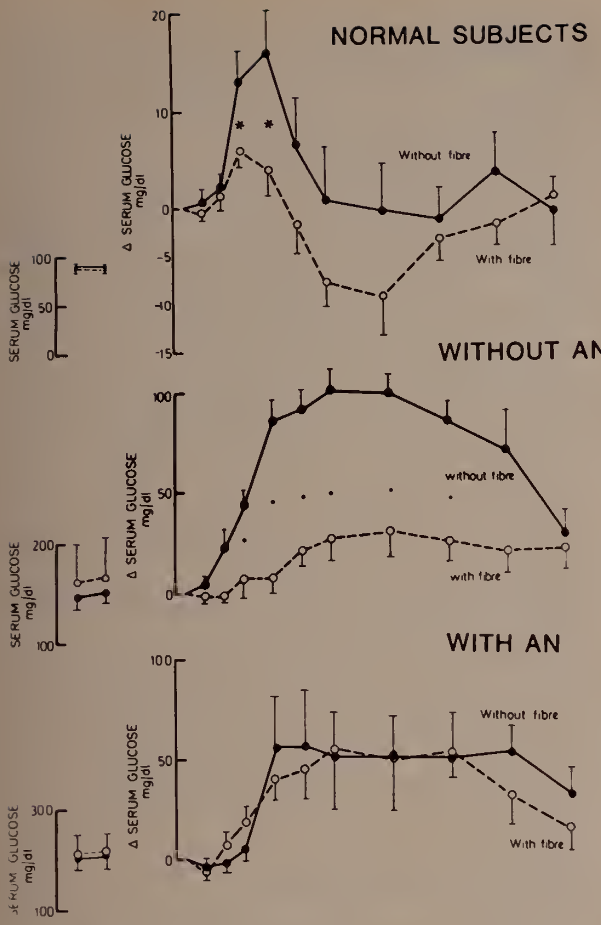


FIGURE 9. Serum glucose responses to ingestion of a mixed meal (Fig. 4) in normal subjects and diabetics with and without AN. Fiber = 5 gm guar and 5 gm pectin added to each meal. (Reproduced with permission from *Diabetes Care*.[113]

insulin values similar to diabetics without AN, but a higher basal glucagon level. The addition of fiber to the standard breakfast produced no change in serum glucose responses. Similarly, the GIP and insulin responses were unchanged. Thus, fiber caused a reduced serum glucose response to meals in healthy subjects and diabetics without AN, as reported earlier,[114,115] although we did not find lowered insulin responses as reported by Jenkins et al,[116] which may be related to the smaller amount of guar and pectin used in our studies. The glucose-lowering effect was not seen in diabetics with AN. A possible explanation for this result is that fiber slows gastric emptying and thus decreases postprandial glucose increments. To study this effect, we gave a solid meal with and without fiber (guar, 5 gm, and pectin, 5 gm) to eight healthy controls and measured their gastric emptying rate scintigraphically using technetium diethylene pentacetic acid (^{99m}Tc-DPTA). The gastric emptying rate was significantly slowed by fiber, but there was no correlation between the reduction in blood glucose and the reduction in gastric emptying rate. Other studies suggest that fiber may have an action on glucose disposal outside of impaired gut absorption.[117] Although the mechanism of action of fiber has not been resolved, it is clear that normal gut motility is a prerequisite for its beneficial effect. In diabetics with autonomic neuropathy, fiber appears to be of no value.

These studies serve to emphasize the need for normal gut motility and hormone secretion if our therapeutic interventions in attempting to optimize diabetes control are to meet with success.

Summary and conclusions

Hormonal secretion in AN is a relatively unexplored area of diabetes mellitus. Only recently have biochemical indices of autonomic function become available. A surprising diversity of plasma catecholamine responses to various stimuli has been found in diabetic autonomic neuropathy, suggesting that the clinical manifestations of this syndrome have a multiplicity of causes. Measurements of plasma catecholamine responses to different stimuli may locate the site (or sites) of the lesion, thus providing a means of guiding therapy.

Autonomic neuropathy in the diabetic is accompanied by derangement of gut hormone secretion and regulation. Since these hormones influence gastrointestinal motility as well as the digestion, absorption, and disposal of nutrients, these abnormalities and the disturbances in gut motility resulting from direct effects of autonomic denervation of the gut per se provide an explanation for the erratic control of blood glucose in this syndrome. Dietary therapy successful in uncomplicated diabetes may have limited usefulness in the presence of autonomic neuropathy.

Diabetic AN has been associated with a dismal prognosis. A better understanding of this complication may provide insight into its treatment and may perhaps reverse the lesions and the poor prognosis it carries.

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Normal and Abnormal Sympathoadrenal Function

In patients with insulin-dependent diabetes mellitus

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The development of sensitive isotope-derivative techniques for the measurement of catecholamines in plasma[1–3] has made it possible to assess sympathoadrenal activity in human subjects. Since epinephrine (E) is derived exclusively from the adrenal medullae, measurements of the plasma E concentration can be interpreted as we interpret other hormonal measurements: those of a biologically active hormone en route to its target cells and to metabolic degradation and elimination. Measurements of the plasma norepinephrine (NE) concentration provide less direct information. Norepinephrine functions primarily as the neurotransmitter released from axon terminals of sympathetic postganglionic neurons in innervated tissues. The NE that enters the circulation is only a fraction of that released, most of which is recaptured into the axon terminal or degraded locally. Thus, the plasma NE concentration provides only an index of sympathetic neural activity. Further, although E is the predominant secretory product, some NE is released into the circulation from the adrenal medullae[4]; under some conditions, such as hypoglycemia, the adrenal medullae may contribute appreciably to the plasma NE pool, and plasma NE concentrations reflect sympathoadrenal activity. This and other aspects of the physiology and pathophysiology of the human sympathoadrenal system have been reviewed recently.[5]

The catecholamines exert a host of metabolic and hemodynamic effects. They stimulate hepatic glucose production (glycogenolysis, gluconeogenesis) and reduce glucose clearance,[6] resulting in hyperglycemia; they accelerate lipolysis in fat, resulting in increments in blood glycerol and fatty acid concentrations, and they stimulate hepatic ketogenesis, resulting in increments in blood beta-hydroxybutyrate and acetoacetate concentrations. They suppress amino acid release, resulting in decrements in blood amino acid levels, especially those of the branched-chain amino acids. These metabolic effects are the result of both direct and indirect actions. Insofar as is known, the direct metabolic actions of the catecholamines are mediated largely, if not exclusively, through beta-adrenergic mechanisms in man. The indirect actions include suppression or limitation of insulin secretion (through an alpha-adrenergic mechanism) and stimulation of glucagon secretion.

The hemodynamic actions of NE and E differ. Through interaction with alpha-adrenergic receptors in the resistance vasculature, sympathetic neural NE release causes vasoconstriction and an increase in peripheral vascular resistance and, therefore, blood pressure. The sympathetic nervous system plays an important role in the regulation of vascular resistance and maintenance of the blood pressure, as will be discussed later. Norepinephrine increases the force and rate of myocardial contraction through interac-

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For reprints contact Philip Cryer, M.D., Department of Medicine, Washington University School of Medicine, 660 South Euclid, St. Louis, Mo. 63110 tion with beta-adrenergic receptors in the heart, but the chronotropic effect is masked in vivo by reflux slowing of the heart rate in response to the rise in blood pressure. Although E is a potent alpha- as well as beta-adrenergic agonist, the fact that it has a high affinity for beta$_2$-adrenergic receptors that mediate vasodilatation results in a hemodynamic response to E that differs from the response to NE. Epinephrine release into the circulation results in a decrease in net vascular resistance and widening of the pulse pressure; its beta$_1$-adrenergic effects on the heart are not reflexively inhibited, and tachycardia ensues. These hemodynamic responses, as well as the metabolic responses mentioned earlier, are well illustrated in studies employing graded infusions of NE[7] and of E[8] in normal human subjects.

The potential relevance of sympathoadrenal activity to the metabolic and hemodynamic abnormalities of human diabetes mellitus is obvious. What follows is a brief review of recent studies relevant to this potential relationship.

Glucose counterregulation

We performed a series of studies,[9–11] recently reviewed,[12–13] that led to the following conclusions concerning the mechanisms of recovery from hypoglycemia in normal human subjects: First, glucagon plays a primary role in glucose recovery; glucose recovery is essentially normal as long as glucagon secretion is intact. Second, enhanced adrenomedullary E secretion rather effectively compensates for deficient glucagon secretion. Glucose recovery fails to occur only in the absence of both glucagon and E. Third, neither the acute release of cortisol nor that of growth hormone is critical to acute glucose recovery. Fourth, neither the release of sympathetic neural NE nor glucose autoregulation is sufficiently potent to promote glucose recovery in the absence of glucagon and E secretion; neither neural NE release nor glucose autoregulation needs be invoked to explain glucose recovery from hypoglycemia.

More recently, we have studied the mechanisms of hypoglycemic glucose counterregulation in patients with insulin-dependent diabetes mellitus (IDDM). Since such patients commonly exhibit blunted glucagon secretory responses to decrements in plasma glucose,[14–16] we reasoned that they might be more dependent upon E to promote recovery from hypoglycemia than are normal subjects with intact glucagon secretion. Preliminary results[17] from seven patients with IDDM and seven nondiabetic controls support this hypothesis. Recovery from hypoglycemia was significantly impaired during beta-adrenergic blockade with propranolol in the patients but not, as before, in the normal controls. Thus, patients with IDDM are to a varying degree dependent upon E for recovery from hypoglycemia. The potential dangers of treating such patients with beta-adrenergic blocking agents such as propranolol are obvious. They may obscure some of the symptoms of hypoglycemia as well as impair glucose recovery. Theoretically, they could promote hypoglycemia if adrenergic mechanisms are critical to the prevention of hypoglycemia, as they may be, in such patients.

Recently, several groups,[18,19] including our own,[16] have begun to examine the responses of counterregulatory systems to nonhypoglycemic decrements in the plasma glucose concentration. Interestingly, sympathoadrenal activation occurs when the plasma glucose concentration is lowered from supraphysiologic levels (200 mg/dl) to high physiologic levels (100 mg/dl).[16,19] In general, the increments in plasma catecholamine concentrations in response to such glucose decrements are small. Occasionally, however, the increments are large and produce symptoms.[16,19] The latter observation provides an explanation for the clinical observation that patients with diabetes sometimes have symptoms suggestive of hypoglycemia associated with a falling plasma glucose concentration but in the absence of absolute hypoglycemia, a phenomenon some have termed "relative hypoglycemia."

Early increments in plasma glucagon, E, and NE and late increments in growth hormone and cortisol occur in response to plasma glucose decrements from the high to the low physiologic range.[16,18] In our studies, the magnitude of the counterregulatory response to glucose decrements from 95 mg/dl to 60 mg/dl was intermediate between the large response to hypoglycemia and the small response to glucose decrements from 200 mg/dl to 100 mg/dl.[16] These findings indicate that the magnitude of the counterregulatory response is inversely related to the absolute plasma glucose concentration; although there is no absolute plasma glucose threshold, the depth of the nadir plasma glucose concentration is the primary determinant of the magnitude of the counterregulatory response. Additional factors, such as the rate of glucose decline and the absolute glucose decrement, are likely to be secondary determinants.[13] These findings are also consistent with the hypothesis that one or more of the measured variables play an active role in nonhypoglycemic glucose counterregulation and the prevention of hypoglycemia.

Sympathoadrenal activity in diabetes mellitus

Plasma catecholamine concentrations are markedly elevated in patients with diabetic ketoacidosis,[20] and exaggerated plasma catecholamine increments in response to exercise occur in patients with poorly controlled diabetes.[20,21] The levels return toward normal with therapy of ketoacidosis,[30] and the response to exercise becomes normal during relatively long-term, effective insulin therapy.[21]

The status of sympathoadrenal activity in patients with stable, nonketotic diabetes is less clear. Plasma total catecholamine or NE and E concentrations in such patients have been reported by at least eight groups of investigators.[21–29] These studies are

Mean Plasma Catecholamine Concentrations in Patients With Nonketotic Diabetes

Authors	Number of Patients	Type of Diabetes	Mean Fasting Glucose (mg/dl)	Plasma Catecholamines Measurement	Basal	Standing	Exercise	Other	Comments
Christensen (1972)[22]	6	IDDM	?	TCA	N	N	...	...	Nonneuropathic patients
Robertson et al (1976)[23]	5	NIDDM	~250	TCA	↑	...	...	...	
Halter (1977)	16	NIDDM	?	TCA	↑	...	...	...	↑ Not sustained over 6 mo
Cryer et al (1978)[25]	100	Mixed	224	NE	N	N	...	...	
				E	N	N	...	...	
Weidmann et al (1979)[26]	8	NIDDM	?	NE	N	N	...	...	Hypertensive patients
				E	N	N	...	...	
Bolli et al (1979)[27]	11	?	132	NE	N	...	...	...	Insulin-treated patients;
				E	N	...	...	...	fluorometric method
	16	?	182	NE	↑	...	...	...	Insulin-treated patients;
				E	N	...	...	...	fluorometric method
Tamborlane et al (1979)[21]	10	IDDM	205	NE	N	N	↑	...	"Standing" actually sitting;
				E	N	N	↑	...	isotonic exercise
Zadik et al (1980)[28]	11	IDDM	299	NE	...	...	...	↑	24-hr plasma pools for
				E	...	...	...	↑	NE, E, and glucose
Gustafson et al (1980)[29]	10	IDDM	165	NE	N	N	N	...	Isometric exercise
				E	N	↑	N	...	

Key: IDDM = Insulin-dependent diabetes mellitus
NIDDM = Non-insulin-dependent diabetes mellitus
TCA = Total catecholamines
NE = Norepinephrine
E = Epinephrine
N = Mean not different from nondiabetic controls
↑ = Mean significantly greater than that of nondiabetic controls.

summarized in the Table. As can be seen, most have found mean basal plasma catecholamine concentrations to be normal. The exceptions include the Seattle group,[23,24] which reported elevated total plasma catecholamine concentrations; however, this difference was not sustained over a mean follow-up of six months, a change not attributable to therapy of the diabetic patients. Bolli et al,[27] using a fluorometric method, observed significantly elevated plasma NE (but not E) concentrations in a group of patients judged to be poorly controlled, but they found normal values in a group of patients under metabolic control. With a single exception,[29] all groups have found mean plasma NE and E concentrations to be normal when the patients were sampled while standing. Tamborlane et al[21] found exaggerated plasma NE and E responses to bicycle exercise in diabetic patients during conventional (poor-control) therapy; it is assumed that these patients were nonketotic, although this was not specifically stated.

Zadik et al[28] used a continuous withdrawal pump to obtain 24-hour plasma pools from 11 insulin-dependent diabetic patients. As the investigators pointed out, the patients were not well controlled; their mean (±SD) integrated plasma glucose concentration was 299 ± 81 mg/dl and their mean glucose excretion was 96 ± 79 gm/24 hours. Nonetheless, they were not ketonuric at the time of study. The mean integrated plasma concentrations of NE (240 ± 81 pg/ml) and of E (38 ± 7 pg/ml) were significantly higher in the diabetic patients than in nondiabetic controls (148 ± 74 pg/ml and 26 ± 13 pg/ml, respectively). Mean NE values were more than two standard deviations above the normal mean in two of 11 patients; mean E values were not more than two standard deviations above the normal mean in any of the patients. These data suggest that a rather subtle increase in the plasma concentrations of NE and E occurs in patients with poorly controlled but nonketotic diabetes mellitus. Their finding of significantly higher mean plasma NE and E values may be due to their technique, which minimized variation in the measured values; alternatively, since other investigators have generally measured morning values, it is conceivable that there are differences in diurnal plasma catecholamine patterns between diabetic and nondiabetic patients. Whether such small differences from normal are a primary feature of diabetes per se or are secondary to the metabolic and/or hemodynamic abnormalities that result from insulin deficiency remains to be determined. The fact that elevated levels, when found, have been noted only in poorly controlled patients favors the latter interpretation.

The sympathoadrenal system would appear to have both positive and negative impacts in patients with diabetes. On the positive side, catecholamine release causes warning symptoms of hypoglycemia, promotes recovery from the condition, and may serve to prevent its occurrence. Indeed, it is conceivable that the efficacy of the counterregulatory systems, including E, may explain the unanticipated success of the currently popular open-loop insulin-infusion treatment regimens, whereby a less-than-perfect insulin dose often results in near normalization of the metabolic abnormalities of diabetes. On the negative side, catecholamine release participates in the genesis of posthypoglycemic hyperglycemia,[17] the Somogyi phenomenon, and may well contribute to metabolic decomposition during stress, including the perpetuation, if not the initiation, of diabetic ketoacidosis. Further, it is conceivable that a sympathoadrenal discharge could cause a fatal cardiac arrhythmia in a patient with coronary artery disease, imbalance in autonomic innervation of the heart, or both.

Postural hypotension in diabetes mellitus

Postural hypotension can be due to relative or absolute intravascular volume contraction, vascular resistance to the pressor action of vasoconstrictors such as NE, or a defect in the sympathetic neural reflex arc.[30] Postural activation of the baroreceptor-initiated, central nervous system (CNS)–mediated sympathetic reflex that results in release of NE from axon terminals within the resistance vasculature and, thus, maintenance of the standing blood pressure, is reflected in a sharp rise in the plasma NE concentration.[31] Thus, the integrity of the sympathetic reflex arc can be readily assessed in human subjects by measurement of the plasma NE concentration before and after standing.

A blunted plasma NE response to standing is the in vivo biochemical common denominator of patients with postural hypotension due to a defect in the sympathetic neural reflex arc.[32] We have referred to this as hypoadrenergic postural hypotension. In contrast, patients with postural hypotension due to intravascular volume contraction or to resistance to the pressor actions of NE exhibit a compensatory increase in their sympathetic response and an exaggerated plasma NE response to standing—hyperadrenergic postural hypotension.[30]

Our study of a large group of patients with diabetes disclosed some diabetic patients with hyperadrenergic postural hypotension.[25] We speculated that they might have diminished pressor responses to NE, diminished plasma volumes, or both, possibly due to hypoaldosteronism. None of these speculations were correct. Detailed studies of four such patients disclosed that they all had sharply reduced red blood cell masses,[33] a finding not suggestesd by their peripheral venous hematocrits. Thus, decreased intravascular volume due to anemia appears to be an important factor in the pathogenesis of hyperadrenergic postural hypotension in some patients with diabetes. A coexisting neuropathic limitation of their compensatory sympathetic response seems likely. Nonetheless, the finding of postural hypotension in a patient with diabetes should not be quickly attributed to diabetic adrenergic neuropathy alone, since other, potentially reversible, factors may be playing a pathogenic role.

Hypoadrenergic postural hypotension due to diabetic adrenergic neuropathy occurs not infrequently. Seven percent of our series of 100 patients[25] had clear-cut hypoadrenergic postural hypotension—a supine-to-standing decrement in mean arterial pressure of 20 mm Hg or greater and a supine-to-standing increment in plasma NE less than that of any nondiabetic control subject. An additional 8% of our patients had postural hypotension but supine-to-standing increments in plasma NE that were not reduced by the stringent criterion used. One could reason that the latter patients should have had exaggerated plasma NE responses if their postural hypotension was due exclusively to other factors and their sympathetic reflex mechanisms were intact. Thus, they, too, may have had at least a component of diabetic adrenergic neuropathy. Lastly, as mentioned earlier, one can postulate a neuropathic limitation of the compensatory sympathetic neural response in the anemic diabetic patient with postural hypotension,[33] of which there were three in our original series.[25] Thus, the incidence of diabetic adrenergic neuropathy that is clinically significant with respect to maintenance of the standing blood pressure may be as high as 18% in our patients with diabetes.

Hypoadrenergic postural hypotension attributed to primary autonomic dysfunction (in patients who do not have diabetes) is of at least two types.[34,35] Type I (idiopathic orthostatic hypotension) is characterized clinically by isolated dysfunction of both the sympathetic and the parasympathetic components of the autonomic nervous system and biochemically by low basal plasma NE concentrations. Type II (the Shy-Drager syndrome) is characterized clinically by autonomic dysfunction coupled with degenerative CNS disease (which most often takes the form of parkinsonism) and biochemically by normal basal plasma NE concentrations. Patients with both types exhibit blunted plasma NE and E responses to standing.[35] It has been suggested that type I patients have a disorder affecting all sympathetic postganglionic elements, including the adrenal medullae[35]; if so, the lesion would include the cell bodies. On the other hand, it has been suggested that type II patients have a lesion central to the sympathetic postganglionic elements.[35] Needless to say, these suggestions remain to be rigorously established.

In analyzing our data from patients with diabetic adrenergic neuropathy, we noted that in contrast to our patients with primary autonomic dysfunction, the plasma E response to standing was not discernibly reduced in the diabetic patients. Based upon this observation, and conceptualizing the adrenal medullae as sympathetic postganglionic neurons without axons, we hypothesized that diabetic adrenergic neuropathy involves a postganglionic axonal lesion. To test this, we produced direct stimulation of postganglionic elements with the rapid-acting acetylcholinesterase inhibitor edrophonium in normal controls and in patients with hypoadrenergic postural hypotension.[35] As predicted by the hypothesis, patients with diabetic adrenergic neuropathy exhibited reduced plasma NE (but not E) responses to cholinergic stimulation. One patient with primary autonomic dysfunction, type I, exhibited no plasma catecholamine responses, and patients with primary autonomic dysfunction, type II, exhibited normal (or exaggerated) plasma catecholamine responses to cholinergic stimulation. Thus, these functional, in vivo data from human subjects provide support for the concept that the lesion lies in the sympathetic postganglionic axons in diabetic adrenergic neuropathy.

Summary

The sympathoadrenal system produces warning symptoms of hypoglycemia, promotes recovery from the condition, and probably serves to prevent its occurrence in patients with insulin-dependent diabetes. Thus, diminished catecholamine release or action—be it drug induced or the result of disease—can be expected to have detrimental and potentially disastrous results in such patients. On the other hand, sympathoadrenal activation causes metabolic instability in that it plays a role in the genesis of posthypoglycemic hyperglycemia and, quite likely in concert with other systems, may well mediate the metabolic decompensation that often accompanies various forms of stress and may culminate in diabetic ketoacidosis.

Postural hypotension in patients with diabetes is often of the hypoadrenergic variety, due to diabetic neuropathy affecting the axons of sympathetic postganglionic neurons. In some patients, however, other factors such as intravascular volume contraction may play a major role in the pathogenesis of postural hypotension. Thus, postural hypotension in a patient with diabetes should not be quickly attributed to adrenergic neuropathy alone. Remediable factors should be sought.

Clearly, much remains to be learned about the physiologic and pathophysiologic roles of the sympathoadrenal system in patients with diabetes. From the metabolic perspective, the relative role of the catecholamines in the modulation of carbohydrate metabolism is only beginning to emerge; their relative importance, with respect to lipid and protein metabolism, remains to be clarified. From the cardiovascular perspective, the role of chronically defective sympathetic neural function in the pathogenesis of postural hypotension has been clarified; the possible contribution of the catecholamines to the pathogenesis of the vascular complications of diabetes remains largely unexplored.

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Pathophysiology in Diabetic Autonomic Neuropathy

Cardiovascular, hormonal, and metabolic studies

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Although the occurrence of peripheral neuropathy in patients with diabetes mellitus has been recognized since 1864,[1] the first comprehensive report on clinical findings in patients with autonomic neuropathy (AN) did not emerge until 1945.[2]

Subsequent studies have shown the following: (1) Measurable signs of AN occur frequently in diabetics.[3] (2) Certain abnormalities in diabetics may be due to autonomic dysfunction.[4-6] (3) AN in diabetics is associated with a high mortality rate.[7] Thus, investigations in patients with diabetic AN may serve a twofold purpose: to elucidate the importance of the autonomic nervous system for human functions and to further characterize a common complication of long-term diabetes.

The present review focuses on the diagnosis of AN and on the importance of diabetic AN for cardiovascular, hormonal, and metabolic responses to exercise, orthostasis, and hypoglycemia, everyday situations in which changes in autonomic nervous activity expectedly are of major importance for physiologic adjustments.

Diagnosis of diabetic autonomic neuropathy

While the diagnosis of somatic neuropathy may be based on direct measurements of somatic nerve function, such as measurements of nerve conduction velocity[8] or of vibratory perception threshold,[9] the diagnosis of AN is indirect, since it is based on measurements of physiologic variables, which are controlled by the autonomic nervous system. This is, of course, true since direct neurophysiologic measurements of autonomic nervous activity are difficult to perform and to interpret and thus are not suitable for clinical routine.

Another important point is that the term "autonomic neuropathy" in diabetics is used for two different clinical conditions: one in which symptomless, but measurable, nervous abnormalities are encountered and a second condition, which is characterized by overt, symptomatic neurologic disease.[10] Keeping these points in mind, a short description of commonly used, quantifiable autonomic function tests may be useful.

Tests of parasympathetic nerve function

Beat-to-beat variation in heart rate. In 1973, Wheeler and Watkins reported that the normal variation in heart rate with respiration (sinus arrhythmia) is absent in long-term diabetics with clinical signs of AN.[11] This was considered due to cardiac parasympathetic dysfunction, since in normal man the sinus arrhythmia is abolished with atropine,[11,12] but apparently not with propranolol,[11] and in animals sinus arrhythmia disappears after section of the vagus nerves.[13] The sinus arrhythmia can be quantified, for instance, by calculation of the difference between maximal and minimal heart rate during deep respiration (called beat-to-beat variation). A beat-to-beat variation below 10 beats per minute is considered indicative of vagal neuropathy (the lower limit in normal subjects being 10 beats per minute).[3,12,14]

Subsequent papers have described modifications of the technique: computer analysis of a five-minute period of resting heart rate during normal breathing, with calculation of the standard deviation of the mean heart rate over that period,[15] and measurement of standard deviation of the differences between succeeding R–R intervals during quiet respiration.[16] Others have calculated beat-to-beat variation during deep breathing.[17,18] In our laboratory we have used equal duration of inspiration and expiration (10 seconds).[17] With these methods, essentially the same thing is measured, ie, the variation of heart rate with either deep or normal breathing. The tests are easily performed, requiring only an ordinary electrocardiogram (ECG) and a ruler.[16-18] The reproducibility of the methods has been evaluated by Bennett et al[19] and by us. Mean difference between two measurements was 2.2 ± 0.2 (mean ± standard error of the mean [SEM]) beats per minute in ten diabetics without neuropathy, having a mean beat-to-beat variation of 27 ± 3 beats per minute, and 1.7 ± 0.2 in diabetics with somatic neuropathy (increased vibratory perception threshold[9]), having a mean beat-to-beat variation of 10 ± 4 beats per minute.[17] In addition, we have shown that reproducibility of beat-to-beat variation does not require a 25-minute period of supine rest, a fact that increases the usefulness of the method in clinical routine.[17] The possible effect of alterations in cardiac sympathetic tone on beat-to-beat variation, however, has not been demonstrated convincingly (data, not quantified; during beta-receptor blockade available from only

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one patient).[11]

The 30:15 ratio. In normal subjects, heart rate increases rapidly upon standing (maximal heart rate is attained after about 15 beats) and then decreases (minimum after about 30 beats). The ratio between R–R interval at beat 15 and R–R interval at beat 30 is termed the 30:15 ratio.[20] During tilting, however, bradycardia is not seen,[21–23] suggesting that afferent nerve activity from muscles is necessary for reflex bradycardia during standing.[22] Heart rate changes upon standing can be altered by atropine. After administration of atropine, the initial increase in heart rate disappears and heart rate increases slowly, due to sympathetic stimulation, whereas administration of propranolol does not alter the initial increase in heart rate, suggesting that the biphasic heart rate response to standing is under vagal control.[22] Accordingly, the 30:15 ratio is considered a measure of cardiac vagal function.[20] In diabetics with clinical signs of AN, the 30:15 ratio is reduced.[14,20] The test has been reported to be reproducible in normal subjects.[22] It has been argued, however, that sinus arrhythmia may alter the 30:15 ratio.[24]

The Valsalva ratio. During the Valsalva maneuver (forced expiration against resistance), tachycardia and peripheral vasoconstriction occur during strain, followed by an overshoot in blood pressure and a bradycardia after release. The heart rate responses can be blocked by atropine[25] but not by beta-adrenergic blockade,[26] suggesting that the heart rate response to the Valsalva maneuver also is under vagal control. It has, however, been argued that the outcome of the Valsalva maneuver is dependent not only on the parasympathetic (PS) but also on the sympathetic (S) tone of the heart, the cardioacceleration during strain probably being partly due to stimulation of cardiac S nerves.[27] The ratio between maximal R–R interval (after release of strain) and minimal R–R interval (during strain) is called the Valsalva ratio.[28] Low ratios have been found in diabetics with clinical signs of autonomic neuropathy.[29,30] The Valsalva ratio is reproducible in normal subjects.[28,31]

Baroreflex sensitivity. During intravenous infusion of agents that have a vasoconstrictor effect on peripheral resistance vessels (eg, phenylephrine), blood pressure rises and reflex bradycardia ensues. Lengthening of the R–R interval and increase in blood pressure are linearly related, and the slope of the regression line may be taken as an index of the sensitivity of the baroreceptor reflex.[27] Atropine injections have been shown to abolish the R–R lengthening in response to phenylephrine injections, and, accordingly, low sensitivity in diabetics with AN is considered due to vagal neuropathy.[27,30]

Tests of sympathetic nerve function

Blood pressure response to standing up. Orthostatic hypotension (often defined as a systolic blood pressure fall greater than 30 mm Hg upon standing) in diabetics was first ascribed to AN by Rundles.[2] The lesion responsible for diabetic orthostatic hypotension is most likely damage to sympathetic vasoconstrictor nerves.[6] Thus, the blood pressure response to standing may be used as a measure of sympathetic dysfunction. In diabetics, orthostatic hypotension may, however, be associated with an exaggerated sympathetic response (hyperadrenergic orthostatic hypotension), the defect responsible for the hypotension in this condition probably being a reduction in the red cell mass.[32] Furthermore, postural hypotension may be aggravated by previous insulin injections,[33,34] possibly because of displacement of fluid from intravascular to extravascular compartments.[35] Orthostatic hypotension in diabetics may therefore be due to (or aggravated by) other factors than sympathetic neuropathy.

Plasma catecholamines. Plasma concentrations of norepinephrine (NE) and epinephrine (E) are due to overflow of these hormones from S nerve endings and adrenal medulla, respectively.[36] Presuming that the amount of neurotransmitter (norepinephrine) liberated into the blood is proportional with S nervous activity, plasma NE concentrations may be used as an index of S nervous activity.[37] Measurements of plasma catecholamines have been used to evaluate S nervous activity in diabetics with AN,[37,38] mostly during change of body position from supine to standing, and blunted NE responses to standing up have been observed in diabetics with orthostatic hypotension.[37–39]

Norepinephrine secreted into the synaptic cleft is in part inactivated by active reuptake in sympathetic nerves.[36] If the reuptake mechanism is damaged, NE is cleared more slowly from the blood, and plasma concentrations will accordingly increase. Thus, since decreased secretion of NE may be accompanied by decreased clearance in diabetics with S neuropathy, plasma concentrations of NE may not be a sensitive measure of S nervous activity; this may account for normal plasma NE concentrations during supine rest in diabetics with AN.[32,39] In accordance with this view, Esler et al (by means of infusion of ^{3}H-norepinephrine) found that secretion rate and clearance of NE were reduced to the same extent and plasma NE was accordingly normal in supine patients with idiopathic orthostatic hypotension.[40] Changes in plasma NE concentrations in response to perturbations (for example in response to standing up) may be a more sensitive measure of sympathetic neuropathy.

Responses to static exercise. During sustained isometric exercise, blood pressure increases, due to increased peripheral resistance and increased cardiac output.[41] In normal subjects, the blood pressure response to sustained handgrip is significantly reduced by injections of phentolamine, which indicates involvement of S nervous activity in the response.[42] In diabetics, diastolic blood pressure increments of less than 15 mm Hg to a standardized sustained handgrip at 30% of the maximum voluntary contraction are considered due to S neuropathy.[43] The test is reproducible in normal subjects.[43] The test requires maximal voluntary contraction, which is associated with high blood pressure in normals.[44] Since patients with AN often have proliferative retinopathy, the test may be hazardous in such patients because of the risk of ocular hemorrhages.

Diagnostic criteria of autonomic neuropathy

An abnormal outcome of any of the tests described indicates that there is a defect in the reflex arc involved. Such a defect may be located anywhere in the reflex arc, ie, in the afferent receptor, afferent nerve, reflex center, efferent nerve, or in the effector organ. Thus, abnormal results of a test are not necessarily due to abnormal nerve function. The reasons for assuming that the outcome of these tests actually is related to autonomic nerve function are as follows: (1) The outcome of different tests of PS function are closely related.[3,14,19,27,31] (2) In the individual subject, there is a close relationship between the outcome of autonomic and somatic nerve function tests.[17,18,29,37,39,45] (3) In patients with clinical symptoms of AN (cystopathy, gustatory sweating, enteropathy, orthostatic hypotension, anhidrosis), one or several autonomic function tests are invariably abnormal.[46]

Since results of different PS function tests correlate with each other, any one or several of these may be used for evaluation of cardiac PS function in diabetes. We use beat-to-beat variation in heart rate during deep respiration,[17] since this test is easily performed and has been used extensively by other groups. For screening purposes, we use blood pressure responses to standing up to evaluate the integrity of the sympathetic nervous system.

Like results from tests of somatic nerve function,[8,9] autonomic tests are often abnormal in long-term diabetics with no clinical symptoms of neuropathy.[3,10,14,17,19,29,46] The physiologic significance of such symptomless abnormalities is unknown, and we, therefore, included such patients in our studies.

In our studies of cardiovascular, hormonal, and metabolic functions in long-term diabetes we have examined three patient groups:

Group 1: Patients without signs of neuropathy

Group 2: Patients with slight neuropathy, with decreased beat-to-beat variation in heart rate during hyperventilation[17] but normal blood pressure responses to standing up (systolic blood pressure decrease <15 mm Hg upon standing)

Group 3: Patients with severe neuropathy, with decreased beat-to-beat variation in heart rate during hyperventilation and, furthermore, orthostatic hypotension (systolic blood pressure decrease ≥30 mm Hg upon standing)

The patients were assigned to the groups according to results from screening of blood pressure and heart rate in the outpatient clinic. All group-2 and group-3 patients had somatic neuropathy as indicated by elevated threshold for sense of vibration.[9] All were insulin-dependent males.

Group-1 patients had no signs of neuropathy, and only a few group-2 patients had signs of AN (anhidrosis of feet). In contrast, group-3 patients had gross clinical signs of neuropathy (atrophy of interdigital muscles, impotence, paresthesia, anhidrosis). The patient groups had similar duration of diabetes (10–15 years), and their ages were between 22 and 49 years. No patient had signs of other endocrine disease or cardiopulmonary disease. With a few exceptions, the patient material was identical in our different investigations.

Exercise in diabetic autonomic neuropathy

Changes in the activity of the autonomic nervous system are generally considered to be important for the circulatory,[47] hormonal, and metabolic[48] responses to exercise. Accordingly, autonomic dysfunction in diabetics might imply that the circulatory, hormonal, and metabolic adaptation to exercise is impaired. Previous studies of exercise in diabetics have not focused on AN.[49–53]

Capacity for exercise. The capacity for graded upright exercise on an ergometer bicycle, expressed both as the greatest tolerable work load and as maximal oxygen uptake, was significantly reduced in group-2 patients (slight neuropathy) compared with group-1 patients (no neuropathy).[54] Compared with group-2 patients, the capacity for exercise was even lower in group-3 patients, who had severe AN.[55] The exercise capacity in our neuropathy-free patients was similar to exercise capacity in healthy males of similar age.[56] Storstein and Jervell[52] found that the exercise capacity in juvenile diabetics was lower than in healthy normals of similar age. Some of their patients had long-term complications, while others did not. The authors suggested that the lower exercise capacity in the diabetics might be related to AN.[52] Karlefors[51] also found that exercise capacity was reduced in long-term diabetics, some of whom had complications.

Thus, the exercise capacity is reduced in diabetics with measurable but asymptomatic AN, compared with diabetics without neuropathy. A further reduction is found in diabetics with severe, symptomatic AN. In our studies, none of the patients stopped exercising because of hypoglycemia. Hypoglycemia may limit exercise capacity, probably due to accelerated absorption of insulin.[54] Furthermore, the effect of AN on striated muscle function and the possible relationship with exercise capacity should be determined. The possible relationship between exercise capacity and long- and short-term metabolic control should be further elucidated.

Heart rate. In normal subjects, the exercise-induced increase in heart rate at low work loads is due to withdrawal of vagal tone, while heart rate increases at higher work loads are mediated through the sympathetic nervous system.[42,57] Resting heart rate was higher and the increase in heart rate at a low work load was diminished in group-2 patients, compared with group-1 patients, indicating a cardiac vagal defect in the former.[54] Heart rate was lower in group-2 patients than in group-1 patients at all relative work loads (actual oxygen uptake—in percent—of individual maximal oxygen uptake; relative work load used in order to compensate for differences in body weight and degree of training),[58] indicating lower sympathetic tone of the heart during exercise in group-2 patients. Maximal heart rate was significantly reduced in group-2 patients. Interestingly, the relationship between heart rate and relative work load in patients with AN corresponded exactly to that seen in normal subjects after administration of both atropine and propranolol.[54] In a subsequent study, we found no differences between group-2 and group-3 patients in heart rate response to exercise.[55] In the study by Storstein and Jervell, resting heart rate was higher in the diabetics than in normal subjects, but during exercise, heart rate was higher in the diabetics at identical absolute work loads, indicating normal heart rate responses to exercise in these patients.[52] During static exercise at 30% of maximal voluntary contraction, the increase in heart rate was significantly smaller in diabetics with retinopathy than in diabetics without retinopathy, suggesting a reduced sympathetic tone on the heart rate in the former patients.[59] Resting heart rate was similar in the two groups. Assessment of neuropathy was not done.

Thus, during exercise, diabetics with slight AN display signs of defective PS and S control of heart rate. Heart rate responses to exercise appear not to be further impaired in patients with severe AN.

Blood pressure. Sympathetic control of circulation is a major determinant of blood pressure during exercise.[60] As was also found after administration of propranolol to normals, the relationship between blood pressure during exercise and relative work load was shifted to the right in group-2 patients compared with group-1 patients, suggesting a decrease in the S outflow to the heart and resistance vessels in group-2 patients.[54] In a subsequent study, we found that the blood pressure response to exercise is even more impaired in group-3 patients: Compared with blood pressure at supine rest, blood pressure increased during exercise in group-2 patients, whereas a significant decrease was found in group-3 patients.[55] From other studies it appears that in diabetics (with presumably little neuropathy) the blood pressure response to dynamic[51] and static[59] exercise may be augmented compared with normal subjects.

Thus, the blood pressure response to exercise is impaired in diabetics with slight AN. In diabetics with severe AN, the blood pressure response is even more impaired; blood pressure decreases during exercise when compared with supine measurements.

Plasma catecholamines. It appears that heart rate and blood pressure findings in diabetics with AN during exercise may be explained by PS and S nerve system defects. Estimations of sympathoadrenal activity during exercise, as measured by plasma concentrations of NE and E, support this view. The relationships between NE and E concentrations, respectively, and relative work load were, like heart rate and blood pressure curves, shifted to the right in group-2 patients compared with group-1 patients, indicating impaired sympathoadrenal outflow.[61] In group-3 patients, plasma catecholamines tended to be lower during exercise than in group-2 patients, but the difference was not significant.[55] Plasma catecholamines were higher during exercise in group-1 patients compared with normals.[55]

Others have not found that the catecholamine response to static exercise is lower in long-term diabetics compared with normal subjects. With the fluorometric assay, which is not as precise as the radioenzymatic assay we use, no difference was found between diabetics with and without retinopathy.[59] As previously mentioned, no assessment of neuropathy was made in that study. Tuck et al found no increase in plasma NE in response to two hours of continuous walking in five diabetics with AN and renal insufficiency due to diabetic nephropathy.[62]

The catecholamine response to exercise is blunted in patients with slight AN and possibly even more impaired in patients with severe neuropathy.

Hemodynamic variables. Since measurements of plasma catecholamines during exercise suggested that the activity in S nerves to the cardiovascular system is impaired in diabetics with AN, we measured cardiovascular variables (cardiac output, hepatosplanchnic blood flow, and plasma volume) during exercise in diabetics with and without AN.

Cardiac stroke volume was significantly lower during rest and exercise in group-2 and group-3 patients compared with normal subjects. Furthermore, intermediate values were found in group-1 patients, and the increase in cardiac output during exercise was impaired in group-2 and group-3 patients. Since pulmonary tissue volume, which is directly related to central venous pressure,[63] was similar in the four groups and afterload (blood pressure) was low during exercise in group-3 patients, the low cardiac output during exercise in group-3 patients was probably due to impaired myocardial contractility. Myocardial contractility may be impaired either because of diminished adrenergic stimulation of the heart, due to diabetic AN, or because of diabetic cardiomyopathy,[64] or both. In favour of the latter explanation is the fact that patients with surgically transplanted, and accordingly denervated, hearts are able to increase stroke volume during exercise by the Frank-Starling mechanism.[65]

The increase in hepatosplanchnic vascular resistance during exercise was significantly lower in group-3 patients than in group-1 patients, whereas intermediate responses were found in group-2 patients.[55] Since hepatosplanchnic vasoconstriction is mediated by the S nervous system,[47] we suggest that the lack of increase in splanchnic vascular resistance during exercise is due to S neuropathy in the splanchnic vascular bed. The finding of a splanchnic vascular resistance defect in diabetics with severe neuropathy is in accordance with anatomic evidence of splanchnic neuropathy in diabetics.[30] Plasma volume changes during exercise were similar in the four groups.[55]

Thus, in diabetics with severe AN, the responses to exercise of the heart and of the hepatosplanchnic resistance vessels are impaired. While sympathetic neuropathy probably is responsible for impaired function of splanchnic resistance vessels, both cardiac S neuropathy and diabetic cardiomyopathy may be involved in the impaired cardiac response. In diabetics with slight AN, the cardiac response to exercise was also reduced, compared with diabetics without neuropathy, and the increase in splanchnic vascular resistance tended to be lower in the former than in the latter group.[55]

Temperature regulation. During exercise, temperature regulation depends on redistribution of blood flow and activation of sweat glands, with these changes mediated by the sympathetic nervous system.[47] To test the effect of AN on temperature regulation in exercise, we measured rectal and mean skin temperature during exercise in diabetics with and without neuropathy and in normal subjects.[55] No differences were found in rectal temperature and skin temperature, which suggests that during short-term exercise (20 minutes of exercise at 50 W (work-load) and 100 W) body temperature regulation is normal in diabetics with AN, probably because short-term exercise (in contrast with prolonged exercise) is not a major challenge for the thermoregulatory system.[47] The effect of AN on temperature regulation during prolonged exercise remains to be determined.

Hormonal responses. The responses to exercise of NE and E are blunted in diabetics with AN. As exercise-induced responses of individual hormones probably are closely interrelated,[48] we also measured the responses of glucagon, growth hormone, and cortisol to graded exercise during daily life conditions (three hours after breakfast and subcutaneous insulin administration[61]) and during relative insulin deficiency (12 hours after subcutaneous insulin injection and food intake[66]). In the former study, group-1 and group-2 patients participated. In group-1 patients, glucagon concentrations decreased at low work loads and subsequently returned to preexercise concentration at higher work loads, whereas growth hormone and cortisol concentrations increased above resting concentrations at high work loads.[61] In group-2 patients, no significant changes occurred in any of these hormones. While S neuropathy may be held responsible for the impaired catecholamine secretion, the cause of impaired cortisol and growth hormone secretion is not obvious. Growth hormone and cortisol responses to surgery have been shown to be mediated by impulses through afferent nerves.[67] Possibly, the impaired growth hormone and cortisol responses to exercise in group-2 patients are also due to neuronal damage.[61] Thus, the hormonal response to exercise is reduced in diabetics with AN.

On the other hand, hormonal response to exercise is enhanced in diabetics in poor metabolic control (due to insulin deficiency).[49,68] In order to further characterize the interplay between metabolic control and AN in the hormonal response to exercise, we measured the responses of E, NE, cortisol, growth hormone, glucagon, renin, and pancreatic polypeptide (PP) to 50 W and 100 W exercise in normals and in patients in groups 1, 2, and 3 in a state of relative insulin deficiency.[66] Multiple regression analysis showed that the responses of all hormones except PP correlated with metabolic control, as expressed by blood glucose concentrations at rest, whereas only the responses of growth hormone and PP correlated with degree of AN, quantitated by measurements of beat-to-beat variation in heart rate at rest (as discussed earlier). Thus, during these experimental conditions (in which comparisons were made at similar absolute and nonrelative work loads), the hormonal response to exercise was more closely related to metabolic control than to degree of AN. The relative work load was probably higher in the patients with AN.[54] This may have compensated for differences in autonomic nerve function during exercise.

No increase was found in PP concentrations during exercise in group-2 and group-3 patients. The exercise-induced increase in PP secretion in normal subjects may be blocked by beta-receptor blockade.[69] Lack of increase in PP concentrations during exercise in group-2 and group-3 patients may, therefore, be due to AN.[66]

Thus, blunted responses of growth hormone, cortisol, and PP have been demonstrated during exercise in diabetics with slight neuropathy. The hormonal response does not seem to be further impaired in patients with severe neuropathy. During relative insulin deficiency, the hormonal response to work, expressed in absolute terms, was more closely related to metabolic control than to degree of neuropathy.

Metabolic response. In normal subjects, the metabolic response to exercise is modulated by the hormonal response.[48] Accordingly, on the basis of blunted hormonal responses to exercise in diabetics with AN, it might be expected that the metabolic response to exercise is affected in these patients. However, measurements of blood concentrations of glucose, lactate, glycerol, free fatty acids, and beta-hydroxybutyrate revealed no differences between diabetics with AN and those who were AN free after normal insulin therapy[61] or during relative insulin deficiency.[66] Compared with normal subjects, the metabolic response to exercise was exaggerated in all three patient groups during insulin deficiency.[66]

The latter finding is in agreement with results from other studies,[49,61,70] indicating that previous metabolic control is a major determinant of the metabolic response to exercise in insulin-dependent diabetics.

During exercise, no correlations were found between beat-to-beat variation and blood concentrations of metabolites. The dissociation between impairment of the hormonal and the metabolic response to exercise in diabetics with AN may be interpreted as either a lack of essential influence of the measured hormones on the metabolic response to exercise or as an increase in the sensitivity of adipose tissue and glycogen stores to the action of glucoregulatory hormones in these patients, compared with neuropathy-free diabetics.

Postural changes

In normal subjects, standing up results in venous pooling of blood in the lower extremities and in the splanchnic vascular bed and causes a fall in central venous pressure, cardiac output, and arterial blood pressure. Reflex vasoconstriction and increased heart rate (elicited by increased sympathoadrenal activity as reflected by a rise in plasma concentrations of catecholamines) are induced. These changes tend to restore blood pressure to its previous level.[71] Long-term diabetes is a frequent cause of orthostatic hypotension.[72] In orthostatic hypotension, irrespective of etiology, the pathogenetic factors that may be involved are as follows: (1) defective contraction of resistance vessels in the upright position; (2) abnormal reduction in blood volume; or (3) diminished cardiac output in the standing position, due either to abnormally reduced venous return (eg, in consequence of abnormal blood volume reduction) or to inability to increase the rate and contractility of the heart, or both. In diabetic orthostatic hypotension, all three of these factors might be supposed to be of importance, alone or in concert, since AN is common in diabetes and may affect the cardiac nerves as well as the sympathetic vasomotor fibers[73] and since capillary permeability to albumin may be increased.[74] Previous investigations of orthostatic hypotension in diabetics have focused only on one of the three factors at a time.[2,6,29,30,75–79] Accordingly, we studied simultaneous responses of the heart, plasma catecholamines, resistance vessels, and plasma volume to standing up in patients in groups 1, 2, and 3 and in normal subjects.[39]

Catecholamines. Orthostatic hypotension in insulin-dependent diabetics may be associated with exaggerated S nerve activity in response to standing up, ie, hyperadrenergic orthostatic hypotension.[38] In this condition, the basic defect seems to be a reduction in the intravascular volume, specifically in the red blood cell mass.[32] However, in our patients with orthostatic hypotension (group 3) the increment in plasma NE upon standing was blunted.[39] Thus, these patients were diagnosed as having hypoadrenergic orthostatic hypotension.[38]

Christensen measured plasma catecholamines in the supine and standing positions and found that the catecholamine response correlated with the degree of somatic neuropathy, evaluated by measurement of vibratory perception threshold,[37] while Cryer et al found no relationship between plasma catecholamine response to standing up and the presence of somatic neuropathy.[38] We found a weak but significant correlation between plasma NE response to standing up and vibratory perception threshold,[39] as expected since AN and somatic neuropathy are correlated in diabetics.[17,45]

Hemodynamic variables. As mentioned earlier, the basic defect in hyperadrenergic orthostatic hypotension seems to be a reduction in red blood cell mass. Our patients with hypoadrenergic orthostatic hypotension did have a reduced red blood cell mass, but this was partially compensated by an increase in plasma volume, making the total intravascular volume similar in groups 1, 2, and 3 and in normal subjects. The decrease in plasma volume upon standing was also similar in the four groups. Thus neither diminished intravascular volume nor abnormal reduction in plasma volume is a pathogenetic factor in diabetic hypoadrenergic orthostatic hypotension.

Heart rate increased in all group-3 patients upon standing, and the increase was similar to the increase in the three other groups. This is in accordance with earlier observations[2,6,80]; apparently only few diabetics with orthostatic hypotension fail to experience an increase in heart rate upon standing.[80] Nevertheless, the fact that heart rate does not increase more in diabetics with orthostatic hypotension than in subjects with normal blood pressure regulation, although blood pressure is lower in the former group, indicates a defect in the baroreceptor reflex arc.

Also, the reduction in cardiac output upon standing was similar in the four groups.[39] Thus, an abnormal decrease in cardiac output does not seem to be a pathogenetic factor in diabetic hypoadrenergic orthostatic hypotension. Rather, lack of increase in total peripheral vascular resistance due to an impaired S nervous activity accounted for orthostatic hypotension in group-3 patients.[39] Lack of increase in total peripheral resistance in these patients was accompanied by lack of increase in hepatosplanchnic as well as subcutaneous vascular resistance (the latter in the ankle region). Increase in hepatosplanchnic vascular resistance previously has been shown to be of major importance for the maintenance of arterial blood pressure upon standing, making up about one third of the increase in total vascular resistance,[81] a figure that is in agreement with our results in normal subjects and in neuropathy-free diabetics.[39] The finding of an impaired regulation of splanchnic vascular resistance is in accordance with anatomic evidence of splanchnic neuropathy in diabetics.[30] The lack of increase in subcutaneous vascular resistance in group-3 patients indicates that a vasoconstrictor defect also exists in the subcutaneous tissue in these patients.[39] Similarly, we found that reflex subcutaneous vasoconstriction during change of position of the ankle from cardiac level to 50 cm below the heart is absent in group-3 patients.[82] The finding of a defect in resistance vessel function in the lower extremities is in accordance with the observation that the NE content is reduced in arteries from the legs of deceased long-term diabetics[83] and with results from studies of vasomotor responses of the lower extremities to heating and cooling in long-term diabetics with signs of AN.[6] Lack of increase in hepatosplanchnic and subcutaneous vascular resistances cannot completely account for lack of increase in total vascular resistance in patients with orthostatic hypotension.[39] Accordingly, a vasoconstrictor defect is also present in other areas. However, it cannot be excluded that some vasoconstriction may occur in diabetics with orthostatic hypotension. This is so since an increase in forearm vascular resistance occurs during lower-body negative pressure in diabetics with orthostatic hypotension.[76]

As mentioned earlier, group-2 patients (with slight neuropathy) have abnormal cardiovascular responses to graded exercise. During change of body position from supine to standing, the blood pressure decrease was somewhat greater, although not significantly so, in group-2 than in group-1 patients (those with no neuropathy). This intermediate response may be explained to some extent by intermediate increments in total peripheral resistance. Also, the increments in hepatosplanchnic and subcutaneous vascular resistances were intermediate. Plasma NE responses were also intermediate.[39] It is conceivable that some of these patients do develop frank orthostatic hypotension.

It may be concluded that diabetic orthostatic hypotension may be due to impaired S vasoconstrictor activity, which causes a lack of increase in total peripheral resistance upon standing. Decrease in cardiac output, as well as in plasma volume, was similar in diabetics with and without orthostatic hypotension, and, therefore, abnormal changes in these variables do not seem to be involved in the pathogenesis of diabetic orthostatic hypotension.

Plasma renin activity. Plasma renin responses to standing up have been reported to be blunted in diabetic orthostatic hypotension, and sympathetic neuropathy has been held responsible for this reduction.[78,84] Yet we found that the plasma renin response to standing was similar in diabetics with and without orthostatic hypotension.[39] Also, patients with cervical cord transections and orthostatic hypotension have plasma renin responses to standing up similar to those of normals, but they are probably elicited by another mechanism, ie, the renal baroreceptor.[85] It has been suggested that if blunted renin responses to standing occur in diabetics with orthostatic hypotension, the reduction in plasma renin response is due to severe nephropathy affecting the juxtaglomerular apparatus and not to sympathetic neuropathy.[86]

Hypoglycemia

In normal subjects, increases in plasma concentrations of catecholamines and glucagon are considered important for glucose recovery from hypoglycemia.[87–89]

Glucagon responses to hypoglycemia have been reported to be diminished in juvenile diabetics.[90,91] Maher et al found that glucagon release during hypoglycemia was diminished in juvenile diabetics without AN and was absent in diabetics with AN, whereas growth hormone and cortisol responses were identical in these patient groups.[92] Plasma catecholamines and glucose recovery were not assessed in this study. However, as stated previously, insulin-dependent diabetics with AN display blunted responses of catecholamines to exercise and standing up. Accordingly, in diabetics with AN, blunted catecholamine responses to hypoglycemia also might be expected, and it might be speculated that blunted responses of glucagon and catecholamines would result in impaired glucose recovery and lipolysis. Accordingly, we studied the effect of AN on the hormonal, metabolic, and cardiovascular responses to hypoglycemia in insulin-dependent diabetics. In an attempt to normalize the intermediary metabolism, the patients were given soluble insulin three times daily for two days preceding the experiment, and insulin was given as an intravenous infusion during the night preceding the experiment. The responses of group-2 and group-3 patients did not differ significantly; these patients were, therefore, regarded as one group, group 2+3, having autonomic neuropathy.

Catecholamines. A rise in plasma E in response to hypoglycemia was found in the patients with AN. The response was, however, significantly smaller than the one found in patients without neuropathy.[93] Similarly, blunted E responses to hypoglycemia have been reported in patients with idiopathic orthostatic hypotension (who also have other signs of AN).[94] The lower response of plasma E in our patients with AN may be due to degeneration of preganglionic sympathetic fibers.[88] Plasma NE responses were similar in diabetics with and without AN, and no correlation was found between beat-to-beat variation and plasma NE responses.[93] Since the source of circulating NE, as well as its physiologic significance during hypoglycemia, is unknown,[36] this dissociation cannot be explained at the present time.

Pancreatic hormones. As stated, plasma concentrations of glucagon increase during insulin-induced hypoglycemia in man. Also, the concentrations of PP[95] and somatostatin[96] increase, while insulin secretion, estimated by measurements of plasma concentrations of C-peptide, decreases. The mechanisms responsible for these changes are not fully understood, stimulation of glucose-sensitive receptors in pancreatic endocrine cells and autonomic nervous activity probably being of primary importance.[97] In group-2+3 patients, no response during insulin-induced hypoglycemia was found in any of the hormones, while significant increments in glucagon and PP concentrations were found in group-1 patients; the responses, however, were significantly smaller than in the normal subjects.

None of the patients had endogenous insulin secretion as measured by the C-peptide response to 1 mg intravenous glucagon.[98] Accordingly, differences in pancreatic damage probably did not account for the difference in hormonal response between group-1 and group-2+3 patients. These results suggest that autonomic nervous activity is of major importance for release of pancreatic hormones during hypoglycemia in man.[99] Our finding of lack of increase in pancreatic hormones in response to hypoglycemia is in accordance with results from studies of calves with cut splanchnic nerves,[97] in patients with multiple neurologic defects (Shy-Drager syndrome),[100] and in diabetics with AN due to non-insulin-dependent, maturity-onset diabetes.[101,102] The lower response of pancreatic hormones in the neuropathy-free diabetics compared with normal subjects may be due to subclinical neuropathy affecting pancreatic autonomic nerves, to glucose-receptor defects (in pancreatic glucagon and, possibly, somatostatin cells, PP release during hypoglycemia probably depending entirely on vagal stimulation[95]), or to an unknown complication of insulin-dependent diabetes.[99]

Cortisol and growth hormone. No significant differences were found in the response of cortisol and growth hormone to hypoglycemia in diabetics with AN and those who were AN free, although growth hormone concentrations tended to be lower in the former.[93] As described earlier, the responses of these hormones to exercise are blunted in diabetics with AN.[61] Accordingly, one might also have expected impaired responses of these hormones to hypoglycemia. Different neural pathways are probably involved in their secretion in the two experimental situations, and this may account for the different findings.

Metabolic response. Serum glucose concentrations were similar (about 6.5 mmole/liter) in the two patient groups before induction of hypoglycemia and glucose nadirs were also similar (2.2 mmole/liter). Following hypoglycemia, the increase in serum glucose concentrations was similar in diabetics with and without AN.[93] This is surprising in the light of lower concentrations of the two most important counterregulatory hormones, glucagon and E, after glucose nadirs in the patients with AN. Recent investigations have pointed out that in man, glucagon secretion is necessary for normal glucose counterregulation, while growth hormone is of little importance.[87–89] Adrenergic mechanisms normally do not play an essential role in counterregulation but become critical to blood glucose recovery when glucagon secretion is impaired. Since no significant increase in glucagon concentrations occurred in patients with AN, it might be speculated that circulating E was responsible for glucose recovery in patients with AN. Since the blood glucose recovery was similar to the recovery in control patients in spite of lower concentrations of circulating E in the patients with AN, the sensitivity to the action of E of hepatic glycogenolysis may be increased in diabetics with AN.

The rate of lipolysis, judged from serum concentrations of free fatty acid (FFA) and glycerol, after cessation of insulin infusion was significantly greater in patients with AN compared with control patients, in spite of lower concentrations of E in the patients with AN. Following hypoglycemia, glycerol concentrations correlated negatively with beat-to-beat variation. This is strange, but may be explained by an increase in the sensitivity of adipose tissue toward the lipolytic action of circulating catecholamines in patients with AN. The higher concentrations of FFA in the patients with AN may have reduced peripheral glucose uptake and thus favored glucose recovery.[103] Alternatively, the patients with neuropathy relied more upon gluconeogenesis, which may have been higher than in control patients since the concentrations of the gluconeogenic precursors, glycerol and lactate, were higher following hypoglycemia in the patients with AN.[93] The concentrations of ketone bodies (acetoacetate and beta-hydroxybutyrate) increased similarly in the two patient groups following hypoglycemia.[93]

Thus, in spite of lower concentrations of glucagon and E in the diabetics with AN, blood glucose recovery was similar to recovery in nonneuropathic diabetics, and lipolysis was exaggerated. This may be due to increased sensitivity of hepatic glycogen stores and adipose tissue to the action of circulating E in diabetics with AN.

Cardiovascular response. In normal man, heart rate increases during insulin-induced hypoglycemia. The subsequent return of heart rate to basal values is probably due to increased vagal activity.[104] In the patients with AN, heart rate returned more slowly to basal values than in the neuropathy-free patients, suggesting impaired vagal activity in the former group.[93]

The rise in systolic blood pressure during hypoglycemia is due to circulating catecholamines.[73] A significant inverse correlation existed between beat-to-beat variation in heart rate and systolic blood pressure increase during hypoglycemia, suggesting also that the sensitivity of the cardiovascular system toward the blood pressure–enhancing effect of circulating catecholamines is increased in patients with AN.[93]

In normal subjects, subcutaneous blood flow decreases during hypoglycemia.[105] This decrease is probably due to stimulation of subcutaneous vascular alpha receptors by circulating catecholamines. This is so since the decrease in flow could be blocked by local alpha-receptor blockade but not by a local nerve-conduction block.[105] In the diabetics with AN, the subcutaneous blood flow decrease during hypoglycemia was similar to the decrease in neuropathy-free patients.[105] This may be another example of increased sensitivity toward circulating E in diabetics with AN. Previously, augmented vascular sensitivity to infusions of NE has been found in diabetics compared with normal subjects.[106,107] It is possible that the increased sensitivity demonstrated in these studies was due to inclusion of diabetics with AN in the experiments.

Temperature regulation. Following hypoglycemia, rectal temperature is usually lowered due to heat loss caused by hyperventilation and sweating.[108] Since sweating may be affected in diabetics with AN,[6] rectal temperature might be affected in these patients. This was not so in our study: The decrease in rectal temperature was similar in the diabetics with and without AN. Several of the patients lacked sweat secretion on feet and legs. During hypoglycemia, sweat secretion from the trunk and the face was copious in these patients, which may account for their normal rectal temperature during hypoglycemia.

Hypoglycemic unawareness. The term "hypoglycemic unawareness" has been used to describe loss of ability to recognize impending hypoglycemia in insulin-treated diabetics.[109] The phenomenon has been considered to be due to AN.[46] This has been disputed by others.[6,109] All of our patients with AN developed subjective symptoms of hypoglycemia (palpitations, blurred vision, and so forth). Apparently, hypoglycemic unawareness is not a feature of autonomic neuropathy.

Final considerations

From this review, it appears that in diabetics with signs of AN (orthostatic hypotension and/or decreased beat-to-beat variation in heart rate during hyperventilation), both PS and S dysfunction are encountered during exercise, standing up, and hypoglycemia. This results in abnormal cardiovascular and hormonal adaptation to all three experimental situations (see Table). Autonomic neuropathy apparently has no effect on the metabolic responses to exercise and hypoglycemia. This may be interpreted as lack of essential influence of the hormones regulating the metabolic response or as an increase in sensitivity of adipose tissue and of hepatic glycogen stores to the action of circulating catecholamines in these patients. The sensitivity of the cardiovascular system to the action of circulating catecholamines may also be increased in diabetics with the mentioned signs of AN.

The responses to the three experimental situations were measured in three patient groups: Group 1 had no measurable or clinical signs of AN. Group 2 had presumably slight neuropathy (measurable abnormalities in autonomic nerve function but few clinical symptoms of AN). Group 3 had severe neuropathy (measurable abnormalities in autonomic nerve function and clinical symptoms of AN). Accordingly, the measured responses, which are believed to be modulated by the autonomic nervous system, might be more impaired in group-3 than in group-2 patients. We found that cardiovascular responses to exercise and standing up are more defective in group-3 patients than in group-2 patients, whereas no differences could be demonstrated during hypoglycemia. The responses of NE to standing are more severely affected in group-3 than in group-2 patients, whereas the responses of other hormones and of metabolites are similar.

As was mentioned earlier, localization in vivo of defects responsible for abnormal results of autonomic function is not yet possible. Neither is it possible to localize the defects responsible for the physiologic maladjustments reviewed in this paper; they may be located anywhere in the reflex arcs controlling the physiologic responses to the various challenges.

Judged from correlations between vibratory perception threshold and beat-to-beat variation, somatic neuropathy may develop in parallel with AN.[39] It has been suggested that PS neuropathy may emerge

TABLE I. The Effect of Autonomic Neuropathy in Insulin-Dependent Diabetics

	Heart Rate	Blood Pressure	Cardiac Output	Plasma Volume	Hepato-splanchnic Resistance	Subcutaneous Resistance	Temperature Regulation	Cardio-vascular variable
Exercise	↓	↓	↓	→	↓		→	
Standing	→	↓	→	→	↓	↓		
Hypoglycemia	↓	↑				→	→	
	Catechol-amines	Glucagon	Cortisol	Growth Hormone	Renin	PP	Somato-statin	
Exercise	↓	→	↓	↓	→ (↓)	↓		
Standing	↓				→			Hormonal
Hypoglycemia	↓	↓	→	→ (↓)		↓	↓	
	Glucose	Lactate	FFA	Glycerol	BoH			
Exercise	→	→	→	→	→			
Standing								Metabolic
Hypoglycemia	→	→	↑	↑	→			

Key: → no effect of autonomic neuropathy; ↓ impaired by autonomic neuropathy; ↑ augmented by autonomic neuropathy.

earlier than S neuropathy in diabetics.[46,75,80] This is in accordance with the fact that in some of our patients with signs of vagal dysfunction (decreased beat-to-beat variation), S function was normal in some of the test situations, whereas patients with S dysfunction invariably also had vagal involvement. However, measurements of plasma concentrations of catecholamines during exercise,[61] standing up,[39] and hypoglycemia[93] correlated with beat-to-beat variation, suggesting that there may be a parallel development of sympathetic and parasympathetic neuropathy in insulin-dependent diabetics.

It has been suggested that S dysfunction in diabetics is due to a lesion in the postganglionic neuron.[110] This was not supported by our investigations since E secretion from adrenomedullary cells, which are innervated by preganglionic autonomic fibers, was impaired during exercise and hypoglycemia in our patients with AN, suggesting a preganglionic lesion.[61,93]

We suggest that diabetic AN develops in parallel with somatic neuropathy. Within the autonomic nervous system, it probably develops at an equal rate in the PS and the S system, as well as in preganglionic and postganglionic neurons.

Abnormal adaptation to exercise, standing up, and hypoglycemia, attributable to AN, has thus been demonstrated in different parts of the cardiovascular system (the heart and the splanchnic and subcutaneous resistance vessels). Abnormal endocrine responses, probably due to neuropathy of autonomic nerves to the pancreas and the adrenal medulla, have been demonstrated in patients supposed to have AN, judged from the outcome of simple, noninvasive bedside tests (beat-to-beat variation in heart rate and blood pressure responses to standing). This suggests a predictive value, with respect to physiologic adaptation to various stimuli, of those tests. From a clinician's point of view, this is important for the interpretation of the results of such tests applied in diabetics, as the tests are now quite extensively used as screening parameters for AN.

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■

Cardiovascular Reflex Tests

In the natural history of diabetic autonomic neuropathy

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Recently developed tests of cardiovascular (CV) reflex function can serve as a tool in establishing the natural history of diabetic autonomic neuropathy (AN). Although the clinical features of AN have become increasingly recognized following the classic review by Rundles[1] in 1945, as well as the later reviews of Martin[2] and Keen,[3] which emphasized the vasomotor and sudomotor abnormalities, and of Ellenberg,[4] which underlined the visceral changes, relatively little is known about the natural history of the condition.

Earlier tests devised to measure CV reflex function, such as those that utilized the Valsalva maneuver,[5–7] had the disadvantage of being invasive and therefore not widely applicable, or they were generally crude and nonreproducible. In the early 1970s, however, a new generation of tests, utilizing cardiovascular reflexes, was developed for assessment of autonomic function in diabetes. These tests had the advantages of being noninvasive, relatively simple, and reproducible.[8,9]

There are five tests currently used, based on measurement of either the heart rate or blood pressure (Table I). The heart rate (R–R interval) variation during deep breathing,[10–12] the heart rate response to the Valsalva maneuver,[13,14] and the heart rate response to standing (30:15 ratio)[15] assess cardiac parasympathetic (PS) function. With the other two, the blood pressure response to sustained handgrip[16] and the blood pressure response to standing[13] become abnormal when more widespread peripheral sympathetic (S) damage is present. The

TABLE I. Newer CV Reflex Tests of Autonomic Nerve Function in Diabetes Mellitus

Tests Assessing Cardiac Parasympathetic Function
Heart rate (R–R) interval variation during deep breathing[10–12]
Heart rate response to Valsalva maneuver[13,14]
Heart rate response to standing (30 : 15 ratio)[15]
Tests Assessing Sympathetic Function
Blood pressure response to sustained handgrip[16]
Blood pressure response to standing[13]

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TABLE II. Prevalence of Abnormal CV Reflex Tests in Randomly Selected Diabetics

Author(s)	Randomly Selected Diabetics (No.)	Age Range (yr)	CV Test	Abnormal Test No.	Abnormal Test (%)
1960 Sharpey-Schafer and Taylor[5]	337	. . .	Valsalva maneuver	69	20
1974 Ewing et al[16]	124	25–54	Sustained handgrip	22	18
1979 Hilsted and Jensen[11]	126	24–45	Heart rate variation	51	40

details of the techniques and interpretation of these tests have been reviewed elsewhere.[8,9,17]

The application of these tests has made it possible to study AN in a more systematic way than previously. They have enabled the detection of subclinical AN,[18] perhaps in some cases many years before the onset of symptoms, and have helped to establish its prevalence. Furthermore, the tests help to confirm symptoms of AN, which are often vague and nonspecific, and they have been shown to serve as a prognostic guide.[19,20]

Cardiovascular tests and prevalence of autonomic neuropathy

The prevalence of subclinical and clinical AN is not yet clearly established. Until recently, AN was considered uncommon in diabetes, but this may be partly due to the fact that the number of patients developing florid symptoms is relatively small and partly that these patients have a prognosis of only a few years.[9,19,20] In some, the symptoms may be nonspecific and overlooked, while in others the autonomic damage may remain subclinical. In studies of CV reflex tests in randomly selected diabetics (Table II), at least 20% of patients have been shown to have abnormal tests, thus demonstrating that autonomic damage is more common than previously appreciated. The prevalence of subclinical autonomic damage may be greater or smaller, depending on the sensitivity of the CV tests and also on whether the tests being used reflect earlier cardiac PS damage or later S involvement.[17,21,22] Heart rate (R–R interval) variation, reflecting early vagal damage, is a sensitive test, and abnormality can be found in up to 40% of unselected patients,[11] whereas the sustained handgrip test, which reflects later S involvement, is abnormal in only 18% of patients.[16]

Cardiovascular tests and prospective studies

Using CV tests, we studied the natural history of AN[2] in a cohort of 73 diabetics (62 males, 11 females) with suggestive symptoms (Table III). The age range was 24 to 69 years (mean, 46 years) and the duration of diabetes ranged from 2 to 37 years (mean, 16 years). The duration of autonomic symptoms was 1 to 18 years (mean, 3.4 years). Treatment utilized insulin in 65 patients (89%) and oral hypoglycemic agents in the remainder. Patients with hypertension or obvious cardiac and renal failure were excluded, as were those who were taking drugs known to affect the nervous system.

For the purposes of analysis, the patients were grouped into those who presented with impotence alone (30 patients) and those who presented with other symptoms suggestive of AN (43 patients). Of the latter group, 32 were males, of whom 29 were also impotent.

The observation period of the prospective study was from 19 months to five years. Cardiovascular tests were carried out as follows: (1) at entry (73 patients); (2) at a second visit between 19 months and three years (57 patients); and (3) at a third visit at five years (21 patients). The tests used consisted of the heart rate response to the Valsalva maneuver, reflecting cardiac PS function, and the blood pressure response to sustained handgrip, reflecting S function. The blood pressure response to standing was also measured, but the results are not used in this analysis. During the latter part of the study, many of the patients also had R–R interval variation measurements and lying-to-standing heart rate response (30:15 ratio) recorded, but these results are not included, since they were not measured in the earlier subjects. Patients were designated as having CV tests that were abnormal (both tests abnormal, one or the other test abnormal, or both tests borderline) or normal (one or the other test borderline or both tests normal).

At entry into the study, 40 patients (29 males, 11 females) had abnormal tests, while the remaining 33 had normal tests, the latter being predominantly males who presented with impotence alone. At the second visit, of the 57 patients available for this analysis, 20 (35%) had now developed further autonomic symptoms, especially postural hypotension (eight patients), gastric fullness (seven patients), and sweating abnormalities (five patients). Of the 28

TABLE III. Presenting Symptoms in 73 Diabetics at Entry Into AN Cohort

Individual Symptoms	No.	Males (n = 62)	Females (n = 11)
Impotence	59	59	. . .
Postural hypotension	25	20	5
Diarrhea	23	18	5
Sweating abnormalities	12	5	7
Gastric fullness	10	8	2

TABLE IV. Results of CV Reflex Tests in 73 Diabetics With Impotence Alone and With Other Autonomic Symptoms at Entry Into Cohort

Group	No.	Males	Females	Cardiovascular Reflex Tests Normal No. (%)	Cardiovascular Reflex Tests Abnormal No. (%)
Impotence alone	30	30	...	28 (93)	2 (7)
Other symptoms	43	32	11	5 (12)	38 (88)

patients with initially normal tests who were available for analysis at the second visit, five had now developed abnormal tests. Of the 40 patients who initially had abnormal tests, only 29 were available for analysis at the second visit (11 had died). In the group with abnormal tests, these remained abnormal except in the case of two patients. Similar trends were found at the third visit at five years, and these findings illustrate the progressive nature of AN in patients with suggestive symptoms, with the development of further symptoms, the progressive abnormality and irreversibility of the CV tests, and the high mortality in those with abnormal tests.

Cardiovascular tests and impotence

In a previous study, we confirmed that impotence is common in diabetic males, and in a randomly selected clinic population sample of 541 males aged 20 to 59 years, the overall prevalence was 35%.[23] Impotence in diabetics is a most difficult symptom to evaluate, and a variety of causes, of which AN is only one, have been put forward to explain it.

In the cohort of 73 patients we have studied prospectively for up to five years, the age and duration of diabetes in the group with impotence alone (30 patients) were similar in the group with other autonomic symptoms (43 patients). There was no difference in the distribution of retinopathy or proteinuria in the two groups. However, the group with other autonomic symptoms had significantly more clinical evidence of peripheral somatic neuropathy. The majority of patients in the group with other symptoms had abnormal CV tests, whereas the tests were abnormal in only two patients in the group with impotence alone (Table IV).

Of the 26 patients in the group with impotence alone who were available for analysis at the second visit, seven had developed other symptoms suggestive of AN, while six had developed abnormal CV tests. These same trends continued throughout the five years.

The development of impotence in male diabetics, without other suggestive autonomic symptoms and with normal CV tests, suggests at first sight that the impotence may be unrelated to neuropathy and due to some other cause. It could alternatively be suggested that in some diabetic males the impotence may be an early feature of AN and that the CV tests do not initially reflect early pelvic autonomic nerve damage. The prospective study showing patients who initially had impotence alone progressing to other symptoms and developing abnormal CV tests supports this latter view.

Cardiovascular tests and peripheral somatic nerve function

Using CV tests, it has been possible to demonstrate a close relationship between autonomic and peripheral somatic nerve function.[24] In 32 of the first 37 patients of the cohort, peripheral nerve function was tested by measurement of motor latency (ML) and motor conduction velocity (MCV) in the upper (ulnar nerve) and lower (common peroneal nerve) limbs (Table V). Autonomic nerve function, assessed by the heart rate response to the Valsalva maneuver, correlated with MCV in the upper limb ($p < .01$) and with both ML ($p < .005$) and MCV ($p < .02$) in the lower limb. Grouped data from normal subjects and diabetics with normal and abnormal CV tests also showed a correlation with peripheral nerve function

TABLE V. CV Autonomic Function (Valsalva Maneuver) and Peripheral Motor Nerve Function (ML and MCV) in 27 Diabetics With Autonomic Symptoms (mean ± SD)*

Valsalva Maneuver	No.	Ulnar Nerve (forearm) Motor Latency (ms)	Ulnar Nerve (forearm) Motor Conduction Velocity (m/s)	Common Peroneal Nerve Motor Latency (ms)	Common Peroneal Nerve Motor Conduction Velocity (m/s)
Normal	12	3.3 ± 0.8	53.2 ± 8.5	4.3 ± 0.5	41.9 ± 8.0
Abnormal	15	3.3 ± 0.6	44.4 ± 6.6	6.5 ± 2.2	34.0 ± 7.4
Significance		NS	$p < .01$	$p < .005$	$p < .02$

* Patients with borderline response to the Valsalva maneuver have been omitted from this table.

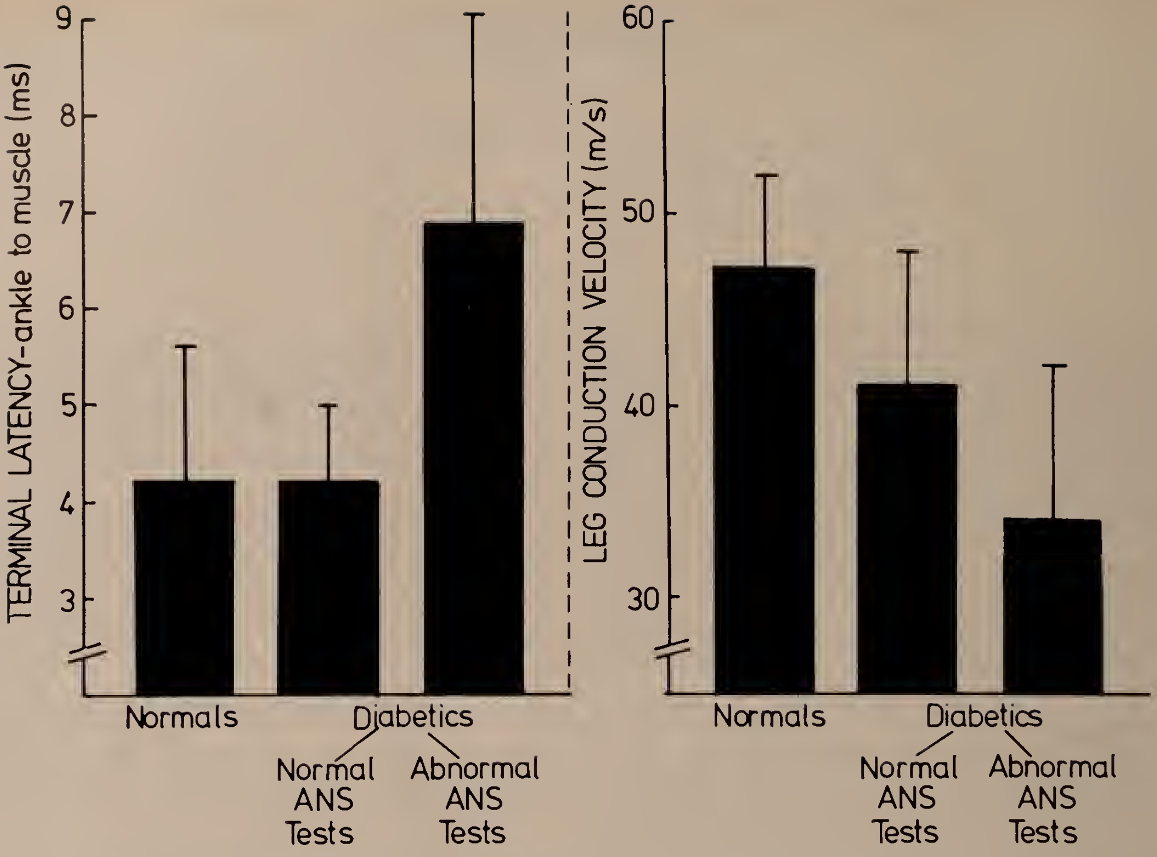

FIGURE 1. Peripheral motor nerve function (terminal latency and MCV), measured in the common peroneal nerve, and autonomic function in 15 diabetics with normal and 17 diabetics with abnormal CV reflex tests.

(terminal latency and MCV) measured in the common peroneal nerve (Fig. 1).

Patients with symptomatic AN usually have symptoms and signs of peripheral somatic neuropathy,[10,25,26] although sometimes the AN is said to occur in isolation.[27,28] It would seem likely that autonomic damage is part of the spectrum of widespread neuronal damage, as has been supported by our study and others,[29,30] confirming the relationship between CV reflexes and peripheral motor nerve function.

Cardiovascular tests and prognosis

Twenty-six (36%) diabetics in the prospective cohort died during the observation period of up to five years. There were 21 deaths (53%) in patients with abnormal CV tests (Table VI), whereas death ocurred in only five (15%) of those with normal tests. The calculated five-year survival curve for the total cohort of 73 patients (Fig. 2), which was compared with the expected survival curves for age- and sex-matched diabetic clinic population (Edinburgh) and general population (Scotland), showed a strikingly decreased survival in the patients with abnormal tests.[20]

Within the group with abnormal CV tests, the poor prognosis in the patients who died was not due to the initial selection of poor-risk patients, since the age, duration of diabetes, and duration of autonomic symptoms, as well as the presence of the other complications of retinopathy and peripheral neuropathy, were similar in those who survived and those who

TABLE VI. Results of CV Reflex Tests in 73 Diabetics at Entry Into AN Cohort and Mortality Rate Over Five Years

Group	No. of Patients	Mortality Rate No. of Deaths	(%)
All patients	73	26	36
Patients with normal CV tests	33	5	15
Patients with abnormal CV tests	40	21	53

$X^2 = 9.43$; $p < .01$

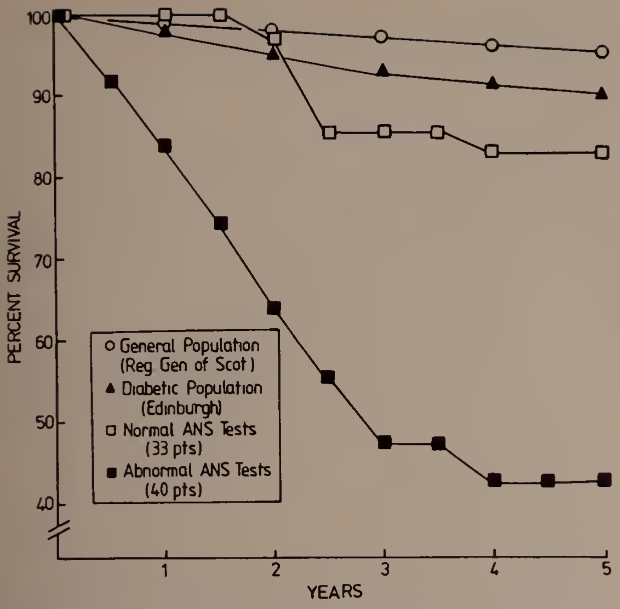

FIGURE 2. Five-year survival curves for age- and sex-matched general population, age- and sex-matched diabetic population, 33 diabetics with normal, and 40 diabetics with abnormal CV reflex tests.

died. The mean initial blood urea was higher, however, in those who died (57 mg/dl) than in those who survived (33.6 mg/dl). In the 21 patients who died in the group with abnormal CV tests, the median survival time was only 18 months and the mean age of death was 47 years.

In the 21 patients in the group with abnormal CV reflexes who died, sudden death occurred in five (with an additional patient dying suddenly after we had completed our analysis). In four of the six patients in whom autopsy was carried out, no obvious cause was found. In an earlier report, we had speculated that this sudden death might be directly attributable to the AN,[19] and Page and Watkins[31] have drawn attention to cardiorespiratory arrest in patients with severe AN. Previously, some of these deaths may have been wrongly attributed to painless myocardial infarction.[32] A more recent study has shown that this association is probably not due to an interference in the peripheal chemoreceptor pathway involved in the hypoxic drive of respiration,[33] although disturbance in other autonomic reflexes may be a factor.[34,35]

Our data have further suggested that the degree of abnormality of the CV tests was related to the mortality rate over five years: Those with three abnormal tests (Valsalva maneuver, blood pressure response to handgrip, and blood pressure response to standing) had a mortality rate of 58% (11 patients); those with two abnormal tests had a mortality rate of 50% (seven patients); and those with one abnormal test had a mortality rate of 33% (three patients) (Table VII).

TABLE VII. Degree of Abnormality of CV Reflex Tests in 73 Diabetics at Entry Into AN Cohort and Mortality Rate Over Five Years

Cardiovascular Tests	No. of Patients	Mortality Rate No. of Deaths	(%)
3 abnormal	19	11	58
2 abnormal	14	7	50
1 abnormal	10	3	33
2 borderline	4	1	25
1 borderline or 3 normal	26	4	15
TOTAL	73	26	36

Summary

Newer tests of CV reflex function that have been developed since 1970 have the advantages of being noninvasive, relatively simple to perform, and reproducible, and they have proved to be a useful tool in delineating AN in diabetes. Those reflecting cardiac PS function become abnormal at an earlier stage, whereas those reflecting more widespread S damage become abnormal later.

The CV reflex tests help to confirm symptoms that, although suggestive of AN, are, nevertheless, nonspecific. They make possible the detection of subclinical AN and have established that its prevalence is at least 20% in the diabetic population. Once abnormal, the CV tests remain abnormal, and increasing abnormalities develop over a five-year period. Whether any influences, such as tight metabolic control, will result in improvement of autonomic nerve function is not yet known. In general, CV tests of autonomic nerve function correlate with tests of peripheral somatic nerve function.

At an early stage, CV tests may not reflect autonomic damage in other systems. Impotence, although common and occurring in 35% of randomly selected diabetic males, may have many causes other than neuropathy. Many diabetic males have no symptoms suggestive of AN apart from impotence and can be shown to have normal CV reflexes. Prospective studies show that some of these patients do go on to develop other symptoms and abnormal CV tests, suggesting that the latter may not reflect very early pelvic PS damage.

Cardiovascular reflex tests serve as a prognostic guide, and if the Valsalva maneuver and handgrip test are both abnormal, the calculated mortality rate is 56% over five years. A high proportion of deaths in patients known to have AN are sudden and may relate to abnormalities in autonomic reflexes.

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Resting Heart Rate and Diabetic Autonomic Neuropathy

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The application of recently developed cardiovascular (CV) reflex function tests has shown that the parasympathetic (PS) nerve supply of the heart is involved early in diabetic autonomic neuropathy (AN)[1] and may also be damaged in asymptomatic patients.[2–4] The sequence and relative severity of cardiac vagal and sympathetic (S) damage have an effect on resting heart rates, and variable abnormalities might be expected to occur not only between different patients but also in the same individual when observed over time.

To date, there have been few systematic studies to assess heart rate changes in diabetics. The two main abnormalities in heart rate so far described are an increased heart rate and a fixed heart rate.

Increased resting heart rate. The earliest report relating heart rate changes to neuropathy is probably that of Eichhorst in 1892.[5] He observed a tachycardia in a 45-year-old diabetic, which was attributed to vagal neuropathy found at subsequent

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TABLE I. Resting Heart Rates (mean ± SD) in 124 Randomly Selected Diabetics Compared With 70 Age- and Sex-Matched Normal Subjects

Age Group (yr)	Normal Subjects No.	Normal Subjects Heart Rate (beats/min)	Diabetics No.	Diabetics Heart Rate (beats/min)
25–34	M11	67 ± 13	M11	79 ± 13
	F10	80 ± 11	F13	88 ± 11
35–44	M12	77 ± 11	M24	87 ± 13
	F 7	70 ± 11	F19	93 ± 11
45–54	M10	75 ± 14	M31	82 ± 12
	F10	79 ± 8	F26	86 ± 16
All	M33	73 ± 13	M66	83 ± 13*
	F27	77 ± 11	F58	89 ± 14*

* Significantly different from normal p <.001.

autopsy. Over 50 years later, Martin[6] noted a tachycardia in three of 150 patients with diabetic neuropathy, but made no further comment about it. Keen[7] also observed an unexplained tachycardia of 120 beats per minute in a single patient in his review of AN. Since 1970, several groups have reported faster resting heart rates in diabetics when compared with matched normal subjects.[2,8–13]

In a previous study of 124 randomly selected diabetics (66 males and 58 females) aged 25 to 54 years, we compared the resting heart rates recorded in the sitting position on an electrocardiagram (ECG) with those of 60 age- and sex-matched normal subjects.[10] Table I shows that male and female diabetics in each subgroup had faster heart rates than those of the normal subjects. Overall, the mean resting heart rate in the diabetics was approximately 10 beats per minute greater than in the controls (p <.001).

In a further study of 42 young male insulin-dependent diabetics, aged 20 to 35 years and with no clinical features of AN, the resting heart rate was recorded on magnetic tape for R–R interval analysis.[2] As in the randomly selected patients, the mean resting heart rate was more rapid in the diabetics (Table II), again exceeding that of the normal subjects by approximately 10 beats per minute (p <.005).

A resting tachycardia, sometimes as high as 120 beats per minute, has been observed in diabetics with autonomic involvement,[2,14] but resting heart rates exceeding 100 beats per minute are relatively uncommon. Tachycardia, when associated with AN, may represent an early stage of cardiac denervation when there is predominant PS damage before any S involvement. This is supported by pharmacologic studies in normal subjects when there was a tachycardia of 104 beats per minute following vagal blockade with atropine.[15] A less marked increase in resting heart rate of 80 to 95 beats per minute is more common and might indicate either less severe vagal damage alone or a combination of both vagal and cardiac S damage.[1] An increased resting heart rate, however, is nonspecific and by itself an unreliable sign of AN; other causes such as infection or hyperthyroidism need to be excluded.

In patients with AN and abnormal circulatory reflexes, insulin treatment may cause a lowering of blood pressure and a reflex tachycardia.[16] Insulin also causes an orthostatic increase in heart rate in diabetics with normal cardiovascular reflexes.[17] In our 124 randomly selected patients, however, the increased heart rate was independent of insulin treatment, with similar heart rate increases in those treated with insulin, diet, and oral agents (Fig. 1).

In the 42 asymptomatic diabetics without clinical evidence of AN, the heart rate, as expressed by mean R–R interval, correlated with R–R interval variation ($r = 0.766$; $p < .001$) (Fig. 2), suggesting a direct relationship with vagal damage.[2] A relationship between loss of R–R interval variation and vagal damage has been previously demonstrated.[1]

Fixed heart rate. This abnormality is uncommon in diabetics and describes the rate of the completely denervated heart. It was observed in only one of 12 patients with severe clinical AN.[1] The resting rate in the normal heart represents a balance

TABLE II. Resting Heart Rates (mean ± SD) in 42 Young Male Diabetics Without Clinical Evidence of AN Compared With 25 Normal Subjects

Age Group (yr)	Normal Subjects No.	Normal Subjects R–R Interval (msec)	Normal Subjects Heart Rate (beats/min)	Diabetics No.	Diabetics R–R Interval (msec)	Diabetics Heart Rate (beats/min)
20–35	25	736 ± 97	82	42	657 ± 89	92*

* Significantly different from normal p <.005.

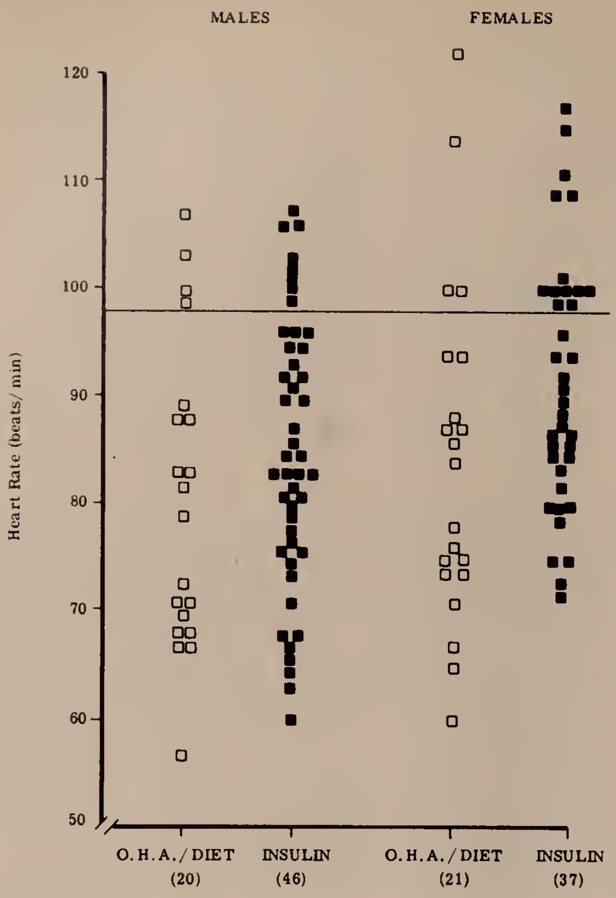

FIGURE 1. Resting heart rates in 124 randomly selected diabetics according to treatment by oral hypoglycemic agents, diet, or insulin.

between intrinsic cardiac control and extrinsic neural (PS and S) control, together with extrinsic hormonal control.[18] The concept of intrinsic control of the heart rate was developed by Jose[19] and becomes evident when extrinsic neural control is removed, such as following autonomic blockade with atropine and propranolol[19,20] or cardiac transplantation.[21] The intrinsic heart rate is more rapid than that of the normally innervated heart and varies between approximately 85 to 105 beats per minute in normal individuals. It decreases with age and does not vary in response to stimuli that normally influence the heart rate reflexly.

Following exercise, in the denervated heart there is a delayed, small increase in heart rate, probably dependent on catecholamines and other extrinsic humoral factors. In normal subjects, pharmacologic blockade with atropine results in a loss of PS tone, with a considerable increase in heart rate to approximately 100 to 120 beats per minute, while the addition of propranolol causes a loss of S tone, with a fall of heart rate to the intrinsic value.[20] The latter rate, however, is still faster than the preblockade resting heart rate.

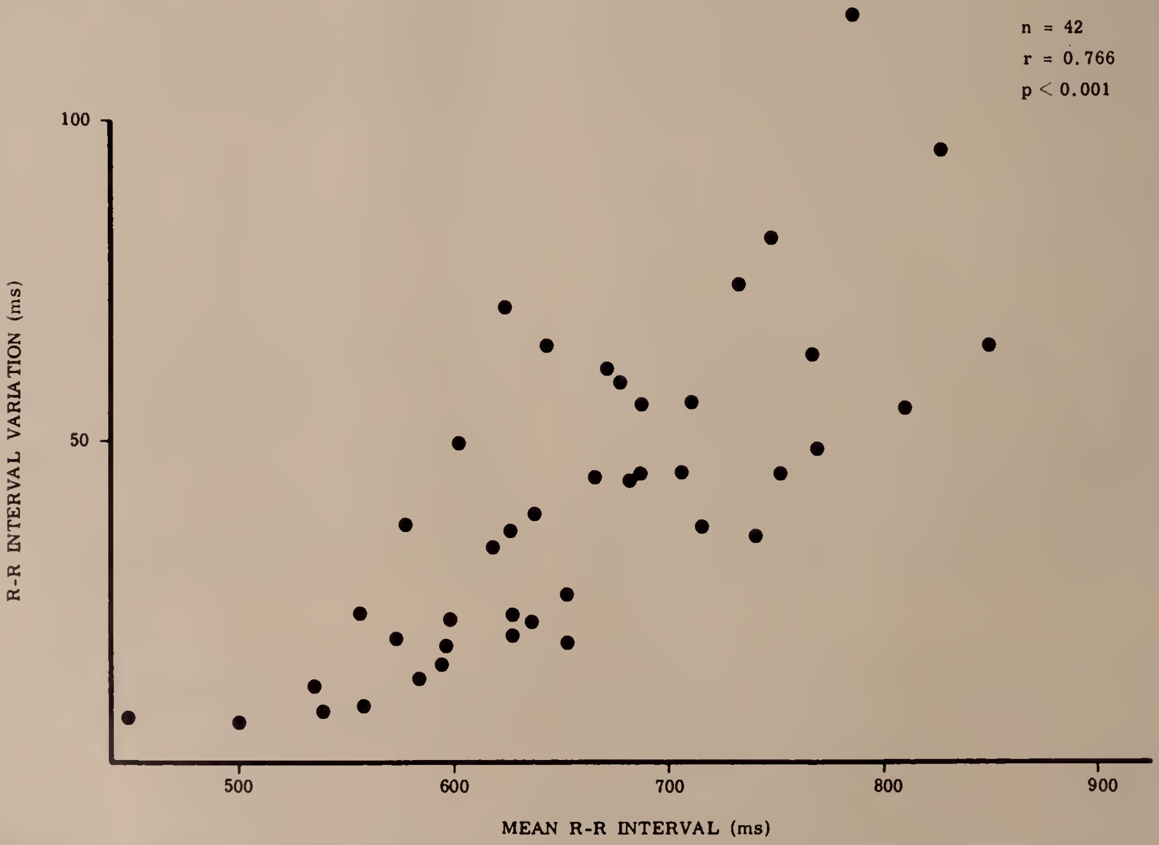

FIGURE 2. Correlation of mean R–R interval and R–R interval variation in 42 young diabetic males without clinical evidence of AN.

In diabetics with severe AN, there is only a small fall in heart rate following propranolol administration and only a small rise following atropine. In the most severely denervated hearts, the resting rate remains fixed with no response to propranolol or atropine and behaves similarly to the intrinsic rate in normal subjects.[1,22]

Studies of heart rate in autonomic neuropathy

To assess more fully the effect of cardiac AN on resting heart rate, we have carried out two studies,[23] the first to correlate resting heart rate with cardiovascular tests reflecting cardiac PS and S integrity and the second to follow temporally the resting heart rate in a group of diabetics over a period of three years.

Resting heart rate and autonomic nerve damage. Sixty-one patients aged 25 to 69 years (mean, 45 years) were selected in order to obtain as wide a range of responses as possible to a battery of CV autonomic function tests. Patients were not included if they had cardiac arrhythmias, congestive cardiac failure, or hypertension or if they were taking drugs known to influence the heart rate. The tests included the heart rate response to the Valsalva maneuver and to standing (30:15 heart rate ratio) and a measure of R–R interval variation (all reflecting cardiac PS damage), as well as the blood pressure response to sustained handgrip and the postural fall in blood pressure (reflecting damage to the S nerves). Details of these tests have been previously described.[15,24] On the basis of these tests, it was possible to define three categories of patients: (1) those with normal tests (22 patients); (2) those with abnormal tests reflecting both parasympathetic and sympathetic damage (abnormal PS + S, 25 patients). There were no significant differences in age between these three groups. The resting rate was recorded on magnetic tape for five minutes in the lying, sitting, and standing positions on two successive days, and the mean heart rate for each position was used in the analysis. Details of the recording technique and analysis have been described elsewhere.[2]

As expected, the most rapid heart rates occurred in the standing position (Fig. 3). The lying position brought out the most significant differences between the normal and the two abnormal groups (PS and PS + S) (p <.05). Patients whose autonomic function tests suggested vagal damage alone had the most rapid heart rates, whereas patients in the abnormal PS + S group with more extensive autonomic damage had less rapid rates, although these were still greater than those in the group with normal autonomic function.

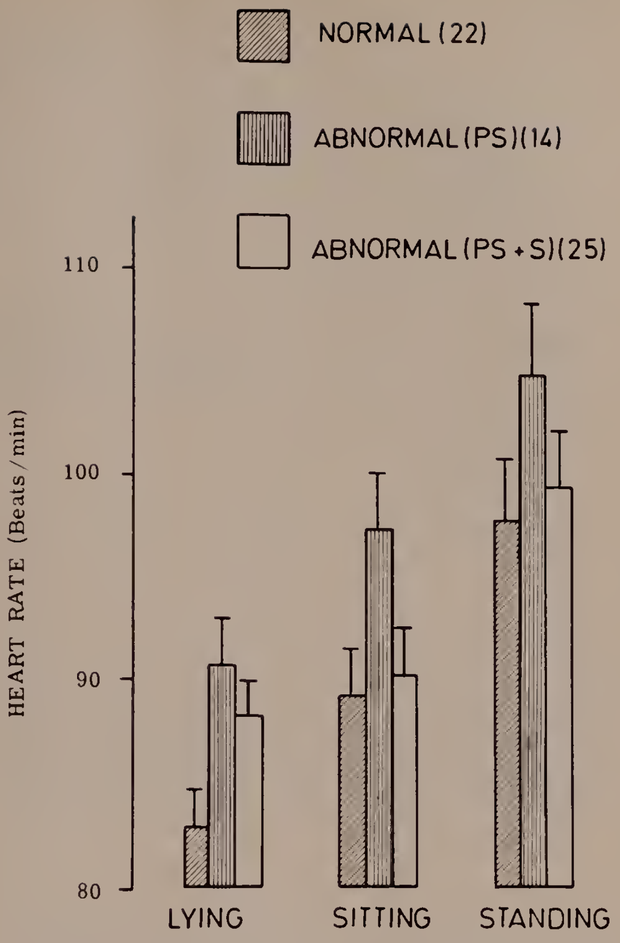

FIGURE 3. Mean resting heart rates (±SEM) lying, sitting, and standing in 22 diabetics with normal CV reflexes, 14 with abnormal PS function and 25 with abnormal PS and S function. (Reproduced with permission from *Lancet*.[23])

Temporal changes in resting heart rate. As part of a study of the natural history of AN,[25] 38 diabetics aged 18 to 69 years (mean, 45 years) were observed for possible temporal changes in their resting heart rate. The patients had initially exhibited a wide range of response to CV reflex tests. The autonomic function tests were carried out on at least three separate occasions over a period of at least 2.5 years. The battery of tests undertaken was as described above and reflected PS damage alone, or more severe damage with additional S changes. The results of the tests were again defined as normal, abnormal PS, and abnormal PS + S, as above: The resting heart rates were recorded with an ECG in the lying, sitting, and standing positions. Over 2.5 years, the CV tests remained unchanged in 25 patients (eight normal, five abnormal PS, 12 abnormal PS + S) and worsened in 13 (seven normal to abnormal PS, three abnormal PS to abnormal PS + S, three normal via abnormal PS to abnormal PS + S). Improvement did not occur in any of the 20 patients who initially had abnormal CV tests. As in the previous study, patients with unchanged autonomic nerve tests in the abnormal PS group had the highest resting heart rates, while the abnormal PS + S group had less rapid resting heart rates, although still

TABLE III. Changes in Resting Heart Rate (mean ± SD) After Two and One Half Years in Ten Diabetics Progressing From Normal to Abnormal PS CV Tests

CV Tests	Resting Heart Rate (beats/min) Lying	Sitting	Standing
Normal	79 ± 7	85 ± 7	93 ± 7
Abnormal PS	94 ± 9	100 ± 10	105 ± 11
Significance	p <.005	p <.005	p <.005

TABLE IV. Changes in Resting Heart Rate (mean ± SD) After Two and One Half Years in Six Diabetics Progressing From Abnormal PS to Abnormal PS + S CV Tests

CV Tests	Resting Heart Rate (beats/min) Lying	Sitting	Standing
Abnormal PS	94 ± 10	98 ± 13	102 ± 13
Abnormal PS + S	87 ± 6	86 ± 6	86 ± 8
Significance	p <.10	p <.05	p <.02

higher than those with normal autonomic function.

In the ten patients progressing from normal to abnormal PS tests, there was a significant increase in resting heart rate in all three positions (Table III), while in the six subjects whose tests worsened from abnormal PS to abnormal PS + S, there was a significant decrease in heart rate in all three positions, with an additional loss of the normal positional variation (Table IV). Figure 4 shows the heart rates in the three patients whose tests changed from normal to abnormal PS and then to abnormal PS + S

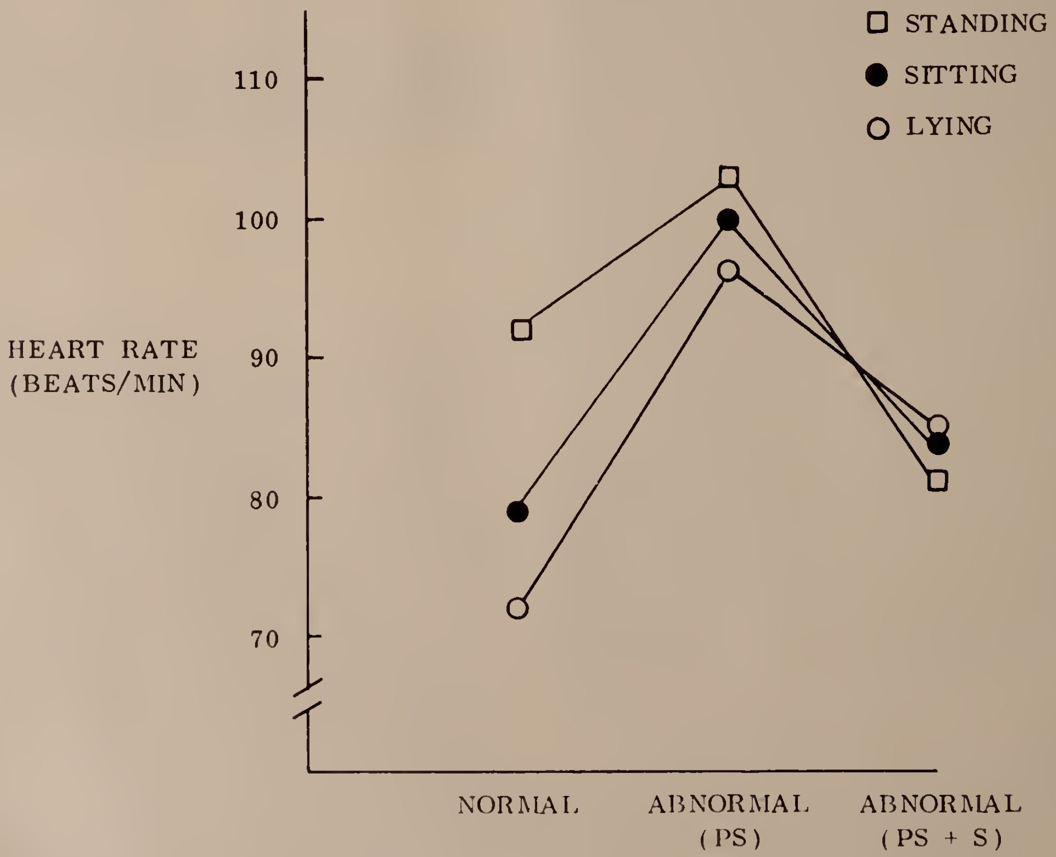

Figure 4. Mean resting heart rates in three diabetics whose autonomic function changed with time from normal to impaired PS function then to abnormal PS and S function. (Reproduced with permission from *Lancet*.[23])

during the 2.5 years, confirming the sequential pattern of autonomic damage in individuals.

These two studies confirm that the increased resting heart rate in diabetics may depend on two components, earlier PS damage and later additional S damage. Those patients with CV tests reflecting vagal damage alone had the highest heart rates, whereas those with both vagal and S involvement, indicating more severe damage, had heart rates that were less rapid but still greater than those with normal autonomic function.

Since abnormalities of CV reflex function occur in at least 20% of randomly selected diabetics,[10,26] it seems reasonable to attribute increased heart rate in many cases to cardiac autonomic nerve damage. The second study demonstrated a uniform temporal sequence of cardiac autonomic denervation and heart rate change, and in no instance did S damage occur before PS damage, supporting the view that the vagus is affected earlier.

Summary

Our own and other studies suggest that an increased resting heart rate of 80 to 90 beats per minute in diabetics without other evidence of clinical AN is relatively common and may indicate early partial cardiac denervation with subclinical vagal damage. A resting tachycardia of 100 to 120 beats per minute is uncommon and may result from severe vagal damage, while S innervation is still preserved. These heart rate changes are, however, nonspecific, as there are many other possible causes of tachycardia in diabetes. Heart rate changes are thus unreliable as a clinical sign of AN.

A fixed heart rate follows complete cardiac denervation with a resting rate, which is more rapid than normal and is the same as the intrinsic heart rate. Its diagnosis requires confirmatory tests, such as the application of maneuvers that reflexly influence heart rate or pharmacologic autonomic blockade tests.

In studies correlating resting heart rate with cardiovascular tests of autonomic function, we have shown that patients with PS abnormalities alone consistently had the highest heart rates. Those with both parasympathetic and sympathetic involvement had less rapid heart rates, but these were still faster than the heart rates of diabetics with normal autonomic function. In temporal studies, patients who initially had normal CV tests and subsequently developed abnormal tests reflecting PS damage alone showed a sequential increase in heart rate, followed by a fall of heart rate (but not back to normal) as S damage developed. These sequential heart rate changes support the view that the vagus nerve is affected before the cardiac S nerves with a uniform underlying pattern of progressive autonomic damage.

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Motor and Absorptive Abnormalities of the Gastrointestinal Tract

Part I. The upper gastrointestinal tract

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Diabetes mellitus can affect any organ in the gastrointestinal (GI) tract. Rundles[1] was the first to draw attention to the effects of diabetes on the gut. Others subsequently have stressed the association of hypotonia and altered motility with neuropathy as a frequent finding in diabetics with GI manifestations. Clinical manifestations of GI involvement, however, can be demonstrated only in a small proportion of diabetic patients.

Esophageal and gastric motor abnormalities in diabetes mellitus

Disorders of the esophagus. Diabetics rarely complain of symptoms referable to the esophagus. Esophageal motor dysfunction, characterized by absence or marked decrease in the primary peristaltic wave with delayed esophageal emptying and frequent spontaneous contractions, has been described in these patients.[2–5] A good association has been found between the presence of esophageal motor abnormalities and peripheral neuropathy, in addition to a demonstrated correlation between the severity of the motor dysfunction and the severity of the peripheral neuropathy.[6] In some studies, a decreased lower esophageal sphincter pressure and gastroesophageal reflux have been reported.[4,7] Contrary to these reports, Hollis et al[6] were unable to find any differences in lower esophageal sphincter pressures between diabetics and healthy individuals, a finding indicative of an intact smooth muscle in this patient population. These investigators did demonstrate a significant decrease in the velocity of esophageal peristalsis, which was associated with the presence of peripheral neuropathy.

Studies on the neuropathology of the esophagus have demonstrated abnormalities in the axons of the extrinsic and intrinsic parasympathetic fibers, while the neurons were normal. In contrast with the observed hypersensitivity of the esophageal muscle to cholinergic drugs as seen in achalasia,[8] where there is degeneration of the myenteric plexus, no increase in lower esophageal sphincter pressure is produced in diabetics after the administration of cholinergic agents. This indirect evidence suggests that the myenteric plexus is functionally intact.

In diabetics, heartburn and dysphagia should not be initially attributed to diabetes unless other causes, such as peptic esophagitis, carcinoma of the esophagus, and fungal esophagitis, have been specifically excluded.

Disorders of the stomach. The first description of a marked decrease in gastric motility in diabetics was reported by Rundles[1] in 1945. Later, Kassander[9] introduced the term "gastroparesis diabeticorum" to describe the atonia and delayed gastric emptying in patients with diabetes mellitus. Gastric motor abnormalities occur in 20 to 30% of diabetics,[10] often without clinical manifestations. In the vast majority of patients, gastroparesis is asssociated with a generalized neuropathy. The effects of gastric stasis are quite variable. Many patients are asymptomatic, while others describe vague abdominal symptoms. Nausea, postprandial bloating, early satiety, and epigastric pain are the most frequent complaints. In advanced cases, protracted vomiting, as seen in patients with gastric outlet obstruction, can occur. Frequently, gastric motor abnormalities occur in the presence of other diabetic complications, such as peripheral neuropathy, retinopathy, and nephropathy. Radiographically, the stomach can be large and distended, with decreased peristalsis. Marked retention of barium and food particles can be demonstrated for hours or even days in extreme cases.[11] Because a routine upper-GI barium study is an insensitive method for the evaluation of gastric stasis, it is advisable that a barium-burger radiologic study or, preferably, an isotopic scintiscanning technique be used to evaluate patients with abnormalities of gastric emptying.[12]

To date, the etiology of gastric stasis has not been fully elucidated. The delay in gastric emptying has been attributed to vagal damage as part of a generalized autonomic neuropathy (AN).[13,14] Other mechanisms, such as hyperglycemia and glucagon, may have a role by inhibiting gastric peristalsis.[15] It is known that diabetics with gastroparesis have either markedly depressed antral motor function or ineffective peristalsis. Interdigestive motor cycles have been found to be absent in the stomach of diabetics with gastroparesis, and sporadic motor activity has also been found to be markedly reduced in the same group of patients.[16] Antral circular muscle appears to be normal as assessed by its pharmacologic response to cholinergic stimulation. The findings that antral motor function is almost completely abolished

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by atropine and that antral hypomotility is restored by the use of bethanechol suggest that some aspects of antral peristalsis are dependent on muscarinic cholinergic mechanisms.[17]

The treatment of patients with symptomatic gastroparesis has been disappointing. Antiemetics can provide some temporary relief and small feedings are generally encouraged. Various anticholinesterase preparations have been tried without much success.[11,18] Drugs such as bethanechol and metoclopramide, which increase gastric motility, have been reported to be clinically helpful.[16,19] Metoclopramide increases gastric motor activity by increasing the strength of gastric contractions and, often, by triggering an intense burst of motor activity similar to the normal interdigestive motor cycles. This drug improves gastric emptying of solids and liquids in diabetic and postvagotomy gastroparesis. Metoclopramide has been found to be superior to placebo in reducing the symptoms associated with delayed gastric emptying.[20] At our institution, we have evaluated in a double-blind fashion the effect of metoclopramide on gastric emptying in symptomatic diabetics with gastroparesis. Of the initial 40 patients who participated in the study, improvement of the total symptom score occurred in 29. Of the remaining 11 patients, nine showed only minimal to no improvement in the symptoms of gastric atonia, and two had to discontinue the drug because of side effects. In our study, as in the one reported by Perkel et al,[20] a placebo effect was also demonstrated. However, despite improvement on placebo, these patients still had symptoms of impaired gastric emptying.

The precise mechanism of action of metoclopramide remains controversial, but it may involve cholinergic and antidopaminergic actions. This drug may act by enhancing the local effect of acetylcholine on gastric smooth muscle. Because gastroparesis is a potentially reversible disorder, further attempts to define the pathophysiology and control of this syndrome should be encouraged.

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Part II. The lower gastrointestinal tract

The large and small bowel

Diabetic diarrhea and steatorrhea. The problems associated with chronic diarrhea overshadow all other manifestations of diabetic gastrointestinal involvement. The syndrome of diabetic diarrhea was first used by Bargen[1] to describe the development of intractable diarrhea in severe diabetics. Although a variety of mechanisms have been postulated to play a role in the pathophysiology of acute and chronic impairment of intestinal function, diarrhea remains an enigmatic aspect of diabetes. Autonomic neuropathy (AN) is a common finding in these patients,[2] and in most cases appears to be a precursor to the development of the syndrome. The usual causes of prolonged diarrhea must always be excluded. Enteric infections, gluten enteropathy, and chronic pancreatitis should be considered among the many etiologic possibilities of diarrhea and steatorrhea in diabetics. Commonly, no obvious cause other than the diabetic state is detected. In these patients, the term "diabetic diarrhea" is applied. The diagnosis of diabetic diarrhea is established by exclusion. These patients usually experience intermittent bouts of profuse, painless, watery diarrhea which can last days to months and subside spontaneously, only to later recur acutely. Diarrhea may be worse at night, at times associated with incontinence. Diabetes often antedates the onset of diarrhea by several years. It is labile, poorly controlled, insulin dependent, and usually complicated by neuropathy. These patients frequently experience symptoms of AN, such as impotence, defective sweating, postural hypotension, and bladder dysfunction.[3]

While the pathogenesis of diabetic diarrhea with or without steatorrhea has not been clearly established, several mechanisms, such as AN, bacterial overgrowth, exocrine pancreatic insufficiency, and intestinal mucosal alterations, have been postulated. Diabetic diarrhea is frequently related to the presence of visceral neuropathy with motor abnormalities of the intestine, such as a progressive decrease in upper small-bowel tone and increase in the frequency and amplitude of large waves.[4]

Radiologic small-bowel barium transit studies have demonstrated both increased and decreased transit times.[5,6] The caliber of the gut lumen can show considerable variation, and localized segments of dilated intestine with segmentation and coarsening of the mucosal folds can be found. Because these radiologic findings lack specificity, primary mucosal abnormalities such as celiac disease must be excluded. Using the breath-hydrogen test, a recent study has shown that small-bowel transit in diabetics with AN was significantly slower than transit in uncomplicated diabetics.[7]

In the majority of patients with diabetic diarrhea, the intestinal mucosa is normal despite significant steatorrhea.[8,9] The absorption of d-xylose and vitamin B_{12}, as well as sodium and water transport, is usually normal.[10] In those patients with grossly slowed transit, an overgrowth of bacteria within the intestinal lumen can develop. In general, this overgrowth is present in some but not all patients with diabetic diarrhea.[11] At times, it may lead to a situation similar to that seen in the blind-loop syndrome. In addition, bacterial colonization of the stomach produced by gastroparesis and decreased gastric acid secretion may further contaminate the small intestine. Bacterial overgrowth will result in deconjugation of luminal bile salts with defective micellar formation and fat malabsorption. As deconjugated bile salts also are not actively reabsorbed by the distal ileum, excessive amounts are discharged into the colon, where they impair the absorption of water. At times, if they reach sufficiently high concentrations, water secretion from the colonic mucosa can occur. Some investigators have also claimed that in patients with diabetic diarrhea there is a specific defect of small-bowel bile salt absorption.[6,12] These data are somewhat controversial, in that after the administration of a resin such as cholestyramine, which binds bile salts, the diarrhea should improve. However, in contradistinction to postvagotomy diarrhea, only a very small number of diabetics respond to this modality of therapy.

Intestinal mucosal ischemia, the result of a microangiopathy, has also been postulated as a cause of diabetic diarrhea. However, there are no specific lesions of the mucosal microvasculature in these patients. Although altered release of GI hormones may cause diabetic diarrhea, the various hormones have not been studied in a systematic or detailed fashion.

Steatorrhea may complicate diabetic neuropathy. It has been stated that steatorrhea represents a more intense manifestation of diabetic diarrhea.[9] The mechanism of steatorrhea in diabetics is usually unexplained, but in some patients, as stated previously, it may be due to the following: (1) exocrine pancreatic insufficiency, (2) bacterial overgrowth, or (3) concomitant celiac disease. Abnormalities of pancreatic exocrine function have been reported in 20 to 70% of diabetics,[13] but clinically significant exocrine insufficiency is uncommon, and pancreatic enzyme replacement therapy usually does not ameliorate the steatorrhea. Whenever bacterial overgrowth is suspected, a trial of broad-spectrum antibiotics is indicated. Although various reports have documented clinical improvement after antibiotic therapy,[14,15] there is lack of a controlled trial of antibiotics in diabetic diarrhea and, furthermore, direct evidence for intestinal bacterial overgrowth has been obtained only in very few patients.[11,15]

Primary malabsorption and diabetes. The association of diabetes mellitus and celiac disease has been widely reported. Thompson[16] concluded that the incidence of diabetes mellitus in children with celiac disease is four times the expected incidence. Although some investigators have failed to find a significant relationship between diabetes and celiac disease,[17] other studies[18–20] seem to indicate that celiac disease may occur more frequently in insulin-dependent diabetics than expected by chance alone. The nature of this possible association remains unclear. The histocompatibility antigen HLA-B8 has been shown to be associated positively with both juvenile-onset diabetes mellitus[21] and celiac sprue,[22] implying a genetic predisposition to both diseases. Although neuropathy may be present in some diabetics with celiac disease, the absence of neuropathy should arouse suspicion that diarrhea is not of diabetic origin. An important clue that the diarrhea in a diabetic is due to gluten-sensitive enteropathy is a history of repeated episodes of hypoglycemia and folate and iron-deficiency anemia.

To establish the diagnosis of celiac sprue, an intestinal biopsy showing the typical lesion is needed. In addition, a clinical and histologic response to a gluten-free diet is necessary. Some suggest that rechallenge with gluten after a response to gluten withdrawal is needed to establish the diagnosis unequivocally. At our institution, we have confirmed the association between gluten-sensitive enteropathy, insulin-dependent diabetes, and the HLA-B8 and DW3 antigens in 80% of our cases.

These related persons with gamma-A globulin (IgA) deficiency, diabetes mellitus, and an intestinal lesion resembling celiac sprue have been described. In these patients, the mucosal lesion failed to improve with the withdrawal of dietary gluten.[23] This abnormality may be part of the spectrum of refractory sprue.

Constipation. The most common bowel disorder in diabetes mellitus appears to be constipation. As many as 20% of diabetics may be constipated.[24] Although the pathogenesis of this condition is poorly understood, constipation usually reflects the end result of the visceral neuropathy that impairs colonic motility, leading to atonia and dilatation of the colon. It is important to emphasize that this symptom is also very common in diabetics without AN. In a recent study of colonic dysfunction in diabetes mellitus,[25] it was found that abnormalities in the myoelectric and motor response of the colon to feeding correlate closely with symptoms of constipation. Diabetics with severe constipation often have an absent gastrocolic response to feeding. In these patients, the cholinergic postganglionic neurons are intact, and colonic smooth muscle has been found to respond when adequately stimulated with drugs such as neostigmine and metoclopramide.[25] The latter effect may explain the decrease in constipation noted in some of our patients who were taking metoclopramide for the treatment of gastroparesis.

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Interplay of Autonomic Neuropathy and Arteriosclerosis

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Diabetic autonomic neuropathy (AN) suggestively plays a significant role in the increased frequency of vascular complications in diabetes, functioning as a contributory or precipitating determinant. In addition, diabetic AN offers the only available clue to help explain the elimination of sex difference in the risk for these complications in the diabetic as compared with the nondiabetic patient.

The introduction of insulin in 1921 was followed by a dramatic reduction in death from acute metabolic derangements and an equally dramatic increase in longevity of the diabetic patient. Unfortunately, the longevity has been accompanied by an increasing risk for the development of vascular complications. Indeed, at present the chief causes of morbidity and death in the diabetic individual are lesions associated with large-vessel arteriosclerosis, namely, cerebral

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For reprints contact: Max Ellenberg, M.D. Mt. Sinai School of Medicine, 1 Gustav Levy Place, New York, N.Y. 10029 vascular infarction, myocardial infarction (MI), and gangrene or diabetic foot problems.

Arteriosclerosis in diabetes is characterized by increased frequency, earlier onset, accelerated progression, more extensive involvement, a lack of correlation with the severity or the control of the carbohydrate metabolic abnormality, and obliteration of the sex difference, in that the diabetic female is at equal risk with the diabetic male in this regard. The remarkable disparity in frequency of these complications in the diabetic vs the nondiabetic has yet to be satisfactorily explained, including the absence of any demonstrable histopathologic differences in the arteriosclerosis in diabetic and nondiabetic patients.

There has been limited progress in the ability to prevent, minimize, or decelerate these vascular complications. Accumulating knowledge relative to carbohydrate and lipoprotein metabolism has not yielded measurable beneficial effect. However, there is an increasing awareness of the occurrence of autonomic nervous system neuropathy in the diabetic individual associated with deleterious effects on physiologic functions, which could play a role in pathologic events.

A great impetus in this regard has resulted from the recent development of a new generation of tests that are simple, noninvasive, and reproducible. Prior to this, assessments of autonomic nervous system function were usually complex, difficult to interpret, and lacking in control of measurements. The newer methods may be classified into tests based on the heart rate and its responses under specific circumstances; tests based on blood pressure, including responses to exercise and standing; and drugs, including phenylephrine and nitroglycerin, which measure baroreceptor function, and atropine and propranolol, which are used in producing cardiac blockade. Some drugs can chemically dissect the input of the parasympathetic vs the sympathetic components of the autonomic nervous system.

Maintenance of circulatory homeostatis is essential for proper functioning. This is brought about through cardiovascular (CV) physiology, which is, to a large measure, under control of the autonomic nervous system. The autonomic nervous system mediates its function through vasomotor reflex mechanisms, including the baroreceptors in the arch of the aorta and the carotid sinus, its influence on secretion of blood and urinary catecholamines and sympathetically governed renin made available from the kidney. Since the autonomic nervous system is so often involved in diabetes, many of these reflexes are impaired or even abolished. As a consequence, there is an important effect on the circulatory system.

Since these two factors, namely, autonomic nervous system neuropathy and arteriosclerosis, are both so involved in determining the circulatory response and since they are both so frequently and simultaneously present in the diabetic, their interacting or influencing one another looms as a distinct possibility. Many new developments suggest that such an interplay may, indeed, exist.

Macroangiopathy can be anatomically divided into three broad aspects, namely, cerebrovascular, myocardial, and peripheral. The possible interrelationships between AN and macroangiopathy will now be considered.

Cerebrovascular aspects

The blood supply to the brain is very carefully maintained. With any fall in blood pressure, several mechanisms come into play, ensuring an adequate cerebral blood flow. Reflex venous and arteriolar constriction is necessary for the normal maintenance of the cardiac output and arterial pressure in the upright position.[1] In health, blood and urinary catecholamines, epinephrine and norepinephrine, increase for the change from the horizontal to the vertical position.[2] In addition, sympathetically mediated renin becomes available from the kidney.[3] These reactions are mediated through the baroreceptors, which are stimulated by a fall in blood pressure with upright posture. This triggers signals via the vasomotor center of the brain to the autonomic nervous system, resulting in an increased cardiac output and vasoconstriction, thus returning blood pressure toward normal. With more severe decrease in the blood pressure, as occurs in shock, chemoreceptors in the carotid and aortic bodies respond to hypoxia and hypercapnea with vasomotor constriction via the autonomic nervous system, resulting in an increase in blood pressure.

Autonomic neuropathy in diabetes may significantly interfere with these mechanisms. Specifically, involvement of the sensory baroreceptors,[4] reduction of catecholamines,[5] abnormal handgrip response,[6] lowering of plasma renin,[3] failure of plasma renin to increase,[3] and the absence of compensatory tachycardia[7] have all been well documented. Failure of these mechanisms singly or, more commonly, in combination may lead to orthostatic hypotension. Whereas under most circumstances of significant fall in blood pressure there is some degree of compensatory tachycardia, patients with true orthostatic hypotension do not exhibit such tachycardia, and this is one of the major factors leading to vertigo and syncope secondary to a decrease in blood flow.[8] The absence of reflex venous and arteriolar constriction is responsible for the marked impairment of postural adjustment leading to syncope. There is evidence that pressor catecholamine insufficiency is correlated with postural hypotension in familial dysautomia.[5] In patients with postural hypotension, there is little or no increase in blood and urinary concentrations of catecholamines, a clear indicator of failure in the chain of events leading to necessary vasoconstriction. Contrary to what happens in the healthy person, change from the horizontal to the vertical position is not accompanied by an increase in blood and urinary catecholamines. It has been demonstrated that diabetic individuals with orthostatic hypotension have a significantly low plasma-reninlike activity.

It is of special interest that a patient with amyloidosis and orthostatic hypotension was found to be depleted of catecholamines in the peripheral adrenergic nerve endings.[9] Thus orthostatic hypotension in amyloidosis may similarly result from diffuse AN independent of amyloid infiltration, objectively demonstrated to be related to catecholamine depletion and directly comparable to diabetic AN.

In summary, involvement of the normal regulatory homeostatic mechanisms by AN is the basis for orthostatic hypotension leading to diminution of cerebral blood flow, resulting in cerebral anemia and syncope. In more severe instances and superimposed on cerebral arteriosclerosis, it suggestively could lead to transient ischemic attacks and cerebral infarction.

Myocardial aspects. The principal differences between coronary arteriosclerosis in the diabetic as compared with the nondiabetic patient are an increased incidence; a striking increase in coronary artery disease in the diabetic female, including those who are normotensive, premenopausal, and free of significant hyperlipidemia; a higher early mortality rate; a shortened life among diabetic survivors of acute MI; and a higher incidence of painless acute MI in the diabetic individual.

The effects of autonomic nervous system neuropathy on cardiac function in the diabetic patient are numerous and well documented. These are measured by relatively simple methods that are noninvasive and nonpainful, which frequently may be done at the bedside. They include the demonstration of abnormal Valsalva maneuver,[10] absence of compensatory tachycardia,[7] presence of resting tachycardia,[11] loss of beat-to-beat heart rate variation, lack of response of the pulse rate or blood pressure to massage of the carotid sinuses, failure of the heart beat to accelerate after intravenous atropine,[12] abnormal handgrip response, arrhythmia,[13] cardiac arrest, and histopathologic evidence of autonomic cardiac nerve involvement on both light and electron microscopy.[14]

Resting tachycardia, the failure of the heart to accelerate normally after intravenous atropine, the absence of reflex bradycardia as well as the absence of sinus arrhythmia, and the decreased variation of the R–R interval all clearly point to the involvement of the vagus nerve. As a consequence, there is the added tendency to cardiac dysrhythmia, including spontaneous cardiac arrest. One patient with a totally denervated heart had tachycardia, a fixed heart rate, and a tendency to cardiac dysrhythmia.[15] In one study, spontaneous cardiac arrest of three patients with severe AN was observed.

A documented common clinical observation indicates that there is an increased occurrence of either painless acute MI in the diabetic patient or a significant diminution of pain. In one study of patients with painless MI, diabetes was the most frequent cause,[16] which clearly suggests involvement of the autonomic nervous system as the afferent part of the reflex arc. This has been further established by the demonstration pathologically of the presence of autonomic nerve involvement at autopsy in diabetic patients with painless MI.

Blunting of pain in the ischemic heart in the diabetic with arteriosclerosis leads to these patients with MI being frequently admitted directly to the ward, bypassing the coronary care unit. Thus, it may delay diagnosis and help contribute to the poor prognosis.

Cardiovascular responses to physical exercise are impaired in diabetic AN. Resting heart rate is higher and the increase in the heart rate for a low work load is diminished in patients with AN. Maximum heart rate, maximal systolic blood pressure, maximal oxygen uptake, and the greatest tolerable work load are reduced in patients with neuropathy. This would suggest a need for a greater stress for the heart and the CV system in general in performance of comparable work loads.

The tissue concentration of norepinephrine, which reflects sympathetic innervation, is found to be considerably reduced in specimens in both hearts and arteries obtained from long-term diabetics at postmortem.[17] The depletion of the norepinephrine stores in the heart indicates that an important supportive mechanism is lost in long-term diabetic patients with AN. This is probably of importance in stress, especially after an acute MI, when a highly active sympathetic nervous system is necessary for the maintenance of an adequate myocardial performance, and the cardiac denervation may contribute to the high mortality observed in the diabetic patient.

The presence of resting tachycardia suggests increased demand on the heart, resulting from the extra persistent pumping effort that is required. All the other autonomic neuropathic effects help increase the loss of ability to alter the rate and amount of blood flow from the heart in response to the physiologic and nutritional demands of tissue. The possibility that this imbalance may contribute to the increased morbidity and mortality rates of myocardial involvement in the diabetic is an attractive and logical possibility.

The diabetic foot. The diabetic foot is characterized by wet gangrene, which can occur only in the presence of available circulating blood, as distinguished from the mummified gangrene of the nondiabetic individual, which results from virtually complete absence of blood supply. In addition, some 10% of amputations in diabetics are performed in the presence of palpable pulses. These facts denote that amputations may be indicated in the diabetic patient even in the presence of measurable circulation. On further analysis, it is evident that the chief single difference between the diabetic and nondiabetic foot is the presence of neuropathy in the former and its absence in the latter. It is well recognized that sensory impairment of diabetic neuropathy permits unperceived minor trauma to occur, which can lead to secondary infection, gangrene, and amputation.[18,19] This is enhanced by fluid loss, perspiration, and dryness and cracking of the skin. In addition, there are important abnormalities of the vasomotor function, which, heretofore, have not been adequately appreciated in the development of this complication. Martin demonstrated the loss of vasomotor response in diabetics with neuropathy.[20] There was no increase in blood flow after heating in the patients with diabetic peripheral neuropathy. However, an injection of tolazoline (Priscoline) acting directly on the smooth muscle of the vessel resulted in the sharp increase in blood flow, indicating that the defect was neuropathic and not a result of occlusive disease. Moorhouse et al investigated physiologic aspects of vasomotor function and demonstrated abnormal vascular responses in diabetic peripheral neuropathy as well as the fact that denervated blood vessels displayed hypersensitivity to cold.[21] Reflex vasomotor responses in the feet were completely absent in those diabetic subjects with peripheral neuropathy. Rundles[22] emphasized autonomic disturbances in diabetic neuropathy, stressing changes in the skin temperature and sweating as detected by the starch-iodine test, as well as reversal in the gradient of the skin temperature. Christensen measured resting blood flow patterns that indicated the presence of varying, undulating, beat-to-beat change of arterial flow.[23] However, in diabetic patients with peripheral neuropathy, there is a complete loss of spontaneous variation, indicating that in the presence of peripheral AN the ability to make necessary physiologic accommodations, to maintain homeostatis, and to meet local demands of tissues that vary from moment to moment has been severely impaired or lost.

The increased susceptibility to undetected injury, with associated infection superimposed on varying degrees of peripheral vascular insufficiency, and the inability to make the necessary homeostatic circulatory adjustments clearly could play a significant role in the development of serious complications in the foot, leading to gangrene.

Respiratory aspects. Cardiorespiratory aspects have been observed in relatively young patients with severe AN, with subsequent death resulting in some of them. The patients become apneic and pulseless but will respond rapidly to resuscitation. In many episodes there was interference with respiration by drugs, anesthesia, or pulmonary infection preceding the incident, suggesting that the arrests were initiated by the affected respiratory rather than CV reflexes. This may well account for some of the sudden and unexplained deaths in diabetic AN.[24]

Comment

Abnormalities relating to autonomic nervous system disturbances in diabetes were described many years ago. These include sweating disturbances, abnormal temperature changes associated with postural hypotension, and vasomotor and trophic signs.[25-27] More recently, Rundles elaborated this concept and described many of the clinical symptoms.[22] The intimate relationships between autonomic nervous system involvement and the syndromes of diabetic anhidrosis,[28] diabetic gastropathy,[29] diabetic diarrhea,[30] diabetic neurogenic bladder,[31] retrograde ejaculation,[32] and impotence[33] have been delineated.

The important advances in understanding autonomic nervous system involvement have led to an appreciation of its significant role in the regulatory phenomena of the CV system. The development of sophisticated tests that are noninvasive, nonpainful, and simple in performance has been remarkably informative and highly instrumental in establishing a significant body of information.

Anatomic evidence of autonomic nerve involvement in diabetes is supplied by the interesting observations of Grover-Johnson, Pearson, and Kim.[34,35] Employing ultrastructural quantitation of the terminal innervation to the small-caliber blood vessels in patients with long-standing diabetes, they observed that the nerve endings are either entirely absent or are found at a significantly greater distance from the affected sites. They infer that the findings account for some of the vasomotor disturbances seen in diabetic patients. Anatomic evidence of a lack of end-organ innervation in the peripheral blood vessels may be an indication that autosympathectomy occurs in diabetes mellitus.

Thus arteriosclerosis is not the only link between diabetes and its CV complications. Neurogenic factors may adversely affect CV hemodynamics in diabetic patients. Altered responses to physiologic, psychologic, and pharmacologic stimuli may present serious clinical problems.

The facts cited in this report indicate impairment of the ability of the diabetic individual with AN to respond in normal physiologic fashion to the demands placed on the CV system. He has lost the capacity to adjust blood flow to respond to local tissue needs, and hence this protective feature is eliminated. This interference with regulatory power limits the ability to maintain homeostasis. It is reasonable to suspect that with the development of vascular disease, otherwise relatively asymptomatic autonomic neuropathic defects may play a role in producing transient ischemia or even infarction. Thus it may accelerate, precipitate, or act as a modifying determinant of vascular pathologic conditions. In the brain, it could lead to cerebral ischemia and cerebral infarction; in the heart, arrhythmia and conduction defects could lead to cardiac arrest or MI; and in the foot, gangrene may result.

There is indirect evidence that this does take place. In a prospective study, it was demonstrated that the death rate of diabetic persons with severe AN was two and one half times that of those diabetic individuals without comparable AN.[36] Thus simple autonomic function tests may serve as a guide to prognosis. Czyzyk and Krolewski, in a study of hospitalized patients with MI, documented a twofold increased mortality in the diabetic vs the nondiabetic patient.[37] They were unable to correlate this marked increase with either shock or pulmonary edema, but they were able to make a definite correlation with the presence of arrhythmia and/or conduction defects. Arrhythmia and even cardiac arrest in diabetic patients with advanced autonomic nervous system involvement have been observed.[38]

A new dimension has been added by observations indicating differences in the nature of autonomic nerve involvement. Specifically, it has been shown that the sympathetic and parasympathetic components need not be equally affected in the early phases of AN. Actually, parasympathetic involvement appears to occur first and progress earlier. Later, sympathetic involvement tends to be superimposed. Thus an opportunity to determine rates and types of progress of these two parts of the autonomic nervous system is now available and, hopefully, will shed light on these problems.[39–41]

Conclusion

Autonomic nervous system neuropathy has deleterious effects on physiologic functions of the blood vessels and circulation. This, in turn, may lead to impairment of normal homeostatic mechanisms and interfere with the responses necessitated by the continually fluctuating demands of local and distal tissues. These abnormalities superimposed on a pathologic vascular system could play a definitive role in the marked increase of vascular related pathologic conditions in the diabetic, which is now the leading cause of morbidity and mortality in diabetes. Since male and female diabetic individuals are at equal risk for the development of diabetic neuropathy, this could be a clue to understanding the elimination of the sex difference in the frequency of these complications in the diabetic patient.

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The Neurogenic Bladder In Diabetes

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The exact incidence and prevalence of diabetic neurogenic bladder are difficult to calculate due to the numerous and varied definitions applied to this disorder. Classification according to urophysiologic criteria (cystometrics, urethral pressure profilometry [UPP], pressure-flow studies, and sphincter electromyography) has yielded prevalence rates of between 26 and 87% of insulin-dependent diabetics, as compared with 25% of those diabetics on oral hypoglycemic agents and dietary control.[1–4] The prevalence of this disorder also appears to be directly proportional to the duration of the disease.[2,5] Ellenberg and Weber demonstrated that there was objective evidence of neurogenic bladder in 83% of those diabetics studied who had evidence of peripheral neuropathy, and none in the nondiabetic controls or in those diabetics without evidence of neuropathy.[3]

The clinical features of this disorder may include increased residual urine, overflow incontinence, and secondary infection, which may ultimately lead to pyelonephritis, sepsis, and azotemia. Prominent symptoms frequently include hesitancy, diminished urinary stream, staining, dribbling, and a sensation of incomplete bladder emptying.

Diagnosis

As is true in all medical practice, diagnosis begins with a good history and physical examination. Diabetic patients are frequently unaware of bladder dysfunction until symptoms of urinary infection are present. It is for this reason that intensive questioning of the patient regarding his voiding habits is extremely important. Physical examination may reveal evidence of bladder distention, overflow incontinence, weak urinary stream or dribbling when observed, and the various signs of peripheral neuropathy.

Excretory urography. Intravenous urography, when permitted, may show evidence of a large bladder, hydroureteronephrosis, inflammatory changes in the kidney, and, most importantly, a large amount of residual urine on the postvoiding film. Cystography may also show evidence of a large atonic bladder, vesicoureteral reflux, and an increased urinary residual on the postvoiding film. Recently, cinecystourethrography while voiding has added a dynamic picture of micturition to the urophysiologic armamentarium. Utilizing this tool, one can visualize detrusor contraction, descent of the bladder, abnormalities of the bladder neck, and external sphincter mechanisms.

One of the most important parameters to determine in the diabetic neurogenic bladder is the volume of residual urine.[3] The presence or absence of this finding is really the critical issue in terms of preventing serious urologic and infectious complications of this disorder. Numerous authors, including Frimodt-Moller,[6] have suggested different volumes as being significant or not. It has yet to be determined accurately what volume, if any, is indeed truly pathologic in this disorder. Urinalysis and culture and sensitivity studies are important in dealing with any diabetic patient to determine the presence or absence of infection, albuminuria, pyuria, and hematuria.

Bladder sensory function. Testing of vesical sensory function in terms of bladder fullness and discomfort, as well as temperature, is important in the diagnosis of this disease. Normally, the first sensation of bladder fullness occurs between 100 and 200 ml. In the diabetic with neurogenic dysfunction, it is not uncommon to see this value rise to over 1,000 ml. Some patients may lose this ability altogether. Sensation of hot or cold fluid within the bladder may also be altered.

Cystometrics. One of the most important studies performed to detect the diabetic neurogenic bladder is the cystometrogram. This study detects detrusor function only and not the integrity of the bladder's innervation. Normally, as the bladder fills, there is

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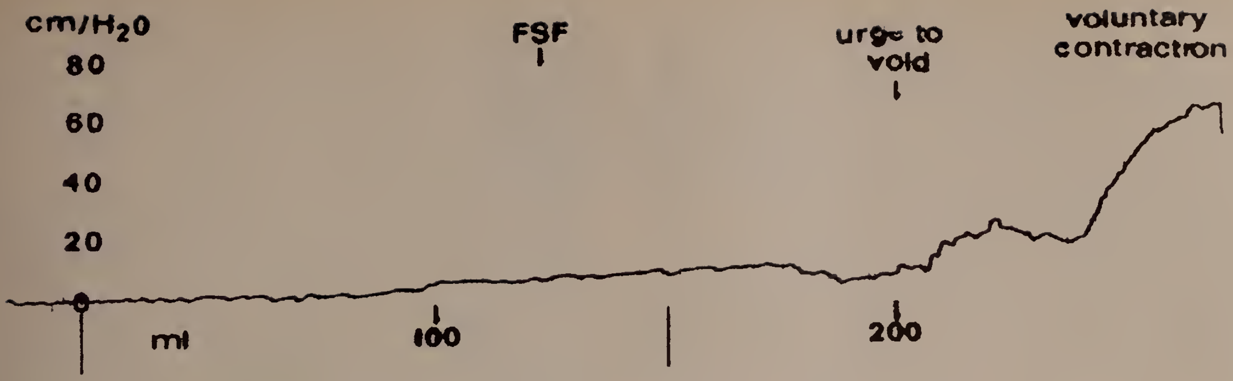

FIGURE 1. Normal cystometrogram. (FSF = first sensation of filling.) (From Blaivas JG[12])

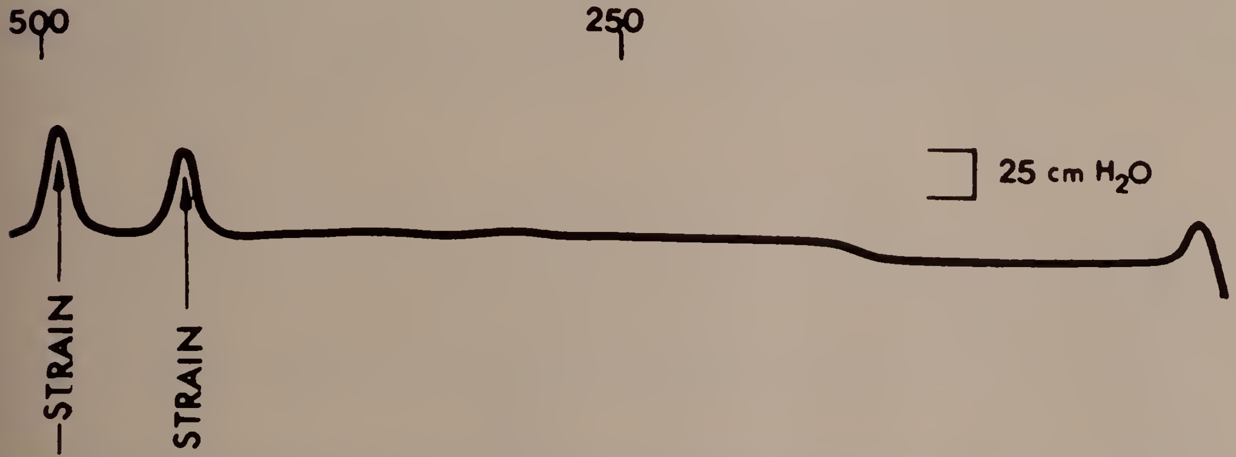

FIGURE 2. Cystometrogram of atonic bladder. Note the absence of detrusor contraction and the need for straining. (From Blaivas JG[12])

a slight rise in pressure, and the first awareness of bladder fullness will occur somewhere between 100 and 200 ml. Continuation of filling to the point of discomfort (which usually occurs at between 300 and 500 ml) will still only reveal a slight rise in the intravesical pressure. During the filling phase, all bladder contractions will be suppressed by cortical input. On command to void, a voluntary voiding spike of between 40 and 80 ml of water will normally be apparent (Fig. 1). In the diabetic neurogenic bladder, we commonly see an areflexic or atonic pattern with a delayed or absent sensation of bladder fullness and a marked increase in bladder capacity (Fig. 2). Bladder capacities of greater than 2 liters are not uncommonly encountered in this group of patients. While the vast majority of diabetic neurogenic bladders are of this type, there are a few that exhibit a hyperreflexic pattern, presumably due to spinovascular complications from the diabetes.

Important in performing this study is the use of a rectal balloon catheter to measure intraabdominal pressure during both the filling and voiding phases.[7] When the intraabdominal pressure is subtracted from the total intravesical tracing, we obtain a truer picture of the actual pressure generated by the detrusor contraction. When no detrusor contraction is demonstrated, detrusor areflexia may be differentiated from normal psychic inhibition by the bethanechol supersensitivity test.[8] The test is performed by injecting 2.5 mg of bethanechol subcutaneously and repeating the cystometrogram one-half hour after injection. When the bladder is filled to 100 ml, there should be a rise in intravesical pressure of 15 ml of water or more. Numerous authors, however, have disputed the accuracy and usefulness of this test.

Uroflowmetry. Uroflowmetry, which provides a quantitative measurement of urine flow, is useful in differentiating among the various causes of voiding dysfunction. Maximum flow, average flow, flow pattern, flow at two seconds, and duration of flow are all easily measured by this method (Fig. 3). In diabetics, two patterns have been observed. In the first, there is a low peak flow and prolonged duration of voiding, associated with an increased urinary residual. In the second group, a prolonged intermittent flow pattern is seen, due to the need for abdominal straining to void (Fig. 4). It is the second pattern that is very commonly seen in those diabetics with neurogenic bladder. Normally, a peak flow of approximately 28 ml per second is expected. In patients with diabetic areflexic bladders, peak flow values of 10 ml per second are not uncommonly seen. All values for this parameter, however, must be adjusted according to a nomogram for voided volume. Average flow likewise must be adjusted according to a different nomogram to obtain accurate results.

Sphincter electromyography. According to Bradley, the usefulness of urethral sphincter electromyography in defining micturition dysfunction in diabetics is limited.[9] He feels this is so because denervation of the perineal musculature and the periurethral striated muscle commonly occurs as part of the normal aging process. This study may be useful, however, in those few diabetic patients who exhibit an intermittent flow pattern due to a detrusor-sphincter dyssynergia and detrusor hyperreflexia secondary to spinovascular disease. It may also be useful in the small group of diabetic patients who exhibit a flaccid sphincter pattern.

More useful in delineating diabetic neuropathy as it affects the detrusor is the measurement of reflex evoked-response potentials.[10,11] A special catheter is utilized with stimulating electrodes mounted on the catheter tip and at a location corresponding to the proximal urethra. An anal plug or needle electrodes are placed in the anus or periurethral striated muscle and are used to record the latency and amplitude of the evoked response (Fig. 5). Normally, the latency of the evoked response is 50 to 80 msec and the amplitude varies from 25 to 150 μV (Fig. 6). Andersen and Bradley studied 27 diabetic patients and found the mean latency times of the evoked response to be between 96 and 98 msec.[11] In seven patients, no evoked response could be elicited, presumably due

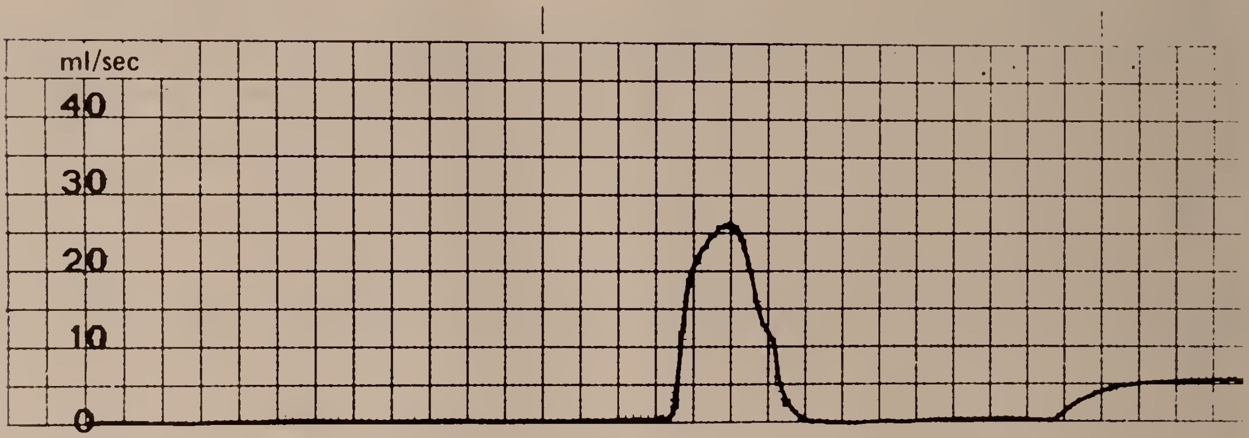

FIGURE 3. Normal uroflowmetry study. (From Blaivas JG[12])

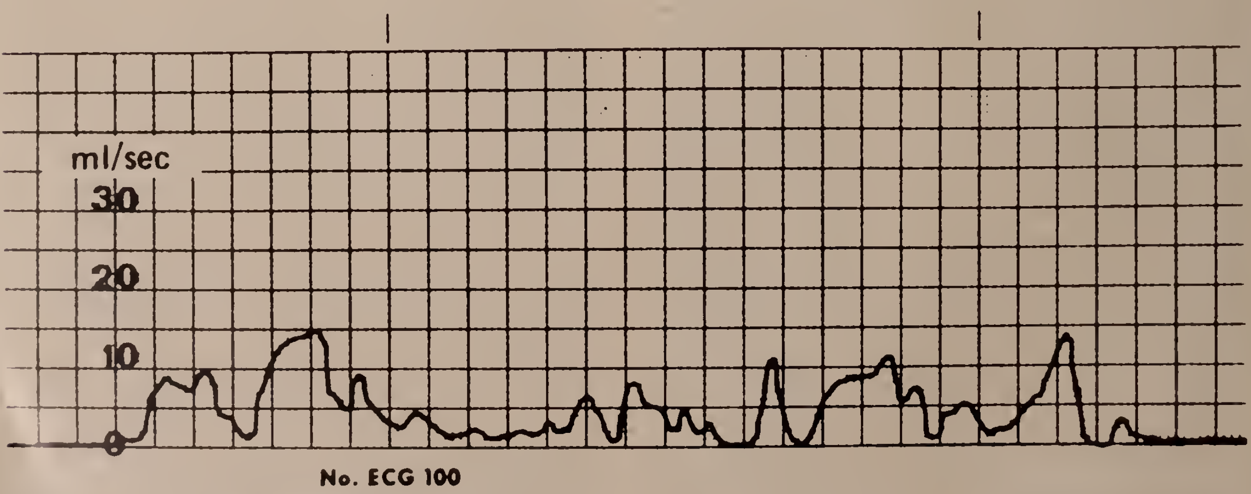

FIGURE 4. Uroflowmetry revealing an intermittent flow pattern due to voiding by abdominal straining. (From Blaivas JG[12])

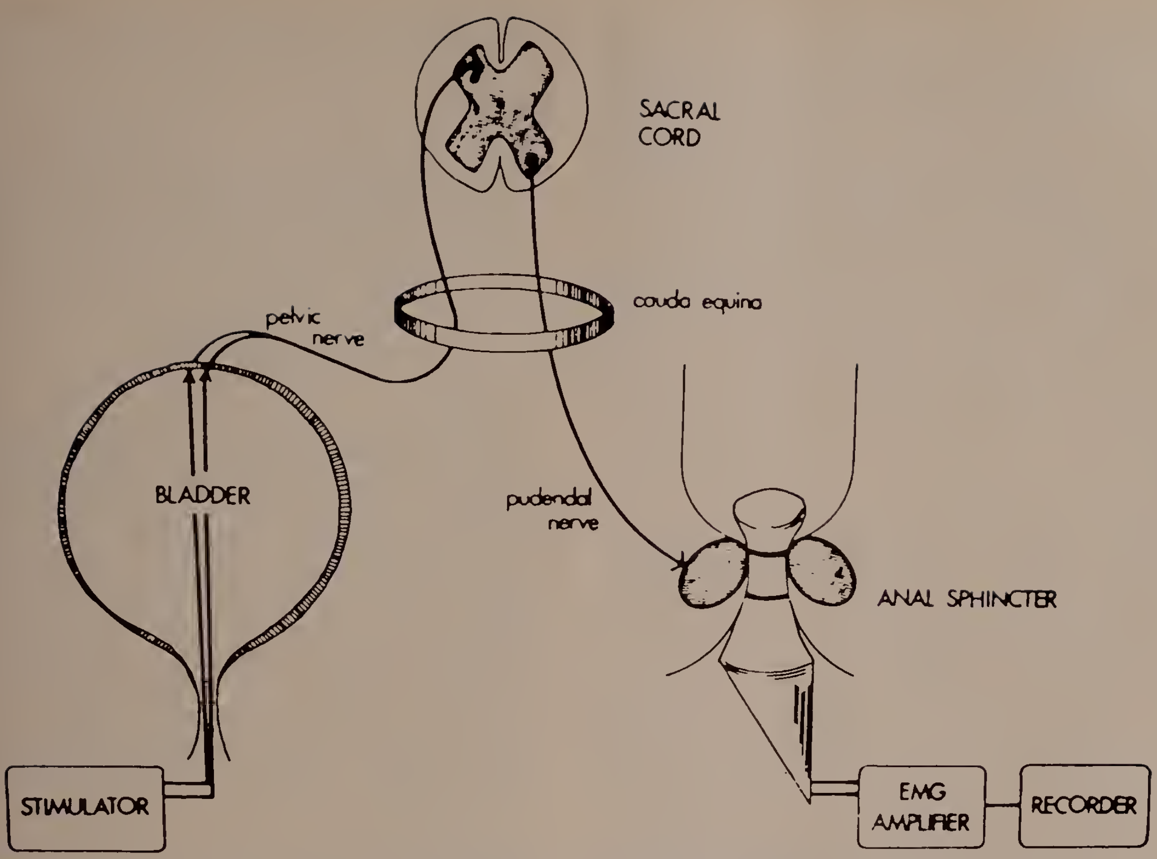

FIGURE 5. Diagram of arrangement for recording reflex evoked-response potentials. (From Bradley WE[11])

to a block in the conduction of the impulse. In two of these patients, flaccidity of the sphincter was present on routine electromyography of the external urethral sphincter. No difference in latency was seen between juvenile- and adult-onset diabetics. The group studied also included 11 patients with no voiding symptoms and nine with a normal cystometrogram. Although this examination is still not routinely performed, it may become very useful in the future for determining those patients with an evolving diabetic neuropathy and neurogenic bladder.

Urethral pressure profilometry. Urethral pressure profilometry, or UPP, is useful in the evaluation of the diabetic only insofar as differentiating between outlet obstruction, urethral stricture disease, female stress incontinence, and neurogenic bladder.[12] In itself, however, this test offers nothing really diagnostic in the diabetic neuropathic state.

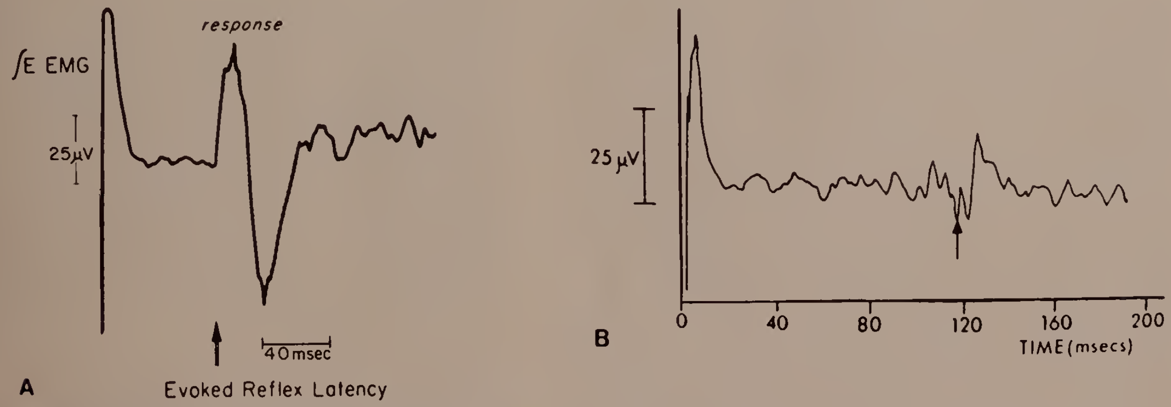

FIGURE 6. Recordings of reflex evoked-response potentials. (a) Normal latency of 60 msec. (b) Prolonged latency of 120 msec in a diabetic patient. (From Bradley WE[9])

Treatment

The treatment of the neurogenic bladder in diabetes varies with the degree of impairment found. Conservative management involving scheduled voidings, double and triple voiding techniques, and the Crede maneuver has long been recognized as being successful in many diabetic patients with early voiding dysfunction. Scheduled voiding every three hours will compensate for the patient's lack of desire to void and will help diminish the amount of residual urine. The patient also may be instructed to void again a second and third time shortly after the initial voiding to help compensate for a deficient detrusor contraction. The Crede maneuver is another simple method of compensating for a weak detrusor contraction.

The pharmacotherapy in this disorder revolves around two agents. Cholinergic pharmacotherapy with bethanechol has long been utilized successfully in diabetic cystopathy. Although some investigators question the effectiveness of oral bethanechol therapy, many patients appear to benefit from the administration of 25 to 100 mg of this substance every six to eight hours.[13,14] The patients who benefit most from this type of therapy are those with residual urines between 100 and 500 ml. In more severe cases where higher residual volumes are encountered, subcutaneous bethanechol, 2.5 to 10 mg every six to eight hours, is given in conjunction with intermittent catheterization. This is continued until the residual urine is lowered to approximately 100 ml or less, at which time the patient is converted to oral therapy. Phenoxybenzamine, an alpha-adrenergic blocking agent, may also be added in some patients to help decrease the outflow resistance generated by the bladder neck and external urethral sphincter. Doses of 10 to 20 mg daily are usually effective in these instances.

The use of a small-diameter urethral catheter may be necessary for varying periods of time in the treatment of the hypotonic bladder. A closed drainage system and good catheter care will minimize the infectious complications of this form of therapy. In certain refractory cases, placement of a suprapubic cystostomy tube may be indicated. Hopefully, however, the patient's bladder will respond to temporary drainage, and the use of the catheter can be discontinued and another mode of therapy substituted. In suitable patients who are refractory to all other modes of therapy, clean, intermittent catheterization may be attempted to minimize the amount of residual urine. Lapides et al found that there is a low incidence of serious bacteriuria in patients who follow this regimen, sometimes including added antimicrobial prophylaxis.[15] The institution of this form of therapy obviously requires ability on the part of the patient to perform this maneuver.

In those patients with diabetic neurogenic bladder and concomitant obstruction of the outflow tract, surgical intervention may be required. In case of benign prostatic hypertrophy, transurethral resection of the prostate or open prostatectomy may be required to eliminate the obstructive element in the diabetic patient with a neurogenic bladder. This reduces the resistance at the bladder neck and prostatic urethra, which may be all that is needed to decrease or abolish the presence of residual urine. Transurethral incision of the bladder neck has also been advocated in certain patients in whom hypertrophy of the bladder neck has been documented.[16] This therapeutic modality also lessens the risk of retrograde ejaculation after surgery.

Summary

It has been determined that there is a significant incidence of subclinical voiding dysfunction found in diabetics. It is important to recognize those patients with the incipient neurogenic bladder so as to prevent future infectious complications of this disorder. The key to avoiding complications from this problem is to prevent the presence of residual urine and decompensation of the detrusor. It is incumbent to use all of the aforementioned modalities to make the diagnosis and to promptly institute proper therapy in those diabetics whose bladder has begun to decompensate. If this is accomplished in time, we will prevent the morbidity and mortality associated with this disorder.

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Diabetes and Sexual Function

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Interest in the relationship of sex to the diabetic state has received a strong impetus as a result of accumulating knowledge and clinical observations that have shown aberrations of sexual function in diabetes. Although impotence in the diabetic male has long been recognized, the frequency, pathogenesis, and clinical implications have only recently been evolved. In addition to impotence, the complication of retrograde ejaculation has been delineated in the male diabetic. The question of the role of diabetes in sex life of the female diabetic has recently come under investigation.

For reasons that will become obvious, problems of male and female diabetics are discussed separately.

Sexual function in male diabetic patients

Retrograde ejaculation. Retrograde ejaculation occurs in diabetes as a result of diabetic neuropathy involving the pelvic autonomic nervous system.[1] An understanding of retrograde ejaculation depends upon knowledge of the anatomy and physiology of normal emission and ejaculation. Emission must not be confused with ejaculation; these are two distinct actions. Emission implies the delivering of seminal fluid into the posterior urethra by the sudden contracture of the smooth muscles of the internal genital organs. Under normal circumstances, this is followed by forceful, antegrade propulsion of the fluid from the urethra to the outside by contraction of the bulbocavernosus muscle, and this sequence comprises the normal ejaculatory process.[2] Should there be incompetence of the vesical neck, permitting a retrograde flow of propelled material, then one has the phenomenon of retrograde ejaculation. In other words, retrograde ejaculation is a propulsion of seminal fluid from the posterior urethra retrograde to the bladder through a relaxed internal vesical sphincter. In the diabetic, this occurs in the presence of neuropathy involving the pelvic autonomic nervous system, as demonstrated by an abnormal cystometrogram and cystogram and by functional impairment of the internal vesical sphincter. Comparable involvement of the internal vesical sphincter (destruction or inhibition) leads to retrograde ejaculation, which is observed after transurethral resection, after bilateral sympathectomy, and in chemical sympathectomy associated with the use of sympatholytic agents.[3]

In retrograde ejaculation, orgasm occurs, but there is no accompanying ejaculate. Following the sensation of ejaculation, catheterization of the bladder yields urine swarming with live, active, motile sperm, thus establishing the diagnosis. In order for retrograde ejaculation to occur in a diabetic, there must be several simultaneously operative factors, which include diabetic neuropathy involving the pelvic autonomic system and maintenance of libido and erectile ability.

Retrograde ejaculation must be considered as a cause of sterility in the male diabetic, and incomplete or partial retrograde ejaculation clearly must have an influence on fertility. Hence, problems of fertility and sterility in the diabetic require that this possibility be properly evaluated. The induction of pregnancy by obtaining centrifuged postmasturbation urine and injecting it into the uterus has been demonstrated and is encouraging.[4] In the early stages of incomplete retrograde ejaculation, sympathomimetic agents, including antihistamines, have been reported to show some benefit.

Impotence. The increased frequency of impotence in diabetic men has long been recognized. Among systemic diseases, diabetes is virtually unique in this regard. These facts suggest that impotence is related to diabetes per se. There is uniform documentation in all studies of the increased prevalence of impotence in diabetic men, the average being about 50%; in my series the prevalence approaches 60%.[5] These figures are considerably higher than for the general population. Impotence is not only more frequent in diabetic men, but it may occur at an early age as well. Actually, it may occur any time after the onset of adolescence.

In approaching the problem, it is essential to differentiate libido, potency, and fertility. These may be individually affected, and considerable confusion has arisen because of an assumed relationship and indiscriminate interchange in use of these terms. Potency may be defined as the ability to initiate, sustain, and successfully conclude the act of coitus. Thus, a satisfactory firm penile erection sufficiently maintained to secure vaginal intromission with subsequent orgasm constitutes adequate potency.[6]

Penile erection takes place as a reflex. Stimulation of the second, third, and fourth sacral components of the parasympathetic nerves (that is, the nervi erigentes), which may be psychic or reflex, results in dilatation of the penile arteries, increase in blood flow, and tumescence of the corpus cavernosum and the corpus spongiosum. Erection is thus induced by active hyperemia of the arteries, which are partially occluded by longitudinal ridges in the resting state. With retention of blood, the cavernous

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spaces expand and compress the veins, which have funnel-like valves, and so sustain erection. Detumescence results from vasoconstriction of the penile arteries with subsequent decrease of arterial blood flow, diminution of pressure, and release of the compressed veins.[7] Erection is the result of a tremendous engorgement of the penis with blood. Obviously, if there is impairment of the involved nerves, the reflex arc does not function. In such a situation, there is no acute dilatation of the penile arteries, there is no engorgement of the penis with blood, and hence there is no erection. This is precisely what occurs in diabetic neuropathy when this affects the autonomic nerves that are involved in erection.

Differential diagnosis

It is important to emphasize that any and all causes of impotence in nondiabetic men may also occur in diabetic men. These causes may be classified as follows:

I. Psychogenic
II. Organic
    A. Congenital abnormality
    B. Trauma
    C. Systemic disease
    D. Vascular disease
    E. Endocrine deficiency
III. Neurologic
    A. Central
    B. Spinal
    C. Peripheral neuropathy
IV. Drug induced

Psychologic impotence is by far the most common type in the nondiabetic population. Probably more than 90% of impotence in the general population is psychogenic. There are no data, however, to suggest that psychogenic impotence is more prevalent in diabetics than in the nondiabetic population. Nevertheless, diabetic men are not inmune to psychologic problems, and at least some instances of impotence in these patients result from psychologic factors. Psychologic impotence is typified by its selectivity and periodicity. Additional differentiating factors include the presence of nocturnal erections, the occurrence of nocturnal emissions, the ability to masturbate successfully, the acute onset, and the retention of testicular sensitivity. There is usually little difficulty in differential diagnosis. In cases in which the picture is not clear, bladder studies may be helpful because the pelvic parasympathetic nerves that lead to erection also innervate the bladder. Impairment of these nerves may be demonstrated by an abnormal cystometrogram and abnormal cystogram.[8] A relatively new and promising method is the assessment of spontaneous nocturnal penile tumescence during sleep. In association with spontaneously recurrent rapid eye movements (REM), which occur approximately every two hours during sleep and last for about 20 minutes, nocturnal penile tumescence has been observed. This can be readily recorded by using a mercury strain gauge at the base of the penis. Nocturnal tumescence of the penis is normal in psychogenic impotence but is absent in diabetic neuropathic impotence.

Impotence in diabetes, being a neuropathic feature, is a slowly progressive phenomenon, whereas psychogenic impotence is usually acute in onset. It may take from six months to two years for diabetic impotence to become manifest. In diabetic neuropathic impotence, there are no erections at any time under any circumstances: In the words of my patients, "It is dead." Another differentiating sign is the presence of normal testicular sensitivity in psychogenic impotence, whereas testicular sensitivity is usually markedly diminished or absent in diabetic neuropathic impotence.

Endocrinologic aspects. An endocrinologic basis for impotence has long been espoused. Because testosterone is the hormonal determinant of potency, it is significant that direct measurement of testosterone in diabetic men with and without impotence yields entirely normal results. Therefore, giving testosterone in any form is completely valueless. Recent evidence suggests that excessive prolactin release can impair sexual function as manifested by decreased sexual interest and impotence.[9] In such instances, bromocriptine has proved to be an effective therapeutic agent.

Other organic causes. Congenital abnormalities, trauma, and systemic diseases can be readily eliminated as causes. Because erection requires an increased blood flow, circulation must be adequate. When impotence is caused by impaired circulation, diffuse advanced arteriosclerosis, usually with thrombosis of the aortic bifurcation or vessels immediately below it, is the cause. A classic example is the Leriche syndrome where impotence has been euphemistically described as "intermittent claudication du troisième membre." The finding of diminished femoral arterial pulsation or the history of gluteal claudication suggests the diagnosis. More exact and objective methods of determining adequacy of blood flow to the penis include direct palpation of the penile pulse and measurement of the penile blood pressure.[10] Some reports suggest that selective arteriosclerosis of the dorsal artery of the penis may be a cause of impotence. Surgical procedures, such as a bypass from the epigastric vein to the dorsal artery of the penis or a bypass from the inferior epigastric artery directly to the cavernous bodies of the penis, have been reported to be efficacious.[11] Reports in the literature are still too indefinite as to diagnosis, indications for surgery, and results of treatment to permit assessment.

Drug-induced impotence. Many drugs may cause impotence. Included, for example, are the estrogens used in the treatment of carcinoma of the prostate. Other important drug groups are alcohol, phenothiazines, antidepressants, and some of the antihypertensive drugs. The latter are particularly important to stress because their use has become so widespread. Many of these drugs are sympatholytic and thus can lead to impotence. Therefore, checking into all drugs that the impotent patient may be receiving is important. Elimination of the offending drug is usually followed by the return of potency.

Clinical implications.

A striking clinical feature in diabetic neuropathic impotence is the persistence of libido despite the absence of potency. This is the hallmark of diabetic neuropathic impotence and is predictable because the abnormalities are peripheral. Although libido is virtually always present when impotence becomes apparent, in some it tends to become sublimated secondary to the frustrations of inadequacy. Inasmuch as patients do not readily volunteer information about sex, they must be tactfully queried. Indeed, the frequency of impotence is directly proportional to the frequency and the direct manner in which the patient is asked. Simply asking, as part of a routine history, How is your sex life? is an opening most patients will readily respond to if they have any problems. Most patients are relieved to learn that their impotence is organic and hence not a reflection on their virility or "manhood," which would be a source of great insecurity and marked destruction of self-image. Further, it is important to remember that all of these men were at one time potent; with the onset of impotence, they are often accused of infidelity. This can precipitate intense marital friction and distress, sometimes leading to separation and even divorce. Discussion with both partners and presentation of the facts will often allay anxiety and lead to satisfactory emotional adjustment. That impotence may present as the initial clinical manifestation of diabetes is also significant.

Therapy.

Impotence resulting from poorly controlled diabetes is a reflection of the associated malnutrition and weakness and not the diabetes per se. In such cases, proper management of the metabolic aspect of the disease, leading to restoration of normal health and vigor, will restore normal potency. If the impotence is psychogenic in orgin, the approach should be based on psychologic evaluation and psychotherapy. If drugs are the cause, their withdrawal usually is followed by return of potency. If there is an endocrinologic basis, the appropriate hormonal therapy should be utilized. In most cases, the cause is neurogenic and, unfortunately, there is no specific prophylactic or therapeutic modality for neurogenic impotence at present. Hence, the prognosis in these cases is poor. Mechanical devices have been suggested and have been found to be beneficial. The implantation of a silicone prosthesis that is static[12] or a more complex dynamic prosthesis (consisting of a pump, a fluid storage reservoir, and inflatable cylinders) that results in actual erection[13] may be helpful.

Sexual function in female diabetic patients

Because a significant portion of the increased impotence in the diabetic man is attributable to pelvic autonomic neuropathy and because the diabetic woman is at equal risk for the development of diabetic neuropathy with comparable involvement of the pelvic autonomic nervous system, one might postulate similar impairment of sexual function. Surprisingly, however, there is little documented evidence about the relation of diabetes to female sexuality, even though the deleterious effects on sex performance in the diabetic male are so well recognized.

A recent study evaluating the effect of diabetes on sexual function in women has not supported this supposition and, indeed, has contradicted it.[14] In this study, diabetic women with and without neuropathy and nondiabetic women were investigated regarding their interest in sex and orgasmic reaction. The three groups were age matched, and the two diabetic groups were also matched for duration of the diabetes. There was no demonstrable difference between diabetic women with and those without neuropathy, but even more startling was the virtually total lack of effect of diabetes on sex performance. Statistics on sex performance and interest as measured by libido and orgasmic reaction in diabetic women compared most favorably with those for the nondiabetic population. Strikingly, the classic picture in diabetic men, namely, maintenance of libido and absence of potency, is not present in diabetic women; that is, none reported persistence of libido with loss of orgasmic function. The presence of peripheral neuropathy did not correlate with the sexual dysfunction of diabetic women, and even serious and more advanced neuropathic involvement, such as neurogenic vesical dysfunction, neuropathic ulcers, Charcot's joint, gastropathy, and diabetic diarrhea, similarly showed no correlation. This is especially noteworthy because most of these neuropathic complications are associated with impotence in diabetic men. In addition, other complications, such as blindness, severe retinopathy, nephropathy including significant azotemia, peripheral vascular disease, angina, and severe necrobiosis lipoidica diabeticorum, had no measurable effect on sexual performance in diabetic women. Although in one study, 35% of diabetic women were nonorgasmic, there was no correlation of diabetic female sexual function with age, duration, insulin dose, or such complications as retinopathy, nephropathy, or neuropathy.[15]

There is no ready explanation for this remarkable difference in sexual function between diabetic men and women. One obvious difficulty is the lack of any objective measurement of sexual response in the female and, therefore, the need to rely entirely on the patient's statement. There are several investigative efforts in progress at the present time to help establish an objective evaluation. These include measurement of increased blood flow in the vagina by measuring increased heat production and color changes in the mucosa.

Anatomic, neurologic, and physiologic differences were sought in an effort to shed some light on the findings. However, none having been identified, they offer no basis for explaining the observed sexual differences. One explanation may lie in the psychologic aspect of sexual behavior. The entire body is involved whenever there is any sexual responsiveness. The tendency is to become overly preoccupied with the physiology of sexuality and to forget that a sexual encounter in human terms is a much more complicated phenomenon than mere spinal reflex activity. A brain and a cord are necessary for the human animal to recognize sexual satisfaction. The central nervous system exerts its control, facilitating and inhibiting responses while also adding its own special ingredients, namely, fantasy, expectations, memories, and emotional situations.

Studying the paraplegic man adds some enlightenment. Any genital or pelvic stimulation may cause him to come to erection and reach orgasm, but he is not conscious of any satisfaction. On the other hand, the paraplegic may still be able to experience the subjective feelings of climax or have an erotic dream without corresponding genital pelvic accompaniments. In other words, the brain can work independently of the genitalia in the generation of erotic experience, just as the genitalia in the paraplegic can work reflexly, independently of the brain.

In conclusion, diabetes plays a significant role in impotence in the diabetic male, whereas the disease has no demonstrable effect on diabetic female sexuality. This striking and remarkable difference has not been adequately explained.

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Electrocardiograms of the Month

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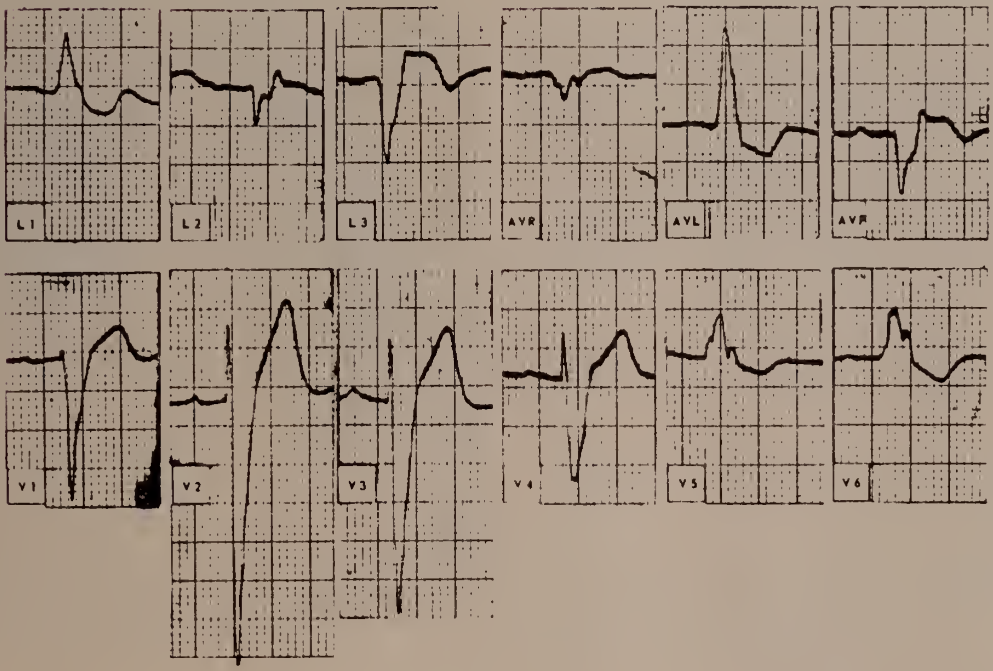
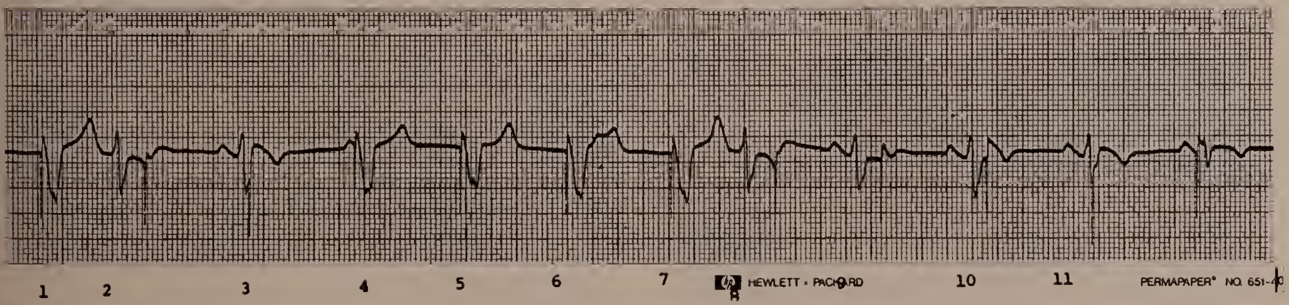


QUESTION 337. A 76-year-old male was admitted with chest pain and a history of previous myocardial infarction. What is the interpretation of the electrocardiogram?



QUESTION 338. The patient has a ventricular pacemaker. Lead II. What is the rhythm? Is the pacemaker functioning properly?

Electrocardiograms of the Month

ELUCIDATION

Answer 337. The patient is in regular sinus rhythm. The PR interval is 0.21 second; the QRS is prolonged to 0.15 second.

In leads I, aV_L, and V_6, Q waves are absent and notched R waves are present, compatible with left bundle branch block. Deep abnormal Q waves with elevated ST segments and inverted T waves are seen in II, III, and aV_F. These findings suggest inferior wall myocardial infarction, possibly acute.

If a prior tracing revealed left bundle branch block and absent Q waves in leads II, III, and aV_F, then a diagnosis of left bundle branch block and inferior wall myocardial infarction with involvement of the septum can be made. If an electrocardiogram was not available or the prior electrocardiogram did not show left bundle branch block, a diagnosis of inferior wall myocardial infarction and intraventricular conduction defect with delay on the left should be made.

Answer 338. Pacer spikes occur at regular intervals at a rate of 70/min. P waves are present at a rate of 60/min. Beats 1, 4, 5, 6, and 7 are preceded by a pacer spike which depolarizes the ventricle. Beats 2, 8, 9, and 10 are sinus beats with pacer spikes falling after the QRS and not capturing the ventricles. Beats 3, 11, and 12 are also sinus but the pacer spike is superimposed on the QRS.

If the pacemaker is in a fixed-rate mode, it is functioning properly.

If the pacemaker is a demand unit, it is malfunctioning since it does not sense the conducted beats (2, 8, and 9); they appear more than 600 ms after the preceding beat. A demand pacemaker should be inhibited by a spontaneous QRS that follows at an interval greater than 250 to 350 ms after a spontaneous or paced depolarization. After this period a spike should not appear. Beat 2, for example, occurs 620 ms after beat 1. The appearance of a spike on the T wave of beat 2 indicates a malfunctioning demand pacemaker. Beats 3, 10, 11, and 12 have a spike superimposed on the spontaneous QRS; this is an appropriate response.

Decaffeinated coffee called stimulant of stomach acid

Decaffeinated coffee has been found to be a stimulant of both gastric acid and gastrin, a hormone that starts gastric acid secretion in the stomach, according to researchers at the Center for Ulcer Research and Education, Veterans Administration Wadsworth Hospital Center, Los Angeles.

Writing in the July 17 Journal of the American Medical Association researchers describe their study in which eight healthy men were given a series of meals consisting of one of three substances: water (used as a control), decaffeinated coffee, or peptone (a partially digested protein). The coffee and peptone were tested in varying concentrations.

Analysis of blood and stomach contents after these meals showed that at each concentration tested, gastric acid secretion and gastrin release were greater in response to decaffeinated coffee than to peptone, which previously had been considered the strongest stimulant.

Earlier studies in man indicate that acid secretion in response to decaffeinated coffee and regular coffee is not significantly different, the authors note. Although calcium—all known stimulants of gastric acid secretion—these are present in such small amounts that decaffeinated coffee may contain some other unidentified ingredient that is a potent stimulant of gastric acid secretion, they speculate.

Radiologic Problem of the Month

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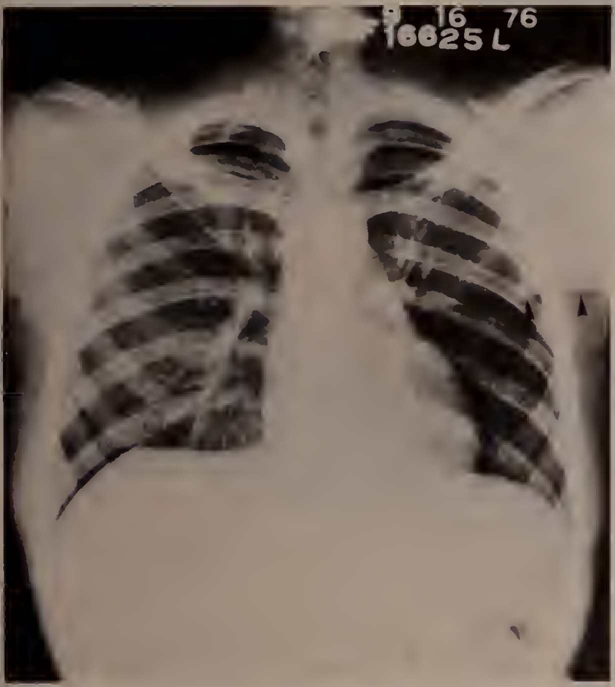
Lucency of Left Hemithorax



Routine preoperative chest film of 11-year-old girl scheduled for cosmetic surgery on webbed fingers of left hand.

Elucidation

The posteroanterior view of the chest reveals increased lucency of the left hemithorax, particularly in the lower half. The left anterior axillary fold (arrow heads) extends over the area of the lung simulating the findings that are generally observed in the adult female chest subsequent to radical mastectomy, where the soft tissues including the pectoral muscles are removed. However, this chest film is of a young girl and she did not have any prior surgery. The dense and horizontal axillary fold seen on x-ray should indicate absence of soft tissues and pectoral muscles. In the history of this girl, cosmetic surgery on the webbed fingers on the same side of thoracic abnormality is scheduled to be performed. Although webbing of fingers may be isolated or associated with other disorders, these two findings put together suggest the possibility of Poland's syndrome.

Poland's syndrome represents a combined congenital malformation of the pectoral muscles with anomaly of the arm and hand on the ipsilateral side.[1,2] Alfred Poland in 1841 (quoted by Brooksaler and Graivier[1]) described this syndrome with webbing of the fingers and partial or complete absence of pectoralis major. Since that time, several cases have been reported. While the basic anomalies remained the same, varying expressions, some overt and some "form fruste," have been described. The spectrum of these findings include thoracic rib cage anomalies ranging from absent or rudimentary development of ribs and costal cartilages to partial absence of sternal attachment of the pectoralis major. A major degree of hypoplastic rib cage may lead to herniation of the lung to the contralateral side.

The breast and nipple on the ipsilateral side may be hypoplastic or absent. Contracture of the anterior axillary fold and elevated scapula may be present. Hypoplasia of the arm and hand with absence of metacarpals and phalanges may be associated. Syndactylism, webbing of the fingers, and even polydactyly may be present. Syndactyly may involve all the fingers but frequently includes the thumb.

The etiology of this syndrome is unknown but it is definitely not hereditary. The anomalies may be explained on an embryologic basis. The development of upper limb pectoralis muscles takes place in the seventh to eighth week of intrauterine life and partial arrest of both components leads to the defects observed in Poland's syndrome.

In the differential diagnosis of increased lucency of a hemithorax, several entities have to be considered. The common cause of such radiolucency in the adult female in this country is radical mastectomy. Certain lung lesions do cause radiolucency, such as Swyer James MacLeod syndrome, hypogenetic lung and venolobar syndromes, and obstructive or compensatory emphysema, but the age and preservation of the normal architecture of the underlying lung rule out these possibilities. In this particular case, the diagnosis was made by the radiologist, but, of course the treatment is the same: cosmetic surgery for the anomalies.

Diagnosis

Poland's syndrome with partial absence of pectoralis major

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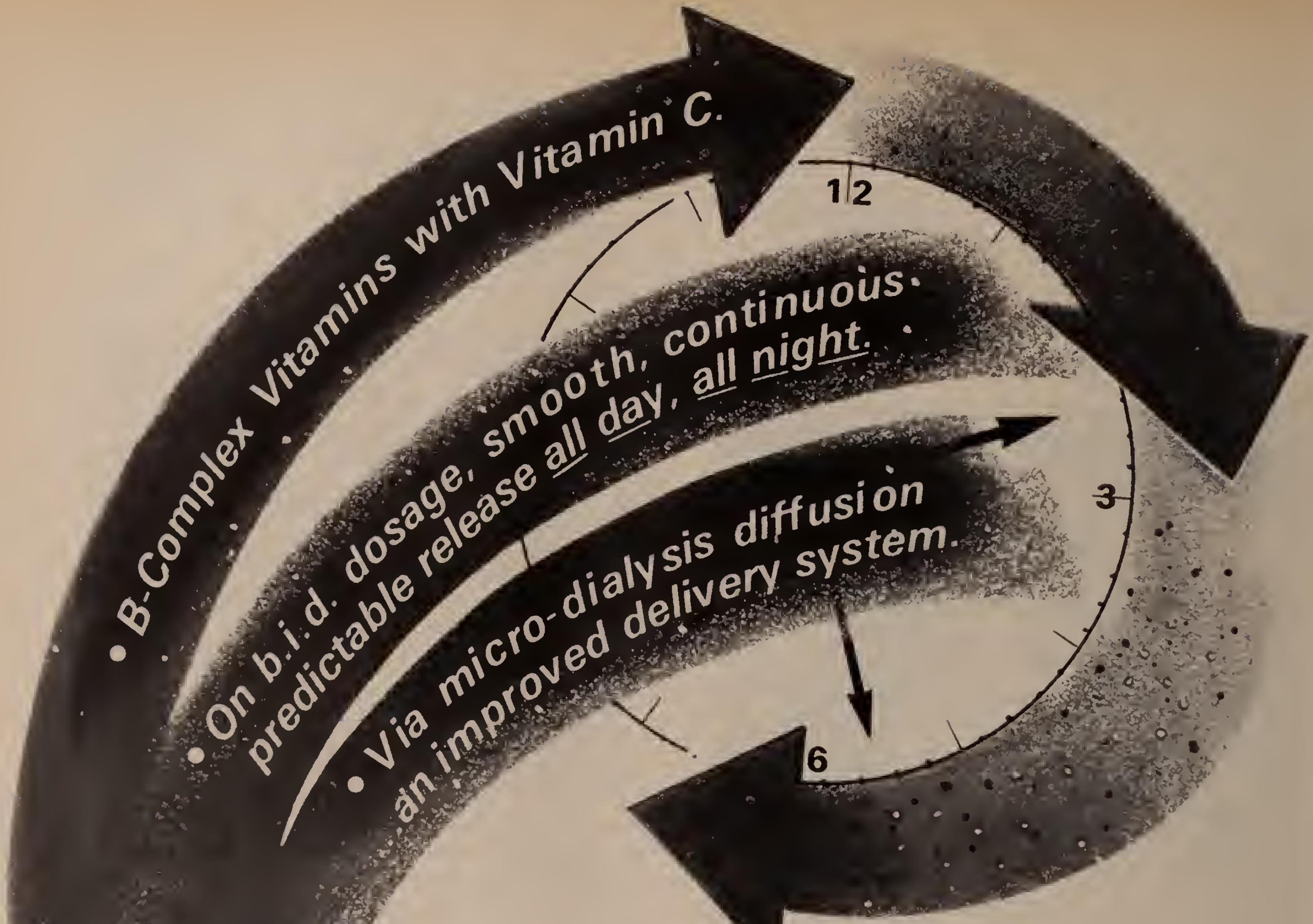
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Vascular Injury Secondary to Laparoscopy

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Iatrogenic injuries are the most common form of vascular injury today in a large medical center. Cardiac catheterization and angiography for peripheral vascular diseases account for the majority of iatrogenic vascular injuries. Other invasive procedures or tests involving penetration of blood vessels also have the potential of causing serious and lethal vascular injury. For this reason, the importance of identifying such procedures has been well emphasized.[1] The operator must be aware of the possibility, be able to recognize its occurrence, and be prepared to manage it promptly. We report here a case of perforation of the abdominal aorta, which occurred during laparoscopy, and its management.

Case report

A 23-year-old Hispanic female was admitted to The Methodist Hospital on March 1, 1979, for diagnostic abdominal laparoscopy. She had complained of dyspareunia and chronic pelvic pain for three months prior to coming to the clinic. Other history and physical examination disclosed no abnormalities. Findings of diagnostic procedures were normal, including complete blood-cell count, urinalysis, SMA-6 (sequential multiple analyzer), chest x-ray film, and pelvic sonogram. Repeated physical examinations revealed nothing remarkable, and she failed to improve on aspirin and/or acetaminophen (Tylenol).

Laparoscopy was performed under general anesthesia. With the patient in the supine position, a small skin incision was made in the midline 2 cm. below the umbilicus. With the anterior abdominal wall elevated by rake retractors, a 16-gauge Toughey needle with obturator was inserted through the intact fascia to create a pneumoperitoneum. Difficulty was encountered at this time and on needle aspiration of abdomen, frank blood was obtained. The abdomen was opened at once in the midline and, on exploration, findings included a hematoma in the small bowel mesentery, a small seromuscular laceration of the small intestine, a needle puncture site, and a large retroperitoneal hematoma. The retroperitoneum was left intact and the vascular surgical team was called to take over further management. The patient's vital signs remained stable with intravenous administration of Ringer's lactated solution.

The retroperitoneal hematoma was observed and found to be large and expanding. When the retroperitoneal space was opened, approximately 700 ml. of clotted blood were evacuated, and an actively bleeding perforation was found in the anterior aspect of the abdominal aorta just proximal to the iliac bifurcation. The perforation in the aorta was repaired by the lateral suture technique using 5-0 prolene. The seromuscular tear of the small intestine was then repaired. There were no postoperative complications. Work-up findings for coagulation abnormalities after surgery were within normal limits.

Comment

Laparoscopy has become a popular procedure for the diagnosis of a host of intra-abdominal disorders as well as a method of female sterilization. It is regarded as a relatively safe and simple procedure, but various complications have been reported.[2,3] Cases of vascular injury secondary to laparoscopy appear to be rare. In their series of 600 inpatient laparoscopic sterilizations, Paterson and Grimwade[2] had only two minor complications and no vascular injury. Thompson and Wheeless[3] reported 666 outpatient sterilizations with complications requiring laparotomy in 0.9 percent, but there were no major vascular injuries and no fatalities.

The proximity of abdominal aorta and its major branches, and of the inferior vena cava and its tributaries to structures that have been injured during laparoscopy, makes it likely that they may also be injured at times. Unlike other injuries from associated laparoscopy, injuries to these vessels may result in serious morbidity or even death.

Translumbar perforation of the abdominal aorta is the standard technique for diagnostic aortogram, but it does not result in retroperitoneal hemorrhage. This can be explained by the fact that following translumbar aortogram, extravasated blood is trapped in the dense posterior periaortic connective tissue, and the puncture site is tamponaded. The anterior aorta however has little or no such protection

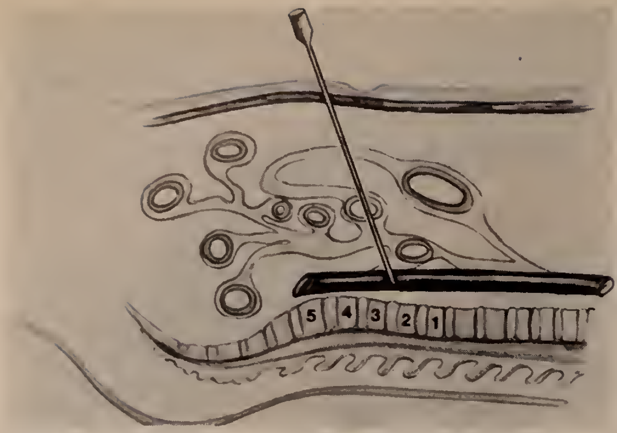

FIGURE 1. Sketch showing needle inserted nearly perpendicular to abdomen.

once its thin peritoneal covering is perforated.

Conditions that increase the risk of complications in laparoscopy include a bleeding tendency, previous abdominal surgery, and faulty technique. The needle used for creating pneumoperitoneum seems to be the offending instrument in most instances. Failure to insert the needle at a 45-degree angle to the abdominal wall increases the risk of serious injury.[4]

In our patient, there was no evidence of previous abdominal surgery or of a bleeding tendency. The relation of the perforation of the aorta to the incision in the abdominal wall of our patient suggests that the needle was inserted almost perpendicular to the abdominal wall (Fig. 1).

In an experimental study, a perforation of the aorta bled more rapidly with the abdomen opened than when closed.[5] No alteration of vital signs may be observed initially in patients with retroperitoneal hematoma from aortic injury. A free flow of blood through the needle after experiencing difficulty in inserting into the peritoneal cavity should alert the endoscopist. Laparotomy should not then be delayed since the result may be disastrous.

Summary

Diagnostic and therapeutic laparoscopy is a common procedure, one that is generally simple and safe. Since it is an invasive procedure, minor and major intra-abdominal vascular injury may occur, especially if the technique is faulty, requiring prompt recognition, laparotomy, and repair. A case of abdominal aortic perforation secondary to laparoscopy exemplifying these principles has been presented.

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Polymicrobial Endocarditis in a Drug Addict

Therapeutic and epidemiologic implications

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Polymicrobial endocarditis is an uncommon disease. In the preantibiotic era common organisms causing polymicrobial endocarditis were combinations of viridans group streptococci, *Streptococcus faecalis*, *Streptococcus pyogenes*, *Hemophilus parainfluenzae*, and *Neisseria gonorrhoeae.*[1] Three or more organisms were rarely recorded.[2] Recently, polymicrobial endocarditis has been reported in intravenous drug abusers, with *Staphylococcus aureus* being the most frequently reported organism accompanying other bacteria and fungi.[2,3]

A case of tricuspid valve polymicrobial endocarditis caused by *S. aureus*, *H. parainfluenzae*, *Eikenella corrodens*, and *Streptococcus milleri* is reported here.

Case report

A 28-year-old female intravenous drug abuser was admitted to Kings County Hospital Center complaining of fever, back pain, diaphoresis, and weight loss. Three weeks prior to admission she experienced a dry cough, increasing shortness of breath, and pleuritic chest pain. She was treated with oral ampicillin and propoxyphene without relief. Chest x-ray film findings were normal. Three days prior to admission her cough produced moderate amounts of purulent sputum. Careful questioning on admission revealed that the patient regularly cleaned her needles by forcing saliva through the lumen and wiping them with alcohol.

Physical examination revealed a thin female in moderate respiratory distress. Her temperature was 39.5°C., the heart rate was 140 per minute, and respiratory rate was 32 per minute. Examination of the lungs revealed dullness to percussion and decreased breath sounds at the bases bilaterally. There was a grade 3/6 blowing systolic murmur at the lower left side of the sternal border. The extremities revealed track marks in the left antecubital fossa.

Chest x-ray films showed bilateral lower lobe infiltrates. The hematocrit was 29.7 and the white blood-cell count was 13,000. Initial blood cultures grew *S. aureus*, *E. corrodens*, *S. milleri*, and *H. parainfluenzae* (Table I and Fig. 1). Quantitative Igs (immunoglobulins) were assayed: the IgG was 1,400 mg., IgA 240 mg., and IgM 120 mg. per deciliter. A purified protein derivative, five tuberculin units, skin test (PPD 5-TU) was reactive and mumps skin test findings were negative. Mitogen stimulation and blast transformation studies were not done. The C_3 component of complement was 75 mg. per deciliter (normal 55 to 120).

She continued to have episodes of dyspnea and spiking fevers to 39.4°C. A Gram's stain of her sputum showed pleomorphic gram-negative coccobacilli. Serial chest x-ray films showed worsening pulmonary infiltrates (Fig. 2). Her cardiovascular status remained stable with an unchanged murmur. *H. parainfluenzae* was grown from subsequent sputa, and blood cultures remained positive (Fig. 1). An echocardiogram showed tricuspid valve vegetations. While awaiting surgery the patient expired following an episode of chest pain.

Postmortem culture of the tricuspid valve vegetations grew *S. milleri*, *E. corrodens*, and *H. parainfluenzae.* The pulmonic, aortic, and mitral valves were grossly normal and were sterile. Macroscopic examination of the lungs revealed numerous abscess cavities. The same isolates recovered from the tricuspid valve were recovered from the abscesses.

Comment

Polymicrobial bacteremia represents 6 percent of all bloodstream infections.[4] The majority of patients with blood cultures positive for two or more organisms have either a gastrointestinal disorder or a hematologic malignant condition. Other conditions in which polymicrobial bacteremias have occurred include urinary tract obstruction, severe dermal injuries, pneumonias, and lung abscesses. Infective endocarditis represents 4 percent of these illnesses.[4]

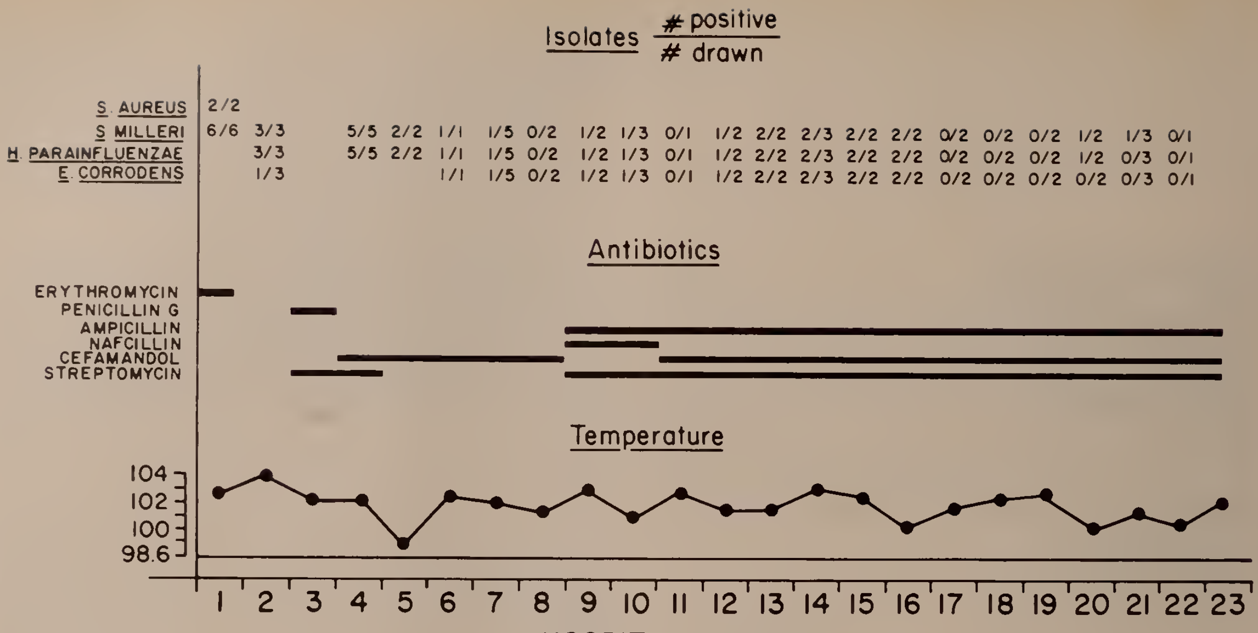

FIGURE 1. Hospital course.

Table I. MIC (minimum inhibitory concentration) and MBC (minimum bactericidal concentration) to *S. aureus*, *H. parainfluenzae*, and *S. milleri* for various antibiotics (broth dilution method)

Organism	Antibiotic—MIC/MBC in micrograms per milliliter					
	Penicillin	Ampicillin	Nafcillin	Cefamandole	Chloroamphenicol	Vancomycin
S. milleri	.125/.125	.125/.125	...	.125/1	...	...
H. parainfluenzae	...	.25/.25	...	1.0/1	.25/4	...
S. aureus	...	...	.25/.25	.5/.5	...	2/2

Our patient had endocarditis caused by four different organisms: *S. aureus*, *H. parainfluenzae*, *S. milleri*, and *E. corrodens*. Except for *S. aureus*, which is the leading cause of acute infective endocarditis,[5] the other organisms are uncommon causes of endocarditis, and their combination is unusual.

S. aureus is capable of infecting normal heart valves. This organism causes disseminated disease as a result of septic embolization and immune complex disposition. *S. aureus* was initially cultured from our patient's blood but was not cultured subsequent to appropriate antistaphylococcal chemotherapy. The MIC (minimum inhibitory concentration) and MBC (minimum bactericidal concentration) of this isolate to cefamandole was 0.5 micrograms per milliliter, and therapeutic serum bactericidal activity was confirmed in vitro.

H. parainfluenzae is second only to *Hemophilus aphrophilus* as a cause of hemophilus species endo-

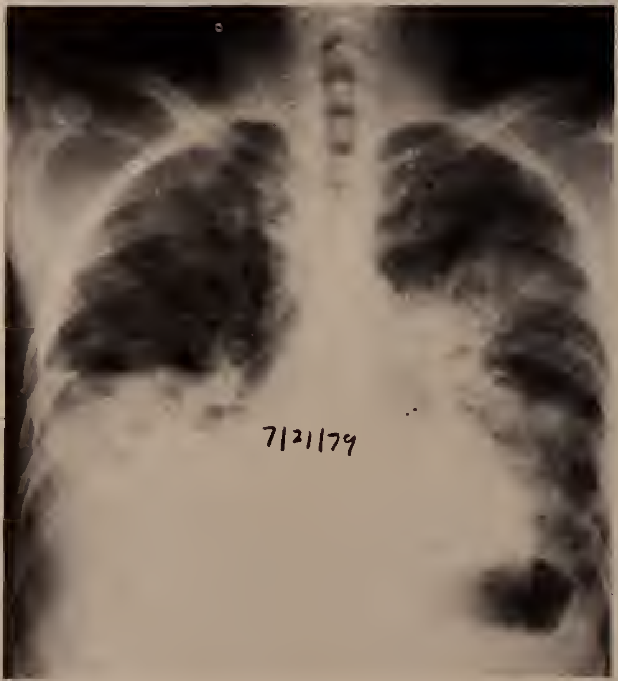

FIGURE 2. Chest x-ray film three weeks after admission.

carditis.[6] It is a facultative gram-negative anaerobe requiring enriched media for growth, including V factor NAD (nicotinamide adenine dinucleotide). In addition, some strains show better growth with increased carbon dioxide, salt, and moisture.[7] The fastidious nature of hemophilus species is most likely responsible for the delay in microbiologic diagnosis. The isolate in our patient grew after a four-day incubation period and was susceptible to ampicillin and cefamandole. In common with certain fungi and bacteria, *H. parainfluenzae* has the propensity to develope large vegetations.[8] Significant systemic emboli occur in 63 percent of patients.[9] The mortality rate in patients with significant embolization is 50 percent and underscores the importance of early diagnosis and appropriate therapy.[9]

The viridans streptococci remain a very common cause of endocarditis, but have only been speciated in recent years. One of the viridans streptococci, *S. milleri*, frequently causes serious pyogenic infections as well as endocarditis.[10] In two streptococcal reference laboratories *S. milleri* accounts for 8 to 14 percent of all viridans streptococci causing endocarditis.[11,12] When left-sided endocarditis was present, visceral abscesses were frequently found.[10] Our patient only had tricuspid involvement, and *S. milleri* was cultured at autopsy from multiple pulmonary abscesses. This isolate was susceptible to penicillin and cefamandole.

The fourth organism causing our patient's endocarditis was *E. corrodens*, a recently recognized human pathogen which has been reported as a cause of meningitis, endocarditis, empyema, and abdominal abscesses.[13] This bacterium is a frequent inhabitant of the oral cavity and upper respiratory tract. *E. corrodens* was repeatedly cultured from our patient's blood in the face of appropriate antimicrobial therapy and therapeutic serum bactericidal activity (Fig. 1).

The common practice among drug addicts of sharing needles and syringes and cleaning them by forcing saliva through them from their mouths may account for the variety of oral and upper respiratory tract organisms isolated from our patient. This information should be carefully sought, since a number of organisms constituting normal oral flora are fastidious and require prolonged incubation, increased carbon dioxide, and in some cases enriched media. As in our patient, many of the organisms are not susceptible to the semisynthetic penicillins that are commonly employed in drug-addict-associated endocarditis. This will result in therapeutic failure if the polymicrobial nature of these infections is not recognized so that appropriate antimicrobial therapy can be instituted.

Valve replacement, in select cases, has a definitive role in the early management of patients with infective endocarditis.[14,15] Current indications for early valve replacement include congestive heart failure, repeated embolization, fungal endocarditis, and prosthetic valve endocarditis. In addition, persistent sepsis despite appropriate antibiotic therapy requires early surgical intervention. This aggressive approach is necessary because of the exceedingly high mortality rate when one temporizes and completes a full course of antibiotic therapy.[15,16]

Summary

Polymicrobial endocarditis is an increasingly recognized clinical entity, especially among intravenous drug users. Fastidious mouth flora can cause endocarditis in those addicts who clean their needles and syringes with saliva. As a result, therapy directed at the common organisms in drug-addict-associated endocarditis may not be sufficient. Antimicrobial chemotherapy should be individualized, based on complete identification of all isolates and susceptibility testing. In addition, early valve replacement should be considered in those patients not responding to medical therapy.

We report a case of polymicrobial endocarditis in a drug addict caused by four organisms: *Staphylococcus aureus*, *Streptococcus milleri*, *Hemophilus parainfluenzae*, and *Eikenella corrodens*. In our patient, three of these organisms were recovered from the tricuspid valve at postmortem examination.

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Clinical Medicine

Survival in New York City

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A short while ago I was speaking with Richard Leakey, a well-known paleoanthropologist, whose astounding fossil finds in East Africa have completely revamped our view of our past ancestors. He told me that piecing together man's past, although laborious and tedious, was nonetheless possible and amenable to scientific scrutiny. Predicting the future is clearly a hazardous game. But, he added, why must we assume that *Homo sapiens* cannot become extinct. After all, so many other species have, and *Homo sapiens* has only been around for about one-half million years. Species disappearance is rarely the result of a sudden single catastrophic event, although in our case this could well happen. Rather, it is a consequence of incrementalism, changes in climate, vegetation, and the balance with other species.

Asking whether the practice of clinical medicine can survive or not in New York City is really a thoughtful attempt to examine the process of incremental change rather than to chart an extinctionist path. Most physicians assume that clinical medicine at the dawn of the next century will be quite different from what we know today. This assumption stems from their observations of the sweep of technologic advances through every parameter of patient care, particularly those of diagnosis and treatment. Yet, while observing and then using these new technologies, many of us frequently fail to see that incremental change is also taking place in the structure of medical practice. Each year an adjustment takes place here, a subtle change there; these are responses not only to new technologies, but also to the larger social, economic, political, and physical environments in which medicine is practiced.

Nowhere have these changes and adjustments been more dramatic than in New York City. As did our hominid predecessors who lived up north close to the advancing edge of the ice sheet, we are seeing it first, before many others who are still warmly holed up in their comfortable caves.

In focusing on the larger environment in New York City and in examining the changing variables that are having a major impact on the structure of medical practice as we have known it since the turn of this century, one cannot negate the importance of advancing technologies in changing practice structure. But, in my opinion, the technologies have not so far had the same level of impact as have demographic and economic changes. I know of few private practitioners who have closed their offices because of changing technologies; I know of many who have done so because of demographic and economic changes.

What has occurred in New York City is a complex process of decline; although its roots are diverse, it is characterized by a changing population, the erosion of the city's commercial and manufacturing infrastructure, a shrinkage in its intellectual and cultural life, and a deterioration of its very physical substance. For whatever comfort it is worth, it is well to remember that municipal decline is not a phenomenon unique to New York City, but is, rather, one that has taken place in a number of America's older northern cities, including Baltimore, Cleveland, Detroit, and St. Louis. The impact of this decline on clinical medicine and medical practice has been enormous.

New York and its population

In 1970, New York City had a population of 7.8 million people, living in five boroughs, and covering 300 square miles; by 1980, the population had dropped to 7 million, representing a loss of almost 1 million people. This contrasted with a 1.4-percent increase in the city's population between 1960 and 1970. Although a major shift in the city's population had been under way in the 1950s, it was really not until the 1960s that the middle-class exodus became substantial. It was fueled by federal housing subsidies, highways, dependence on the automobile, and the desire of many Americans to own a green patch of earth; this exodus continued through the 1970s. In essence, these two decades witnessed the steady departure of middle-class populations, and their replacement by poor black and Hispanic groups, both from other areas of the United States and from other countries as well. Between 1960 and 1970, the black population of The Bronx rose 118 percent, that of Brooklyn 76 percent, Queens 77 percent, and Richmond 63 percent. Manhattan's black population declined by 4 percent during this period. The Hispanic population of the four outer boroughs similarly rose during the 1960s. By 1970 it had risen 70 percent in The Bronx, 51 percent in Brooklyn, 90 percent in Queens, and 93 percent in Richmond; it fell by 18 percent in Manhattan.[1]

The 1980 census showed a continuation of these trends, but with an overall decline in the city's total population of 11 percent. The white population, exclusive of Hispanics, was about 3,257,738 in 1980, or 46.5 percent of the total. The black population was 1,784,124 or 24.4 percent, and the Hispanic, 1,405,957 or 20.1 percent. Other groups, including Asian and American Indians, amounted to 623,211 or 8.9 percent. For the first time in the city's history, nonwhite minorities formed the majority population.[2]

Additionally, it is estimated that anywhere from one-half million to one and one-half million illegal aliens lived in New York City at any given time during the 1970s. Most were immigrants from Central and South America and the Caribbean. What these figures tell us is that the city's population has dramatically changed in a way that has had a direct impact on both private practice and clinical medicine.

Employment trends

In 1970, there were approximately 3.75 million people employed in the city. By 1977 that figure had dropped to 3.16 million, representing a loss of almost 600,000 jobs. Between 1960 and 1970, the city lost 181,000 manufacturing jobs, compensated for by a gain of the same magnitude in service jobs. The annual loss of manufacturing jobs after 1970 has been in the order of 44,000. During the five-year period, 1970 to 1974, some 83,000 sales jobs and 36,500 jobs in finance, insurance, and real estate were lost. During the same time there was a gain of 33,500 jobs in government and 10,500 jobs in the service sector. The city's unemployment rate during the early 1970s rose by 83.6 percent, representing the highest in the country. In addition, the service and government jobs gained scarcely offset the jobs lost. Worse still, as far as the city's tax revenues were concerned, the jobs gained produced only one-half the amount of income taxes as did an equal number of those that were lost.[3]

The reasons for the city's continuous loss of jobs are many. Few would argue that the high corporate and personal income taxes levied by both New York City and New York State play a small role in causing the flight of businesses from the city. It is significant that a large number of businesses and corporate headquarters moved to nearby Connecticut where there is no state income tax and to New Jersey where there was also no tax until the late 1970s. But there were also a number of other reasons for the flight of commerce and industry. Auletta,[4] in documenting the reasons for the departure of Union Carbide from the city, cities crime, high living costs, discomfort with the city's changing ethnic mix, the decline of basic city services, vandalism, and dirt on the streets. This is a rather sweeping indictment against the city, but it does not fully explain why businesses have left. The fact that commerce and industry can be profitably conducted in decentralized locations, thanks to computers and modern highways coupled to the suburbanization of America and the individual's reliance on automobiles, has had no small impact on the decline of all older northern cities. There has also been a massive shift of people and businesses out of the Northeast to the southern and western "sunbelt" areas.

Housing

Two major trends in housing characterized the 1970s. The most visible to outsiders and visitors was the surge of office, hotel, and apartment buildings in Manhattan, particularly after 1975. Yet, it is far less significant than is the massive abandonment of buildings by landlords and the widespread arson of housing stock in The Bronx, Queens, and Brooklyn. The Manhattan building boom is in a sense an artificiality, reflecting not the inherent fiscal health of the city, but rather a response to a growing tourist industry and the investment of expatriated petrodollars and other wealth from abroad. No one will argue that new construction in Manhattan is better than no construction. It is, rather, the result of stimuli that may not have staying power. As new glass and steel towers have risen in Manhattan, the outer boroughs have fallen into decay and been burned. The magnitude of building abandonment and arson is truly staggering.

The trend of housing-unit abandonment by landlords began in the 1960s. During the latter part of that decade, approximately 20,000 units were being abandoned annually. By the late 1970s, this number had risen to 25,000 annually; in 1970, this translated into 150,000 apartments with a population of one-half million. Abandoned buildings legally become *in rem* properties and are the city's responsibility. Those abandoned by landlords may not necessarily be abandoned by tenants, meaning that the city has gradually become the principal landlord in many inner-city poverty areas. In addition, these properties no longer produce real-estate tax revenue for the city.[4]

Arson and abandonment of housing units are not random events. They have their origins in public policies, specifically in rent control and rent stabilization laws, demographic changes, and years of underinvestment.[5] One, or a combination, of these forces acted in various parts of the city to create bombed-out landscapes of buildings destroyed by vandalism or arson. In the South Bronx, for example, it is claimed that housing abandonment was related to the economics of obsolete housing stock. This area was densely populated from the 1920s through the 1950s and consisted of five- and six-story walk-up tenaments. As an upwardly mobile population moved out, landlords were unable to rent out the upper-most floors, even at prices just sufficient to cover maintenance. Arson became a convenient and, in some cases, the only financial alternative for landlords. Others point out that rent-control and rent-stabilization laws made it impossible for landlords to obtain rents that would even cover the costs of routine maintenance, much less those for capital improvements. In effect, landlords were made to subsidize tenants to a degree where income for profits, capital improvements, and, finally, routine maintenance ceased to exist.

Social problems and crime

Like all major cities in America, New York has a number of pressing social problems that escalate each year. The roots of many of these problems lie in high rates of unemployment among minority groups, such as black youths, in grinding poverty, and in the inability of many of the city's more recent immigrants to move into the economic and social mainstream of American life. One out of every seven New Yorkers is on welfare, representing a population of 930,000.[6] In addition, there are anywhere from 500,000 to 1.5 million illegal aliens in the city, most of whom are poor, uncounted, and untaxed, but who avail themselves of a variety of free social and medical services.

In 1978, Senator Edward M. Kennedy, in addressing the twenty third annual National Association for the Advancement of Colored People dinner, warned of the development of a permanent underclass in many of America's cities. He cited statistics for New York City that did not take public-health officials by surprise. Fifty percent of all New York blacks were born out of wedlock; this compared with 20 percent in 1956. Similarly, 30 percent of Hispanics were born to mothers without husbands, compared with 11 percent in 1956.[7] These data are of significance, not least of all because such a large proportion of the welfare roles are comprised of such mothers and children. They speak for societal disorganization and the emergence of a generation that is disadvantaged from the outset. They are also a manifestation of a broader social problem, that of the permanent underclass referred to by Senator Kennedy. Ill-equipped for the few white-collar jobs available, the poor from the inner-city poverty areas cannot integrate themselves into the city's job market. And the unskilled or semiskilled positions for which they are qualified have long since disappeared.

By the late 1970s, crime had spread throughout the city, even to midtown Manhattan where assaults on persons had been rare in the early part of the decade. But New York City did not lead the nation in various categories of crime. According to the *Uniform Crime Report* published by the Federal Bureau of Investigation, New York City ranked twelfth in murders, eighteenth in forcible rape, third in assaults, and second in robbery.[4] It is the latter two types of crime that are of overwhelming concern to many people, precisely because of their relatively high incidence. Crime is significantly related to drug use, since a number of addicts must spend up to several hundred dollars a day to support their habits. There were approximately 150,000 individuals in drug-treatment programs in the city during the 1970s and an equal number of addicts who were not receiving treatment of any kind. It is difficult to determine what proportion of crime is drug related. But clearly, based on the number of addicts in the city and their daily monetary needs, it is significant. As in many other areas of the country, increasingly more crime was attributable to juvenile offenders from all socioeconomic classes and to the widespread availability of handguns.

Auletta[4] succinctly summed up New York City's social and crime problems when he said that the city has too many poor, too few middle-class people, spreading segregation, eroding neighborhoods, youth gangs, and a haunting fear of crime. This certainly portrays a bleak picture, but it is hardly one that can be denied.

In summary, what characterizes New York City today is retrenchment of basic city services, a progressive deterioration of the city's mass-transit system, vandalized parks, rampant crime and unsafe streets, declining quality in public education, poor sanitation services, and a progressive atrophy of economic strength.

Impact on medical practice

Private practice in New York City has historically been based on stable middle- and upper-class populations. What happens when they leave or are replaced? First of all, the decline in absolute numbers of close to one million such people has resulted in a surfeit of physicians in many areas of the city. Oversupply raises levels of economic and professional competition and, coupled with a host of other variables, blocks entry into the system of many younger physicians.

There are now roughly 18,137 physicians practicing in New York City; one-half, or 9,000 of them, are in Manhattan. The ratio of physicians per 1,000 population is 2.4; for New York State it is 1.6 per 1,000 population, and for the United States as a whole 1.3 per 1,000.

In Manhattan the ratio is 6.3 per 1,000 population, contrasted with a ratio of 1.5 per 1,000 in the other boroughs.[8]

Within each of the boroughs of New York City, a maldistribution of physicians is clearly present; specific health areas in The Bronx, Brooklyn, and Manhattan, in particular, have virtually no physicians available. Within the physician pool the proportion of generalists is declining, while that of specialists is increasing.

In boroughs such as Brooklyn the total number of private practitioners has fallen steadily over the past 15 years to 3,500, from a high of 6,000. And what is left is by and large an aging population.

Asking where all the physicians have gone is really asking where all the middle-class people have gone. The changing of middle-class neighborhoods to poorer ones incrementally leads to the disappearance of private offices and their replacement by either shared health facilities or institution-based medical care.

In Manhattan, the condominium explosion has driven out a substantial number of both the elderly and the middle class who have been replaced by a wealthy and often international population that is frequently only episodically resident. In terms of service demand, they are not an equal replacement for the middle class that preceded them.

The impact of all these changes on the municipal hospitals has been enormous. As providers of last resort, they run increasing defects caring for the indigent and the illegals who do not pay. Close to 50 percent of all outpatients at municipal hospitals cannot pay for the services rendered.

The voluntary hospitals, in possession of the option of patient selection, have fared better for the following reasons:

1. Private attendings feed them patients.
2. They have served as tertiary referral centers for people living outside the city.
3. They have reached out to other areas of the city for patients.

However, the maneuverability within this option has recently narrowed. The growth of tertiary centers in inner- and outer-ring suburbs staffed by well-trained specialists has slowed the flow to Manhattan-based tertiary care centers. At present only about 11 percent of all patients in New York City hospitals reside outside the city; in Manhattan it is 19 percent, a far cry from two decades ago. Many referred patients are older ex-New Yorkers, who, conditioned by a belief in the excellence of our hospitals, return when they are ill. But their numbers decline, every year.

Hospitals have now realized that their survival can no longer hinge only on patients brought in by private physicians, some of whose population bases are declining, and on referrals from the suburbs. They have begun to address themselves to the city's new population; in the case of the voluntary hospitals, this consists of the Medicaid-covered group and those covered by other third-party payers. To reach these populations, hospital-based practice groups are being established.

Graduate medical education

In March, 1981, interns and residents at several municipal and voluntary hospitals in New York City went on strike. They did not make any demands for more pay or for additional fringe benefits. Rather, they struck because of their frustration with the life-threatening decay in the quality of hospital-support services and with their own inability to remedy them through normal administrative processes. Both New York's Mayor Edward Koch and newspaper editorialists quickly dismissed the strike action as irresponsible, dispensed patronizing reprimands, and then called for inquiries into the physicians' charges. In so doing they hoped to rapidly dismiss yet one more irksome problem but, at the same time, appear responsible. For, in reality, there is no need for further inquiries, as anyone familiar with New York City's hospitals knows. The charges made by the striking physicians were accurate and to the point, and read like paraphrases from numerous previous inquiries and studies.

Municipal hospitals in New York City are generally underfunded and are obliged to treat large numbers of patients who are not covered by third-party plans. It is not difficult to understand why these hospitals end the fiscal year in the red. Those political leaders whose courage is wanting in addressing the complex social, economic, and political problems, which are the genesis of this worsening situation, are quick to lay the blame in simplistic terms on alleged poor management and deficient administration. What has resulted is a steady procession of short-tenured, top-level executives in and out of the municipal hospital system. If such executives are not wise enough to resign prematurely, they are eventually vilified and victimized by self-seeking political leaders who gain mileage out of accusations of incompetence because this is what the public wants to believe.

Each new manager tries his hand at dealing with financial resources eroded by inflation, salary and fringe increases, and decreased funding by a financially troubled city. What results is a decline in the overall quality of medical care provided in these hospitals, something not easily perceived by the inner-city public. But this decline has not gone unnoticed by the professionals and paraprofessionals who work in these institutions; they have tried to initiate corrective action from within, only to be frustrated because the real forces that can effect change lie outside these hospitals.

It is well known that hospitals are extremely complex technologic environments. The days when patient survival was solely linked to the quality of physician and nursing care are long gone. Patients now interact with a complex array of diagnostic and therapeutic technologies and depend on a spectrum of supporting services. It is the quality of these technologies and support services that strongly influences patient outcome.

The physicians in New York City struck because of the inadequacies in these elements in their institutions. On the outside, their hospitals look sleek and modern, but their insides have been economized back into the early twentieth century. The world of these physicians is one of lost laboratory results, malfunctioning defibrillators, and the absence of anyone to take the patient to the x-ray department.

Because of the decline in supporting services and the inadequacies in technologies, New York's large municipal hospitals have generally lost many of the unique educational features they once had. Many of those who have opted to train in them have done so on the basis of a past reputation that has survived years of change in reality. In a sense, the recent strike was a turning point, because it not only demonstrated that there was a strong and courageous internal voice calling for change, but also because it sent out a loud, new message to the next generation of interns and residents. That message is that quality medical education, in the absence of quality medical care, cannot be had.

Malpractice issue

If all the assaults mentioned here are not enough, medical malpractice has also had an important effect on the practice of clinical medicine in New York City. Ever-rising premium rates have driven younger physicians out of the State, especially those in the surgical specialties. And they have forced many older physicians, who have opted for limited practices, into early retirement. Today, we are again faced with the prospect of another substantial rise in medical malpractice premium rates for physicians in this State.

Comment

The practice of clinical medicine obviously will survive in New York City. Coupled with this certainty is that of the continued development of medical-practice trends that have emerged in response to New York City's changing social and economic environments. These trends include the growth of hospital-based practitioner groups, health-maintenance organizations, declining numbers of solo practitioners and general and family practitioners, continued increases in the numbers of specialists largely practicing in groups either within or outside of hospitals, and expanded efforts on the part of hospitals to reach the poor populations that have replaced the middle class that departed.

Clinical medicine will change for physicians everywhere in the United States, owing to advancing biomedical knowledge and to the development of newer diagnostic and therapeutic technologies and modalities. The structure of medical practice, as well, will change because of economic, social, and political forces and public policy decisions. But for physicians in places like New York City the structure of medical practice will also change in response to local social and economic trends. Changes of this kind and magnitude are always unsettling, but physicians now practicing in the city are already veterans of change; those of lesser heart fled to the supposed safety of the suburbs long ago.

Because the recent changes have been so heavily negative is no predictor that they will be always so. Although New York City continues to lose commerce and industry as well as its cultural assets, there is still no other place in the country with as much to offer. The well is far from running dry, and the exodus trend may not continue.

We can, I think, take some solace in the fact that changes and trends occur in cycles. Life, after all, did improve for man after the ice ages, but few who experienced those times would have hazarded such a prediction. Medicine and the practice of it face exciting frontiers and challenges in New York City. Those of us who choose to stay and face them are, according to the Chinese, the recipients of the greatest blessing. We live in interesting times.

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Presented at the New York Cardiological Society, New York, Saturday, May 16, 1981.

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Alcohol and Drug Problems in Medical Patients

Comprehensive survey of physicians' perceptions

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Alcohol and other drug abuse problems may be presenting or confounding conditions in many patients seeking medical care. An awareness of the varieties of possible manifestations of both drug and alcohol dependence has been an ongoing concern of many medical societies. The local county medical society has worked for many years to increase physicians' awareness of these problems and to encourage their involvement in diagnosis and treatment. As one of these efforts, members of the Medical Society of Erie County, New York, have been surveyed every five years with respect to their perceptions of alcohol and drug abuse problems among their patients. The present study has been carried out under the auspices of the Medical Society's Public Health Committee. The study was designed during the latter part of 1980 and was completed in the early months of 1981. It consisted of a concise two-page questionnaire with an accompanying letter from the Society's President and Chairman of the Committee on Alcohol and Substance Abuse. It was sent to all members of the Society, with one subsequent follow-up.

The prime objective of the questionnaire was to assess the extent to which physicians had contact with patients who were perceived as having alcohol or drug abuse problems. A secondary, but important, objective was to ascertain what physicians' perceptions were regarding the needs for medical, social, and educational programs. The respondents were also asked what they recommended to their patients and whether or not they would be willing to treat private patients with alcohol or drug abuse problems.

Results

Response to survey. One of the most encouraging aspects of this survey and the preceding one was a reasonably high response rate for a mailed questionnaire to physicians. The present survey was sent to 1,186 active members of the Society; 36% (422) of the membership completed and returned the questionnaire. In the previous 1975 questionnaire, approximately 50% of the physicians responded, and although these response rates are not outstanding by survey research standards, these rates exceed those in many previous surveys of physicians in practice.* This interest stands to refute the frequently voiced opinion that physicians are unlikely to be responsive to this type of mailed questionnaire, especially in the area of alcohol problems. Considering the wide variety of types and extents of medical practices, the Committee of the Society interprets this response rate as indicating a wide appreciation and concern among physicians about alcohol and drug abuse problems.

The physicians who responded represent a wide variety of medical practices. The largest number, 78 (19%), were in internal medicine; 70 (17%) were in a surgical specialty; 55 (14%) were in general practice; 40 (10%) were in obstetrics and gynecology; 25 (6%) were in pediatrics; 20 (5%) were in psychiatry; 15 (4%) were in radiology; and 14 (4%) were in ophthalmology. Other specialties of the responding physicians included anesthesiology (5), dermatology (7), urology (8), emergency medicine (3), industrial medicine (3), neurology (3), and pathology (3).

Extent of problems among patients. The physicians were asked to estimate the number of patients they had seen during the past year who they felt had problems associated with excessive drinking, excessive self-medication with sedative and tranquilizer drugs, or other drug abuse.

While the majority of physicians (63%) indicated that the percentage of patients with alcohol problems has remained about the same over the past five years, 29% of the physicians felt the number has increased. Only 8% felt that the number of people with alcohol problems has decreased. Overall, 82% of the responding physicians stated that they had seen patients with alcohol-related problems (Table I). Approximately one third of the physicians had seen a small number of patients (one to nine) with alcohol problems. At the other end of the spectrum, 50% of the physicians reported seeing ten or more patients during the past year with excessive drinking problems and 8% saw 100 or more patients with alcohol

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* Smith CM, Barnes GM: Physicians' perspectives on alcohol and drug problems: survey of the members of the Medical Society of the County of Erie. *New York State J Med* 1977;77:2140–2142.

TABLE I. Physicians Reporting Having Seen Patients During Past 12 Months Who Had Problems Associated With Alcohol or Drug Abuse

No. Patients	Excessive Drinking		Excessive Self-Medication (Sedatives/Tranquilizers)		Other Drug Abuse	
	No.	%	No.	%	No.	%
None	65	18	94	27	110	34
1-9	115	32	108	32	141	43
10-19	75	21	61	18	47	14
20-99	74	21	62	18	23	7
100 or more	29	8	17	5	6	2
TOTALS	358	100	342	100	327	100

abuse problems. These findings confirm the serious nature of these problems, as well as the fact that there are many practitioners who recognize that a significant number of their patients have drinking problems. Obviously, the nature of the specialty and the practice will influence the number identified with alcohol problems. The specialties of the 29 physicians reporting the largest number (100 or more) of patients with alcohol problems were tabulated and 48% (14) of these physicians specialized in internal medicine, 17% (5) in surgery, and 14% (4) in psychiatry.

The proportion of physicians who reported recognizing patients with problems of excessive self-medication or other drug abuse is somewhat less, overall, than for alcohol problems (Table I). Nevertheless, there are sizeable numbers of physicians who report detecting drug abuse problems among their patients. Although 27% of the respondents report no patients with problems of excessive sedative/tranquilizer self-medication, 41% of the physicians report ten or more patients with such problems; furthermore, 5% (17 physicians) saw 100 or more patients during the past year who were using sedative drugs excessively. In comparison with excessive drinking and excessive self-medication, problems with other drug abuses were observed by physicians less frequently.

Ranking of problem drugs. In this survey, physicians were also asked to rank their impression of the number of patients having problems with the different classes of drugs, such as alcohol, diazepam, benzodiazepines, barbiturates, and narcotics. Alcohol was ranked first by three fourths (74%) of the responding physicians; that is, the vast majority of physicians feel that more patients had problems with alcohol than with any other specific drug or drug class (Table II).

Second in order of prevalence of identified patient problems was diazepam (Valium) with 16% of physicians indicating it as the most prevalent drug of abuse and 52% ranking it second—second largely to alcohol. The most common drug class ranked in third place was the minor tranquilizer and other benzodiazepine group, with one third (34%) of the physicians selecting these drugs as third in importance.

In an attempt to get another indication of the problems patients may be having with prescription drugs, physicians were asked to estimate the percentage of patients who asked for a specific prescription for a sedative, tranquilizer, or hypnotic drug (Table III). Eighty-seven percent of responding physicians reported having patients who wanted such drug prescriptions; approximately half (53%) of the physicians detected from 1% to 5% of their patients wanting prescriptions; 15% of the physicians stated that 6% to 10% of their patients wanted such prescriptions, and 19% of the respondents stated that over 10% of their patients wanted a sedative, tran-

TABLE II. Physicians' Rankings of Frequency of Various Drug Problems Among Their Patients

Ranking[*]	%							
	Alcohol (N = 295)	Valium (N = 255)	Minor Tranquilizers (N = 197)	Barbiturates (N = 194)	Antidepressants (N = 179)	Stimulants (N = 183)	Major Tranquilizers (N = 178)	Narcotics (N = 205)
1	74	16	2	5	3	4	6	7
2	8	52	6	6	4	3	6	12
3	5	11	34	11	8	11	13	6
4	4	8	15	18	15	10	12	8
5	2	4	12	12	13	11	13	9
6	2	2	11	15	13	18	13	4
7	1	3	6	15	20	15	18	8
8	4	5	14	18	23	28	19	45
TOTALS	100	101[†]	100	100	99[†]	100	100	99[†]
Mean Ranking	1.8	2.8	4.6	5.2	5.6	5.8	5.3	5.7

[*] A ranking of 1 indicates the most frequent drug problem and a rank of 8 the least frequent drug problem.

[†] Rounding error.

TABLE III. Physicians' Reports of the Percentages of Patients Who Wanted Prescription for Sedative, Tranquilizer, or Hypnotic Drug

% of Patients Wanting Prescription	No. Physicians	% Physicians Responding
None	44	13
1-5	184	53
6-10	51	15
11-20	31	9
21 or more	33	10
TOTALS	343	100

quilizer, or hypnotic drug. In relation to this question, physicians were surveyed with regard to their perceptions of the percentage of patients wanting sedative or hypnotic agents who also needed social or emotional help. Fifty-three percent (169) of the physicians indicated that at least one half of such patients required such assistance. Only 11% (35) of the physicians responding thought that none of the patients who wanted a sedative or hypnotic also needed social or emotional help.

Patients seeking help. Not only do many physicians diagnose alcohol or drug problems, but an appreciable number of patients sought help from their doctors specifically with respect to their alcohol-related problems. Over one half (59%) of the physicians responding reported having seen patients with alcohol problems during the past year (Table IV).

A smaller number of patients sought help for drug problems than for alcohol problems. Nevertheless, 44% of the physicians had patients who sought help for drug problems. Thus, many physicians are recognizing alcohol- and other drug-related problems among their patients, and an appreciable number of patients are bringing these specific problems to the attention of their physicians.

The most frequently reported practices of those physicians who have been sought out by their patients specifically for help with alcohol problems are internal medicine (38%), psychiatry (23%), general practice (14%) and surgery (13%).

Treatment for patients. Physicians were asked whether or not they would treat a private patient for an alcohol or drug problem, and, if not, to whom or where would the patient be referred. Approximately two thirds (68%) of the responding physicians indicated they would not personally treat the patient for an alcohol or drug problem. On the other hand, one third (32%) indicated that they would treat such a patient.

TABLE IV. Physicians Reporting Patients Seeking Help Specifically for Alcohol or Drug Problems During the Past 12 Months

No. Patients	Alcohol Problems		Drug Problems	
	No.	%	No.	%
None	128	41	166	56
1-9	125	41	108	36
10-19	34	11	14	5
20 or more	22	7	10	3
TOTALS	309	100	298	100

Of those physicians who indicated that they would treat patients with alcohol or drug abuse problems, 41% are in internal medicine, 27% are in a general practice, 17% are in psychiatry, 8% are in pediatrics, and the remaining small percentage represents all other types of practices.

The majority of physicians would refer patients with alcohol or drug problems to a psychiatrist (31%), Alcoholics Anonymous (AA) (18%), a family physician (8%), the local hospital detoxification unit (6%), and a variety of other local service agencies, alcohol centers, and counseling programs. Many of the respondents indicated more than one referral person or facility. These responses, which were open-ended on the questionnaire, indicate a fairly wide appreciation of the variety of programs, facilities, and services available in this community.

Follow-up. It is the intent of the County Society to follow up this survey by writing to each of the physicians who said they were willing to treat patients to ask if they would agree to have their names included on the list of physicians to whom referrals are made by the Medical Society office when a request for a physician is received. The private physicians on the list serve on a conventional fee-for-service basis and the previous practice has been to provide whoever calls with a request with the next three names on the list as they come up, in rotation. This is the same system that is used for responding to requests for referrals to a number of other specialties. This referral service is available to any caller, as well as to physicians. Of course, the Society ensures that physicians grant their permission to use their names in advance, and receives the assurance that the list *in toto* will not be made public or used in any manner other than for the referrals as described.

Impact of multiple prescription controls. New York State has relatively recently implemented a multiple (triplicate) prescription form for controlled substances, essentially for all drugs included in the Federal Schedules I through III. This triplicate system provides extensive data on prescribing practices of individual physicians, as well as comprehensive data on total numbers of prescriptions by drugs and formulation. Its prime objective is the reduction of the abuse of prescription drugs. Yet, at the same time, it results inevitably in increased cost at the level of the prescribing physician. In view of its relatively recent introduction to the State, physicians were asked for their opinions regarding the utility of the triplicate system to improve medical care, to reduce drug abuse, and its impact on the cost of medical care.

An overwhelming number of physicians (82%) indicated that the triplicate system would not improve

TABLE V. Physicians' (%) Perceptions of State Triplicate Prescription System

Perception	Yes	No	Totals (No.)
Improves quality of medical care	18	82	100 (345)
Reduces abuse or misuse of prescription drugs	43	57	100 (338)
Increases cost of medical care	76	24	100 (342)

medical care (Table V). Fifty-seven percent felt that it would not reduce prescription drug abuse, and three fourths of the respondents (76%) indicated that the triplicate prescription system would increase the cost of medical care.

Guidelines for prescribing benzodiazepines. In view of the frequent publicity given to minor tranquilizers and antianxiety drugs, such as diazepam and other benzodiazepines, physicians were asked what guidelines they used when prescribing these preparations, in terms of the duration of the prescription, the maximum dose, concurrent drug or alcohol use, and contraindications. This was an optional, open-ended question, but two thirds of the sample responded to these questions. Fifty-nine percent of the responding physicians stated that they would limit the duration of the prescription to one month or less; nearly 20% indicated that their guideline was to keep the prescription to less than two weeks. The dose levels and frequencies provided as guidelines were quite diverse and ranged from less than 5 mg diazepam to greater than 20 mg four times a day. The most common of the various doses and schedules provided was 5 to 10 mg three times a day; approximately one third of those responding cited maximum doses equivalent to 20 mg or less a day in divided doses. With respect to contraindications, most frequently mentioned were history of drug or alcohol abuse (18%) and an addictive or dependent personality (16%). Other contraindications included other medications (8%), suicidal tendencies (3%), and depression (6%).

On the basis of these responses, it can be concluded that most of the physicians providing their guidelines have adopted cautious use consonant with the very carefully defined, circumscribed use of this minor tranquilizer. We provide this conclusion in light of a comprehensive analysis of all extant studies and case reports on abuse or dependence on any of the benzodiazepines (Gessner and Smith, in preparation).

Resources and priorities. The recognition of the seriousness of alcohol and nonmedical drug abuse by patients is an important initial step in meeting the needs of these patients. The opinions of physicians were also sought regarding the resources that would be most beneficial in dealing with patients with alcoholism problems. A number of items were provided based on the open-ended responses received from the previous survey.* All the suggested means were supported by a majority of responding physicians (Table VI). Ninety-three percent of the physicians viewed expert consultation or referral for diagnosis or treatment as beneficial. Similarly, an overwhelming percentage of physicians (94%) thought more available AA groups would be beneficial. Education and training in the diagnosis and treatment of alcohol- and drug-related problems as well as increased treatment facilities were resources that large proportions of physicians (90% respectively) felt to be of benefit. Physicians (86%) also responded that improved skills of emergency medical personnel in the care of the intoxicated person would be beneficial. Although the expressed need for more halfway houses was less than for other resources, nonetheless, over two thirds of responding physicians concluded that there were unmet needs in that area.

Physicians' opinions were also solicited about the areas the Medical Society should address (Table VII). "General public education on the benefits and hazards of alcohol and prescription drugs" was the area perceived by the greatest proportion of physicians as being "very important" (78%) and "somewhat important" (20%). Continuing education programs on emergency care and diagnosis of alcohol and other drug problems were also felt to be important by nearly all of the responding physicians

TABLE VI. Resources Physicians Feel to be of Relative Benefit to Them in Dealing with Patients Who Have Alcoholism Problems

	% Physicians Responding as:			
	Very Beneficial	Somewhat Beneficial	Not Beneficial	Total Response to Question (No.)
Expert consultation or referral for diagnosis or treatment	63	30	7	100 (314)
Education and training in diagnosis and treatment of alcohol and drug-related problems	38	52	10	100 (303)
Increased outpatient and inpatient treatment facilities	45	45	10	100 (299)
More halfway houses or residential facilities	18	54	28	100 (287)
More available AA groups	61	33	6	100 (304)
Improved skills of emergency medical personnel in care of the intoxicated person	39	47	14	100 (296)

TABLE VII. Areas of Information, Training, or Service Physicians Feel Medical Society Should Address

	% Physicians Responding as:			Total
	Very Important	Somewhat Important	Not Important	Response to Question (No.)
Continuing education programs on:				
Emergency care of acute alcohol or drug intoxication	52	45	3	100 (328)
Diagnosis and outpatient treatment of alcohol problems	59	39	3	101* (326)
Diagnosis and treatment of prescription drug problems	58	39	3	100 (325)
General public education on benefits/hazards of alcohol and prescription drugs	78	20	2	100 (339)
Preparation of new Tel-Med tapes on alcoholism and prescription drug misuse	37	52	11	100 (325)
More involvement of practicing physicians in education of medical students and house officers	47	47	6	100 (327)
More service for physician impaired by alcohol or drug abuse	48	46	6	100 (325)

* Rounding error.

(97%).

These areas, which were identified by open-ended inquiry five years ago and now confirmed by responses to explicit categories, provide a very clear direction for future efforts, both individually by knowledgeable or expert physicians and by the Medical Society in collaboration with other educational programs. It is our conclusion that all of the topics are well recommended for agendas by the state, local and national society and their memberships.

It is also recommended that other groups utilize this type of survey. Informal responses to the questionnaire have included many that have commended and encouraged the committee for its timely efforts. Many have recognized its severe limitations in terms of patient prevalence data as well as the inherent biases created by the voluntary nature of the responding. Nevertheless, many have expressed their concern about the frequency of abuse problems, the needs for further education, the complex nature of the problems, as well as the inadequacies or distortion of medical care introduced by such legal measures as the cumbersome and costly triplicate prescription system.

Summary and conclusions

1. A survey of the members of the Medical Society of the County of Erie, New York confirmed the fact that a large proportion of practicing physicians are interested, concerned, and recognize alcohol- and drug-related problems among their patients (82% of 422 respondents).
2. Among the different classes of drugs, alcohol was ranked as the most frequent agent of abuse; diazepam was identified as second in order of prevalence of association with patient problems.
3. Patients frequently sought help from their doctors specifically for alcohol and drug problems, and an appreciable number of physicians indicated that they would undertake treatment of patients with such problems.
4. The multiple prescription system required in New York for controlled substances was perceived by the majority of physicians as increasing the cost of care, yet ineffective in reducing drug abuse.
5. Most important, these data serve to identify the areas of greatest need in the community in dealing with alcohol and other drug-abuse problems. The approach described here can be readily adapted to meet unique local conditions and is recommended to other medical societies.

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Professional Practice

Significant changes in law

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During the past several years, the New York State Legislature, particularly the assembly committee on higher education, has demonstrated its interest in the regulation of licensed professionals.

In 1975, with the support of the organized profession, the investigation of complaints about physicians, physicians' assistants, and specialist assistants was transferred from the State of New York Department of Education to the State of New York Department of Health. The ostensible purpose of this legislation was to reverse the recent trend of rapidly rising medical malpractice insurance rates by improving physician discipline. As a result of this legislation, a special unit was created in the department of health to investigate allegations against physicians; significant increases in funding were provided the department to enable them to meet their new responsibilities. Physician members of the State board for medicine of the State of New York Department of Health were to be appointed by the commissioner of health on recommendation of State and County medical and osteopathic societies and the hospital association.

Role of medical societies

During the next few years, State and County medical societies attempted, through various means, to play a more significant role in the disciplinary process. Legislation was supported, which would have allowed County medical societies to investigate and discipline professionals for minor instances of professional misconduct. However, attempts to pass such legislation were largely unsuccessful.

New legislation

Physician Reporting Bill. The legislature passed two significant laws in the late 1970s. One was the Physician Reporting Bill, commonly known as the "tattletale bill," which requires medical and osteopathic societies on both a State and County level, Article 28 Facilities, as well as physicians and other licensed professionals, on pain of action being taken against their license, to report any information that "reasonably appears to show" that a physician is guilty of professional misconduct as defined in Section 6509 of the Education Law.

Sick Physician Bill. Another was a law, commonly called the Sick Physician Bill, that allows the State medical and osteopathic societies to refer physicians who are thought to be suffering from alcoholism, drug abuse, or mental illness for treatment rather than reporting them to the Health Department for disciplinary proceedings.

However, despite the transfer of the responsibility to investigate allegations of professional misconduct to the health department, the number of physicians disciplined annually under the new procedure is small, and the price of medical malpractice insurance continues to increase at an alarming rate.

New legislation

During the late 1970s, a joint study was made by both the assembly committee on Higher Education, chaired by Mark Allen Siegel, and the Senate Education Committee, chaired by James H. Donovan.

These committees held public hearings in Rochester, Albany, and New York City, at which many professional organizations and individual professionals testified and/or provided written suggestions. Their efforts culminated in the enactment of chapter 866 of the laws of 1980. This legislation is perhaps the single most important piece of legislation affecting the regulation of professionals licensed by the State of New York enacted in this century.

The most significant changes contained in chapter 866 are:

> 1. Responsibility for the prosecution of disciplinary cases has been transferred from the Attorney General to the Health Department. This transfer, together with the additional funds provided to hire attorneys, is expected to eliminate the backlog of cases awaiting hearing.

2. The requirements for reporting instances of professional misconduct have been expanded, so that Probation Departments are required to report any information that comes to their attention concerning crimes committed by licensed professionals. Hospitals and other health facilities are required to report any action taken that results in a reduction or termination of privileges of a member of their staff.

Perhaps the most significant change contained in the new legislation is the adoption of innovative procedures that will enable disciplinary proceedings to be concluded expeditiously. These new procedures will significantly decrease the role of the professional board members in the disciplinary process.

3. The voting of charges will no longer require the concurrence of a screening panel selected from the State board for the profession. The legislation only requires that the director "consult" with one or more members of the State board. After such consultation the director may vote charges on his own, whether or not the State board concurs.

4. Professionals, whose misconduct arises as the result of criminal convictions, out-of-state disciplinary actions, or action by the State of New York Bureau of Narcotics Control, are no longer entitled to hearings before hearing panels composed of members of the State board for the profession involved. Their cases are now referred directly to the Board of Regents by way of the Regents Review Committee. This committee, which normally consists of one regent and two non-regent attorneys, will review the case and make a recommendation to the Board of Regents. The professional and his attorney may appear before this committee, but no hearing will be held and no verbatim record of the proceeding made.

Several other procedures intended to expedite the processing of disciplinary cases have also been put into effect, but it is not expected that these will result in significant change.

Comment

It is too early to assess the effect of these changes; however, it seems fair to assume that the role of the professional in the discipline process, except for the professional's responsibility to report instances of professional misconduct, will be diminished.

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Physician Discipline

Board of regent's role

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New York State legislation that became effective September 1, 1975, transferred responsibility for the investigation of complaints of physician misconduct from the State of New York Department of Education to the Health Department. However, the State of New York Board of Regents has retained the power to make final determinations and to modify or reverse recommendations of the Commissioner of Health in all disciplinary cases.

The role of the Board of Regents and the actual effect of its intercession in the process may not be fully understood by the medical profession. Since I have worked closely with the Board of Regents in physician discipline cases over the past six years, as Director of the Education Department's Division of Professional Conduct, I believe that I am in a unique position to comment on its activities in this area.

Procedure

Under the procedure promulgated in the legislation, the Executive Secretary of the Medical Board is to present each complaint to a committee of the Medical Board to determine if charges are warranted; if they are, the matter is tried before the Health Department's hearing panel by an attorney. (Prior to January 1, 1981, the attorney was on the staff of the Attorney General's Office, and, since that date, on the State Health Department's staff.) At the conclusion of the hearing, the panel prepares a report on its findings and recommendations for penalty.

Panel review

The 1975 legislation introduced an extra step into the process, requiring the Commissioner of Health to review the recommendations of the hearing panel, which is composed of one lay person and four physicians. The recommendations of the Commissioner of Health are then transmitted to the Board of Regents for review.

Regents Review Committee

The Board of Regents traditionally routes all disciplinary matters through its Regents Review Committee. This is a statutory committee composed of at least one member of the Board of Regents and two practicing attorneys. Usually, the Regent selected is an attorney, although this is not required. Therefore, this Committee is qualified to review the case as to its legal merits, whether or not the decision is likely to stand on appeal, as well as to the fairness of the penalty to be imposed.

Unlike the review by the Commissioner of Health, which is based entirely on the written record, the physician and his attorney have the right to appear before the Committee and to make oral or written statements on the physician's behalf; they may submit briefs or other documents to this committee. The attorney for the State also has the opportunity to respond to these arguments, both orally and in writing.

The Regents Review Committee prepares a report indicating its findings and recommendations. This report is submitted to the Regents' Committee on Professional Discipline which reviews the record and then submits its recommendation to the Board of Regents for final action.

The question as to whether or not three separate reviews by the Board of Regents are necessary has been considered by the Health Department, the Education Department, and the Legislature. One point of view often stated is that three separate reviews by the Board of Regents make the review process too complex and time-consuming. However, it is my belief that this review does not waste time and is such a valuable part of the process that it should be kept.

It normally takes several years from the time that a complaint is received by the Health Department until the hearing is complete; the Commissioner makes his recommendation, and the matter is referred to the Education Department. During that time, the case is under the control of the Health Department and the Office of the Attorney General. When a case is referred to the Education Department, it is immediately placed on the calendar of the Regents Review Committee; this Committee meets the first week of each month. Fifteen days notice of the meeting must be provided to the Respondent. Therefore, the review of a case by the Regents Review Committee takes between 15 and 40 days, depending on the date that the case is received.

Referrals

Each case considered by the Regents Review Committee is referred, the same month, to the Regents Committee on Professional Discipline, and on the next day to the Board of Regents. Since the Board of Regents normally meets three weeks after the meeting of the Regents Review Committee, the review by the Board of Regents and its committees takes less than 60 days, and often takes a much shorter time. The time involved in the review by the Regents takes only a small percentage of the time spent in the entire disciplinary process.

Effect of review

The question of the effect of the review by the Board of Regents is more complex. Review by the Regents is important because it strengthens the public's faith in the disciplinary process by providing a board, not primarily composed of physicians, to review the actions of the State Medical Board. It should be noted that the Executive Director of the Medical Board is a physician, that the majority of the members of both the Screening Panel and the Hearing Panel are physicians, and that the Commissioner of Health is a physician. At the present time, whether right or wrong, many members of the public are suspicious of the willingness of professionals to discipline themselves; they feel better served if a lay board, the Board of Regents, reviews the actions of the physicians.

The Regents' review also provides the person being prosecuted with an additional forum in which to present his view of the case; he often favors review by a disinterested lay person.

Disciplinary process

We might argue ad infinitum about the philosophy behind submitting disciplinary matters to the Board of Regents for review without resolving the issue. However, the real proof of the effectiveness of the Board of Regents is in determining whether or not its review has strengthened the disciplinary process. I believe that the Board of Regents has demonstrated during the past five years that it is not a rubber stamp for the Commission of Health by increasing the penalties to be imposed in appropriate cases. Some instances in which the penalty was raised will now be described so that you may judge for yourself.

In the first two and one-half years after the effective date of the 1975 legislation, the Health Department referred 20 cases to the Board of Regents after hearings had been held by the Hearing Panel and a recommendation made by the Commissioner of Health. The Board of Regents raised the penalties in 14 of these cases and left 6 the same. In one case a surgeon who had caused one patient's death and left another a paraplegic through his mistakes in surgery was required to take additional training by the Hearing Panel. The Board of Regents revoked his license to practice medicine. In several cases, physicians who were found guilty of unlawfully prescribing or dispensing drugs without medical need were given no actual penalty by the State Health Department, but the Board of Regents revoked their licenses to practice medicine. In another case, a physician who had been found guilty of performing immoral acts on several patients was given a three-year suspension by the Health Department, with leave to terminate after one year; the Board of Regents raised this to a revocation. In four cases of Medicaid fraud, the hearing panel recommended a censure and reprimand. In each case, the Board of Regents changed the penalty to a revocation, the effect of which was stayed on condition that the physician pay a $5,000 fine. This change was based on their belief that a person who defrauds the government by receiving money improperly should be punished by being required to return the money. In each case the Board of Regents levied the maximum fine permitted by law.

In no case had the Commissioner of Health recommended any change in a penalty proposed by the hearing panel, which would have had an actual effect on the physician disciplined.

A physician whose penalty had been increased by both the Regents Review Commission and the Board of Regents sought to avoid review by the Regents Review Committee. His penalty had been raised from a one-year suspension to a revocation because of his negligence in the treatment of several patients; he then appealed his revocation to the Courts. He received a favorable decision in the Appellate Division, which stated that the review of physician discipline cases by the Regents Review Committee was improper. At that point, the Board of Regents elected to discontinue review by the Regents Review Committee in all physician discipline cases, pending final determination by the Court of Appeals. The Board of Regents changed the penalty in only one of the nine cases that they reviewed in the next year, probably because it no longer had the advantage of being able to personally observe and question the physician. Ultimately, the Board of Regents prevailed in the lawsuit. Review by the Regents Review Committee was reinstated, with the result that the penalties in 8 of the next 20 cases reviewed by the Board of Regents were changed, with 7 being increased and 1 being reduced.

Thus far in 1981, the Board of Regents has affirmed the penalties in almost all physician discipline cases referred to it. This may indicate that the hearing panels have raised the penalties they recommend in conformity with the Regents' view of the seriousness of the infraction.

Summary

Review by the Board of Regents through its Regents Review Committee has not been an empty exercise. It has provided an internal forum for the physician and his attorney to appear personally before a panel and to point out any mistakes, as to facts or law, that the Hearing Panel may have made, and to present information in mitigation of the penalty imposed. The Board of Regents has raised the penalty to be imposed in over 40 percent of the cases it considered during the period from September 1, 1975, to December 31, 1981. This review has not increased, to a significant extent, the time interval between the receipt of the complaint and the ultimate disposition, since it requires less than two months for the entire review by the Regents. As stated previously, this is only a small portion of the time spent in the disciplinary proceeding.

Although many of these disciplinary cases have been appealed to the courts, none of the penalties imposed by the Board of Regents has, as yet, been modified by the courts. This support indicates that the courts agree with the Board of Regents that those professionals who abuse their position of trust should be severely punished.

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BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

INDERAL is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i* e , that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect The effects of INDERAL and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol s potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, e *g* , isoproterenol or levarterenol However such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e *g* , CHRONIC BRONCHITIS EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure, intensification of AV block hypotension, paresthesia of hands arterial insufficiency, usually of the Raynaud type thrombocytopenic purpura

Central Nervous System lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION—*Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED

BRADYCARDIA—ADMINISTER ATROPINE (0 25 to 1 0 mg) IF THERE IS NO RESPONSE TO VAGAL BLOCKADE ADMINISTER ISOPROTERENOL CAUTIOUSLY

CARDIAC FAILURE—DIGITALIZATION AND DIURETICS

HYPOTENSION—VASOPRESSORS, *e g* LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE)

BRONCHOSPASM ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

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No 464—Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 468—Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

INJECTABLE

No 3265—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10

Reference: 1 Freis, E D Hypertension (Suppl II) *3* 230 (Nov-Dec) 1981

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Serendipity in our files

... originally published in the New York State Journal of Medicine, September 1902, vol 2 no 9, page 277.

THE ACQUISITION OF CLINICAL WISDOM.

In the course of a recent address before the Canadian Medical Association Dr. William Osler made the following pertinent comments: "Medicine is a most difficult art to acquire. All the college can do is to teach the student principles, based on facts in science, and give him good methods of work. These simply start him in the right direction, they do not make him a good practitioner—that is his own affair. To master the art requires sustained effort, like the bird's flight, which depends upon the incessant action of the wings, but this sustained effort is so hard that many give up the struggle in despair. And yet it is only by persistent, intelligent study of disease upon a methodical plan of examination that a man gradually learns to correlate his daily lessons with the facts of his previous experience and with that of his fellows, and so acquires clinical wisdom. Nowadays it is really not a hard matter for a well-trained man to keep abreast of the best work of the day. He need not be very scientific, so long as he has a true appreciation of the dependence of his 'art on science,' for, in a way, it is true that a good doctor may have practice and no theory, art and no science. To keep up a familiarity with the use of instruments of precision is an all-important help in his art, and I am profoundly convinced that as much space should be given to the clinical laboratory as to the dispensary. One great difficulty is that while waiting for the years to bring the inevitable yoke, a young fellow gets stale and loses that practiced familiarity with technique which gives confidence.

"I wish the older practitioners would remember how important it is to encourage and utilize the young men who settle near them. In every large practice there are a dozen or more cases requiring skilled aid in the diagnosis, and this the general practitioner can have at hand. It is his duty, and failing to do so he acts in a most illiberal and unjust way to himself and to the profession at large. Not only may the older man, if he has soft arteries in his gray cortex, pick up many points from the young fellow, but there is much clinical wisdom afloat in each parish which is now wasted or dies with the old doctor, because he and the young men have never been on friendly terms.

"In the fight which we have to wage incessantly against ignorance and quackery among the masses and follies of all sorts among the classes, *diagnosis, not drugging*, is our chief weapon of offense. Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment when treatment is useless, and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks."

... the following editorials originally appeared in the New York State Journal of Medicine, 1934, vol. 34, pp 656, 928.

No Place for the Chronic Sick

Indigent sick people in New York City should be very careful not to be ill too long. It seems to be against the rules, for no place is provided for them. Sufferers from acute and subacute diseases are all right. Facilities are given to them by the municipality and by philanthropic voluntary hospitals and clinics. Indigent persons incapacitated by old age, too, are cared for by State and City, and the tuberculous and insane are provided for at public expense because they are a menace to the rest of the population. But those rendered helpless by chronic illness have made the blunder of getting into the wrong category. There is no provision for them.

Their plight has been under investigation by a committee of the Welfare Council of New York City, who find that a majority of the indigent chronic sick are shuttled from pillar to post, without any attempt at constructive care or rehabilitation. In fact it is said to be a common experience for a patient to receive treatment first in a private general hospital, then try a period of home care, return to the same hospital, transfer to Bellevue, transfer again to City Hospital, and finally end up in Neurological Hospital. The long and short of it is that they find refuge in any institute willing to admit them, so that these unhappy sufferers are scattered in every imaginable type of institution, many not at all adapted to their care. In this way chronic illness is becoming an ever increasing cause of disability and death.

Few outside of the medical profession realize the extent of chronic illness among the population. The survey of the Commission reveals that 10 per cent of the total population are suffering from chronic disease. One and a half per cent of the population over 40 years of age are completely disabled by chronic maladies, and, not counting the victims of tuberculosis and mental disease, over 0.3 per cent are receiving some care from medical or social agencies because of incapacity due to chronic illness.

To meet this unfortunate situation, the Committee recommends, for one thing, a modern hospital in New York City for chronic diseases. No less than 20 per cent of the beds of general hospitals, it appears are now used for victims of chronic illness, and "most of these could be treated more economically and with better results" in such a special institution. The only provision now made by the city for the chronic sick are Neurological Hospital, Cancer Institute, and the chronic wards in three other hospitals, "all of which are inadequate for this purpose."

We all know only too well how often the best solution of a problem meets a snag because it turns out to be against some rule or regulation. Well, it happens again here. The committee believes that "many of the chronically ill could be cared for just as well at home and would be happier there." Home care, indeed, "is not only more humane for many patients, but it is also much more economical than institutional provision." And what is more, a survey shows that four-fifths of the patients living at home do not need institutional care, several hundred patients in general hospitals might be taken care of at home, and undoubtedly more in other institutions could be at home. Here, however, we strike the snag. The city provides at present only institutional care for the chronic sick, because home care paid for out of public funds is not permitted under the city charter. Besides, the committee remarks sagely, "one question to be met is whether a system of home care free from political abuse can be conducted in a city the size of New York." The committee certainly "said something" when they said that.

At any rate, the anomalous condition of this unfortunate group is now squarely in the limelight, and we may expect that something will be done to remedy it. The committee is composed of the kind of people who get things accomplished, they have given their findings and recommendations to Commissioner Goldwater, who has the same excellent trait, and their ideas and plans have been endorsed by the New York Academy of Medicine, the United Hospital Fund, the New York City Visiting Committee of the State Charities Aid Association, and the Executive Committee of the Welfare Council of New York City.

Probably very few, if any, of the indigent chronic sick themselves have the faintest idea of all this effort going on far over their heads to better their care. Some day they will merely find that they are more comfortable, that they are in a fine new building, with medical and nursing attention that is better suited to them. It may very likely happen that not one of the committee who are working to bring this about will ever receive a word of thanks from these unfortunates whose burden of illness is made a bit lighter, a bit more endurable. But the workers are not looking for thanks. If the days of pain are eased, that is reward enough. And the weight of power back of this plan seems to indicate that the happy result is not far away.

Medical Care for Indigents in New York State

Responsibility of a community to provide medical care to its poor as well as food, shelter and clothing has crystallized into general recognition in recent years. The citizen "in need" should find medical attention readily available; and the machinery of administration by the community should be so simple, so easy to understand, so soundly arranged that all concerned, sick man, physician, community welfare official can go into action, separately and collectively, quickly and surely.

Legislative enactment for regulation of provision of medical care to the poor and needy in New York State has been an evolutionary process, usually motivated irregularly and independently by minority groups toward more or less solitary objectives. The gradual accretion of law has followed no comprehensive and inclusive master plan. Orderly progress to co-ordinated effective action between the necessary agencies has not developed. Chaos, conflict, deficiencies, overlapping provisions and other faults confront and confuse those who should participate and co-operate understandingly. Ten different statutes and fragments of others, prescribe how public and semi-public assistance shall or may be given to the poor in need of medical care.

Under such conditions, how could medical service be furnished the indigents smoothly, easily, efficiently in accordance with the simple, all inclusive formula, "quickly" and "surely"? And in New York State this formula, in fact, is not satisfied.

For a long time aware of the situation, the Medical Society of the State of New York commissioned its Committee on Economics to delve deeply into this phase of the larger problem of providing medical care to all citizens of the State, with a view to formulating positive suggestions, positive plans that should do full justice at one and the same time to patients, taxpayers and physicians, now and in the future.

The first step has been taken in the field of medical care of indigents and completed during the last summer. Those parts of the laws which specify the actions, powers, privileges and restrictions, responsibilities and authority of those concerned with the administration of the laws or with the actual task of medical care have been extracted, briefed, published in a loose-leaf book of 121 pages. Copies have been circulated among physicians, County Societies, nurses, officials of welfare, health and hospital positions, with a request that each recipient note on blank interleaves personal comments on deficiencies, on conflicts, on needs for correction in the laws.

When these annotated books return the Committee will classify and analyze the criticisms. Conferences may be held with those agencies both State and local having to do with various provisions of the laws relating to the indigent especially as concerns provision of medical care and hospitalization. Two objectives are being pursued. The one is simplification by amendment of the laws where necessary, the other, publication of a manual which shall guide all concerned with provision of medical service, be it casual or custodial care, to the poor and needy.

At this time, when revolutionary changes are being proposed from outside the profession, it should be enheartening to know that the State Society is actively moving toward carefully considered action, that it has advanced with due study and foresight along the first most important pathway, medical care for indigents.

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Beta agonists act by stimulating beta_2 receptors in bronchial smooth muscle. This stimulus results in increased levels of cyclic AMP, which triggers the series of biochemical events leading to bronchodilation.

Beta agonists may be difficult to control in chronic use.

There is concern that chronic use of beta agonists can lead to clinically important drug tolerance.[2] Repeated stimulation of receptors by beta agonists causes an eventual reduction in the number of receptor sites and a decreased ability to produce cyclic AMP. The result: a potential decline in both magnitude and duration of bronchodilator response.[3]

This may help account for the fact that more than half of all patients on beta agonists require concomitant therapy, usually a theophylline.[4]

Theophylline: no evidence of tolerance.

Unlike beta agonists, theophylline appears to act through the inhibition of phosphodiesterase, the enzyme which breaks down cyclic AMP. Theophylline has no effect on the number of beta_2 receptors and therefore has none of the potential for tolerance seen with beta agonists.

Conclusion: Current thinking strongly suggests that beta agonists should be reserved for use in acute attacks. Theo-Dur is indicated for both relief and prophylaxis of bronchospasm.

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Description: THEO-DUR Sustained Action Tablets contain anhydrous theophylline, with no color additives.
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Indications and Usage: Symptomatic relief and/or prevention of asthma and reversible bronchospasm associated with chronic bronchitis and emphysema.
Contraindications: THEO-DUR is contraindicated in individuals who have shown hypersensitivity to any of its components or xanthine derivatives.
Warnings: Excessive theophylline doses may be associated with toxicity; serum theophylline levels should be monitored to assure maximum benefit with minimum risk. Incidence of toxicity increases at serum levels greater than 20 mcg/ml. High blood levels of theophylline resulting from conventional doses are correlated with clinical manifestation of toxicity in: patients with lowered body plasma clearances, patients with liver dysfunction or chronic obstructive lung disease, and patients who are older than 55 years of age, particularly males. There are often no early signs of less serious theophylline toxicity such as nausea and restlessness, which may appear in up to 50% of patients prior to onset of convulsions. Ventricular arrhythmias or seizures may be the first signs of toxicity. Many patients who have higher theophylline serum levels exhibit a tachycardia. Theophylline products may worsen pre-existing arrhythmias.
Usage In Pregnancy: Safe use in pregnancy has not been established relative to possible adverse effects on fetal development, but neither have adverse effects on fetal development been established. This is, unfortunately, true for most anti-asthmatic medications. Therefore, use of theophylline in pregnant women should be balanced against the risk of uncontrolled asthma.
Precautions: THEO-DUR TABLETS SHOULD NOT BE CHEWED OR CRUSHED. Theophyllines should not be administered concurrently with other xanthine medications. It should be used with caution in patients with severe cardiac disease, severe hypoxemia, hypertension, hyperthyroidism, acute myocardial injury, cor pulmonale, congestive heart failure, liver disease, and in the elderly, particularly males, and in neonates. Great caution should be used in giving theophylline to patients in congestive heart failure since these patients show markedly prolonged theophylline blood level curves. Use theophylline cautiously in patients with history of peptic ulcer. Theophylline may occasionally act as a local irritant to G.I. tract, although gastrointestinal symptoms are more commonly central and associated with high serum concentrations above 20 mcg/ml.
Adverse Reactions: The most consistent adverse reactions are usually due to overdose and are:
Gastrointestinal: Nausea, vomiting, epigastric pain, hematemesis, diarrhea
Central Nervous System: Headaches, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions.
Cardiovascular: Palpitation, tachycardia, extrasystoles, flushing, hypotension, circulatory failure, life threatening ventricular arrhythmias.
Respiratory: Tachypnea.
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References:
1. Theo-Dur package insert.
2 Plummer AL: *Chest 73*:6 (Suppl 949-957), 1978.
3 Jenne J et al *J Allergy Clin Immunol 59*:383-390, 1977.
4 Data on file, Key Pharmaceuticals, Inc.

KEY
PHARMACEUTICALS, INC.
Miami, Florida 33169 (USA)
TD-1104

(*continued from page 842*)

At its meeting in May 1975 the Union International Against Cancer (UICC) Project on Controlled Therapeutic Trials decided to devote its activities to the improvement of methodology "so that trials are easier to conduct and lead to more valid conclusions."

For this purpose a number of subjects, which were related to the major difficulties encountered both by physicians and statisticians involved in cancer clinical trials, were selected.

In Part II, the impact of clinical trials in the treatment of cancer were assessed, such as problems specific to some localizations: cancer of the lung, of the colon and rectum, of the breast, malignant melanoma, Hodgkin's disease, and osteosarcoma.

The reports should not be considered as an up-to-date review of the cancer treatment methods studied. **Leonard B. Goldman, M.D.**

Critical Care for Surgical Patients. Edited by John M. Beal, M.D. New York, Macmillan Publishing Company, Inc., 1982. Illustrated, 606 pages. Cloth, $45.

This is the third book this author has edited in the area of critical care since 1957. His expertise shows in the choice of subjects covered in this book, the aim of which is to present the basic principles in the management of the critically ill surgical patients. In general, this aim is realized. The book is divided into six units covering Respiratory Problems, Cardiovascular Crisis, General Surgical Care, Problems in the Surgical Specialities, Pediatric Surgical Emergencies, and Medical Problems in Surgical Patients. Each unit is composed of concise chapters by different authors, which makes for easy review of a particular subject. The section on the adrenal may, however, be too concise and misses important advances such as the use of an intra-aortic balloon in catecholamine myocarditis. As a rule, references are more than adequate. Italics were used in the first unit (Respiratory Care) to stress important points. This was an added help, in an already well-written chapter. The failure to include high-frequency ventilators was inexplicable in a volume published in 1982. The chapters on cardiovascular monitoring, elevated intracranial pressure, neurological emergencies, and management of burned patients are excellent reviews.

However, this book is of value to all who are involved in the care of the critically ill. **Vasilios Pratilas, M.D.**

Toxicologic Emergencies: A Comprehensive Handbook in Problem Solving. Second edition. Edited by Lewis R. Goldfrank, M.D. New York, Appleton-Century-Crofts, 1982. Hardcover, 432 pages. $34.50.

Several years ago I had the pleasure of hearing Dr. Lewis Goldfrank present his experience in clinical toxicology at the Joel Hartley Memorial Symposium held at Mount Sinai Hospital. His talk was both pertinent and entertaining and I remember becoming very interested in material that I had previously perceived as dry and encyclopedic. Later, as an occasional reader of *Hospital Physician* during my residency, I would come across Dr. Goldfrank's case presentations in emergency toxicology, and several of the tables that appeared in these articles found their way into my "black book" for future reference. Now,

(*continued on page 976*)

Obituaries

M. Nisar Ahmad, M.D., F.A.C.A., Syracuse.
Died January 20, 1982; age 50.
King Edward Medical College of the University of Punjab, Lahore, West Pakistan, 1955. Member: American College of Cardiology, American College of Chest Physicians, Medical Society of the County of Onondaga, Medical Society of the State of New York.

John Jacob Arnold, M.D., New York City
Died December 31, 1981; age 85.
University and Bellevue Hospital Medical College, 1920. Member: Medical Society of the County of New York, Medical Society of the State of New York.

Arthur Joseph Barsky, M.D., New York City
Died February 11, 1982; age 83.
New York Homeopathic Medical College, 1926. Member: Medical Society of the County of New York, Medical Society of the State of New York.

Thomas Norman Cassidy, M.D., Westbury
Died February 19, 1982; age 82.
Georgetown University Medical School, 1927. Member: Nassau County Medical Society, Medical Society of the State of New York.

Harry J. Cohen, M.D., Long Beach
Died December 31, 1981; age 80.
University and Bellevue Hospital Medical College, 1924. Member: Bronx County Medical Society, Medical Society of the State of New York.

Harold B. Davidson, M.D., New York City
Died January 15, 1982; age 88.
Columbia University College of Physicians & Surgeons, 1921. Membership: Medical Society of the County of New York, Medical Society of the State of New York.

John K. Deegan, M.D., Beacon
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Albany Medical College, 1927. Membership: New York Thoracic Surgery Society, American Medical Association, Dutchess County Medical Society, Medical Society of the State of New York.

Paul Fagin, M.D., The Bronx.
Died December 3, 1981; age 80.
Cornell Medical College, 1926. Membership: National Board of Medical Examiners, Bronx County Medical Society, Medical Society of the State of New York.

Joseph P. Garen, M.D., Rochester
Died January 30, 1982; age 85.
University of Buffalo, 1918. Membership: American Medical Association, Monroe County Medical Society, Medical Society of the State of New York.

Bernard Joseph Gioffre, M.D., Port Chester
Died January 4, 1982; age 81.
Georgetown University School of Medicine, 1928. Membership: Medical Society of the County of Westchester, Medical Society of the State of New York.

Robert Emmet Harrington, M.D., Saratoga Springs
Died April 28, 1981; age 80.
Albany Medical College, 1929. Membership: Medical Society of the County of Saratoga, Medical Society of the State of New York.

Stephen A. Graczyk, M.D., Buffalo
Died January 23, 1982; age 86.
University of Buffalo Medical School, 1920. Membership: Medical Society of the County of Erie, Medical Society of the State of New York, American Societies of Internal Medicine, Bockus Internal Society of Gastroenterology, Buffalo Academy of Medicine, Fellow of the American College of Physicians, American Geriatrics Society.

Arthur S. Heldman, M.D., The Bronx
Died January 28, 1982; age 68.
Dalhousie University, Canada, 1940. Membership: Medical Society of the County of Bronx, Medical Society of the State of New York.

Myron Herman, M.D., The Bronx and Yonkers
Died February 11, 1982; age 71.
New York University College of Medicine, 1936. Membership: American Psychoanalytic Association, American Psychiatric Association, Westchester Psychoanalytic Society, Westchester.

Obituaries appearing in the April 1982 issue of the New York State Journal of Medicine are on pages 763 and 764.

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Your Next Meeting

The 176th Annual Meeting of the Medical Society of the State of New York will be held at the Concord Hotel, Kiamesha Lake, New York, on . . .

NOVEMBER 7th–10th, 1982

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1982

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Members of the Medical Society of the State of New York are entitled to the many benefits outlined below. We suggest that you retain this section for future reference, bring it home and share it with your family. Use the return coupon on facing page to obtain detailed information on the benefits that interest you.

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Medically insurable members under the age 55 may add protection of up to $500 per week payable if they become totally disabled by accident or sickness. Guaranteed coverage of $150 a week under Plan 5–2 to new members under 45 who apply within 60 days of joining the Society.

b. **Disability Overhead Program with Special Renewal Guarantee*.**
Medically insurable members under age 60 may add up to $2,500 a month expense reimbursement for continuing practice expenses in the event of disability. The cost of this protection is tax-deductible.

c. **Hospital Indemnity Plan with Special Renewal Guarantee*.**
Members under age 60 may add supplementary hospital protection up to $80 per day. Spouse and children may be included optionally. Skilled nursing home benefits are available. Plan may be renewed for life of insured person . . . member, spouse or child.

d. **Accidental Death, Dismemberment & Permanent Total Disability Plan with Special Renewal Guarantee*.**
Members under age 60 may add protection up to $100,000. Total amount is also paid if the member is permanently and totally disabled as the result of an accident, after 12 consecutive months of total disability

Continued

**The renewal of your policy is guaranteed* so long as (a) you are a member of MSSNY, (b) you are under age 70, (c) you remain actively engaged in medicine and (d) the Society sponsors this Plan and does not sponsor or endorse any other similar program.

e. **Student Disability Income Protection Plan***

Group Life Plan with Special Renewal Guarantee. Society members under age 65 who are medically insurable may add up to $250,000 term life protection. New MSSNY members under age 65 are guaranteed substantial amounts of the protection without regard to medical history, if they apply within 60 days of joining MSSNY. Tax-deductible coverage is available for a physician's employees or the physicians and other employees in a professional corporation.

Renewal guarantee: By special agreement with MSSNY, the Company cannot cancel or refuse to renew your group life contract so long as the Society sponsors this plan and no competing life plan.

UNDERWRITERS OF INSURANCE PLANS:

The Society Group Life Plan is underwritten by Bankers Life Co., Des Moines, Iowa, a leader in the professional association life field. The other endorsed plans are written by the Commercial Insurance Co's of New York City. Commercial Insurance has written many of the county and district branch programs in New York for many years.

PUBLICATIONS

NEW YORK STATE JOURNAL OF MEDICINE. Published monthly. The Journal provides continuing medical education through original scientific articles, case reports; symposia and seminar meeting dates throughout New York State It also lists physician placement opportunities, classified advertising, and the annual convention program.

MEDICAL DIRECTORY OF NEW YORK STATE. A biennial listing of over 35,000 physicians licensed in New York State indicating their office addresses, specialty boards and colleges and official hospital staff appointments; as well as the staff lists of hospitals throughout the state.

NEWS OF NEW YORK. This twice-monthly newsletter is MSSNY's main channel of communication of socioeconomic and legislative information to the membership.

MSSNY MEMBERSHIP BENEFITS QUESTIONNAIRE

Please send me further information on the following:

☐ Supplemental Insurance Programs:

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( ) Disability Income Insurance ( ) Office Overhead Expense Insurance

( ) Hospital Indemnity Insurance ( ) Accidental Death & Dismemberment Insurance.

( ) Medical Student Disability Income Insurance

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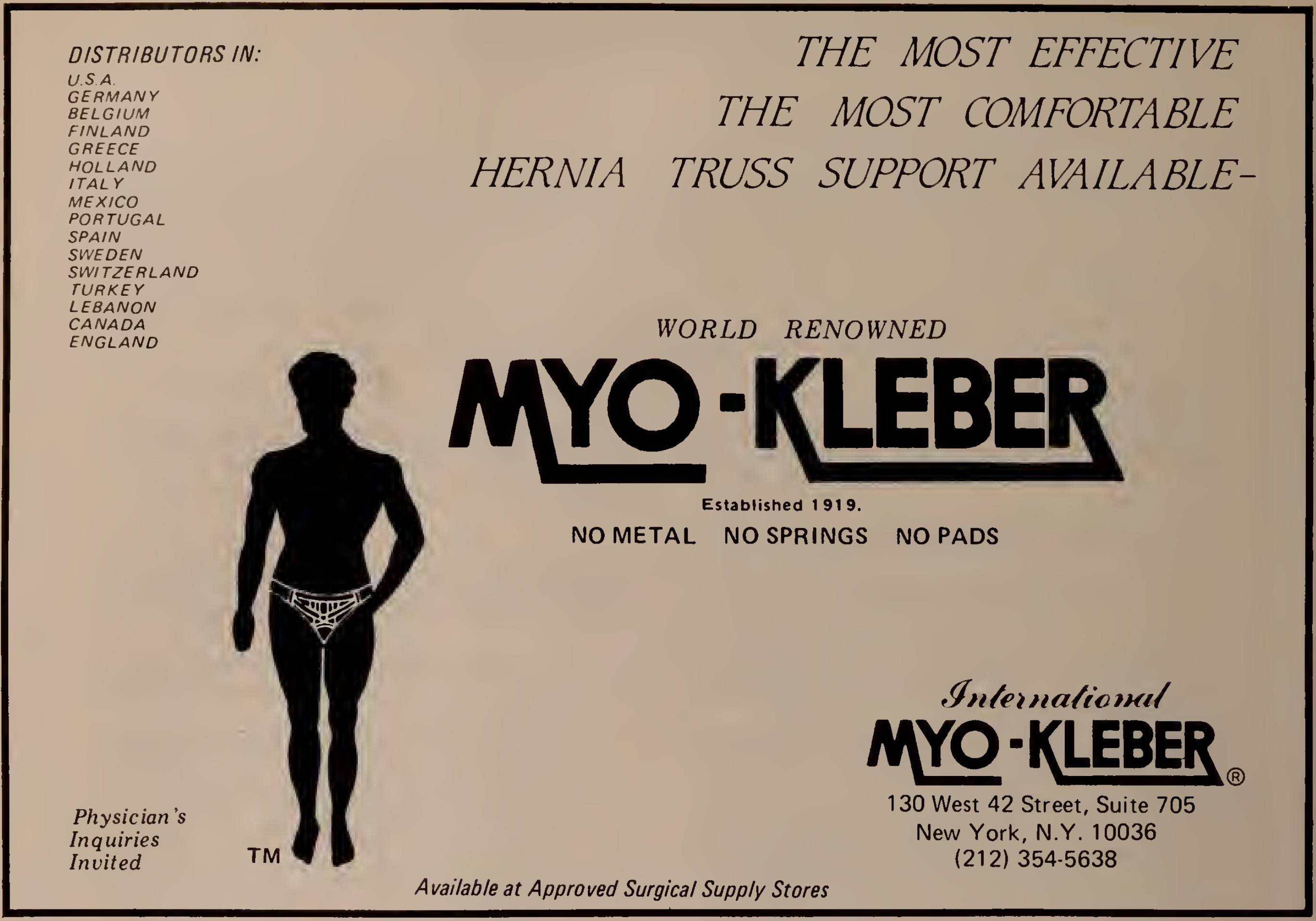
Please return questionnaire to: Division of Insurance & Membership Benefits, c/o MSSNY, 420 Lakeville Rd., P.O. Box 5404, Lake Success, N.Y. 11042. Phone: (516) 488-6100, ext. 235/6.



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(*continued from page 964*)

in solo rural practice and seeing similar cases on a fairly frequent basis, it is a real pleasure to become reacquainted with Dr. Goldfrank through the second edition of *Toxicologic Emergencies: A Comprehensive Handbook in Problem Solving.*

The book represents a revised collection of a series of articles originally published in *Hospital Physician.* As toxicology texts go, the significant feature of Dr. Goldfrank's book is the use of the case study. The approach is common to many areas of medicine but particularly in toxicology; it allows for clinical correlation with what otherwise could be an exhaustive catalogue of physical findings and chemical side effects. The first four chapters deal with an overview of clinical toxicology, including a discussion of prevention. Surprisingly little is mentioned regarding the "Mr. Yuk" campaign widely used by many hospitals and practitioners (including myself) and first developed at the Children's Hospital of Pittsburgh, Pennsylvania. (Mr. Yuk is a scowling face with a bright green color, chosen by children themselves as particularly uninviting and frightening.) Perhaps Dr. Goldfrank and his associates have found its use of limited value, based on their experience. The bulk of the book consists of eight parts representing broad categories of potential toxins (including the environment) and further subdivision of its chapters dealing with specific agents. The final section of the book is a self-assessment examination with answers; the questions are grouped according to chapters that make for easy review and concentration in a particular area. Following this self-assessment portion, an index is provided for additional review.

Shortly after receiving this book for review, I had two separate cases of poisoning in children, and I found the book far more useful to utilize in a clinical setting than some of the texts to which I had access. To that extent, it appears that Dr. Goldfrank has accomplished his goal of formulating a useful clinical tool for the treatment of poisoning. **Louis Verardo, M.D.**

Urology in Pregnancy. Edited by Selwyn A. Freed, M.D., and Norman Herzig, M.D. Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, 255 pages. Cloth, $35.

This is an excellent compendium of up-to-date knowledge about the urological complications of pregnancy. It is a much-needed text reminiscent of Crabtree and Everett. The choice of contributors is excellent. Everyone who cares for the pregnant woman should have access to this book. **William F. Finn, M.D.**

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[1] Medical Accounting System was created by Cimarron Corp.

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Medical News

National rehabilitation research site named

Harlem Valley Psychiatric Center's Central Westchester Community Services has been selected as one of three national rehabilitation research sites by Boston University.

Department chairman named

Joseph Goodgold, M.D. has been appointed chairman of the department of rehabilitation medicine at the New York University School of Medicine.

National group honor

The American College of Physicians (ACP) announced that James R. Vervaina, M.D., of Flushing, N.Y., has been selected to Fellowship.

First woman in nation named to urology post in medical school

I. Kathleen Hagen, M.D., who is one of six board certified women urologists in the country, has returned to her native New Jersey to set a national precedent: the first woman to become chief of a urology division in an American medical school.

The school is the Rutgers Medical School of the University of Medicine and Dentistry of New Jersey (UMD) — which also happens to be an alma mater of the 36-year old physician. Dr. Hagen's appointment as chief of the school's Division of Urology and associate professor of surgery became official on January 1.

Brookhaven lab scientist wins Lawrence Award

Martin Blume of Brookhaven National Laboratory has won the 1981 U.S. Department of Energy's prestigious Lawrence Award for physicis.

Honorary doctorate

Dr. Hermann Rahn, Distinguished Professor of Physiology at the State University at Buffalo, was awarded an honorary doctorate in medicine from the University of Bern, Switzerland, in ceremonies there in December.

New chairman for Brookhaven Lab Chemistry Department

Alfred P Wolf, a Brookhaven National Laboratory chemist, who is internationally known for his scientific research, has been appointed chairman of the Lab's Chemistry Department.

Material for inclusion in the medical news section must be received eight weeks prior to publication date.

George W. Perkins III Scholar

Afif R. Iliya, M.D., a resident in neurological surgery at SUNY Upstate Medical Center in Syracuse, has been named the first George W. Perkins III Scholar in Neuroscience, as a consequence of his research in fundamental neuroanatomy and neurophysiology of the motor system.

New Fellows — ACCP

The following New York State physicians were formally inducted into Fellowship of the American College of Chest Physicians during the convocation ceremonies at The ACCPs 47th Annual Scientific Assembly held recently in San Francisco, California:

NEW YORK

Raj K. Gupta	Tarrytown
John T. Hsu	New York
Robert H. Israel	Rochester
Philip Marcus	Great Neck
Jasvant G. Mehta	Mamaroneck
Ronald G. Perciaccante	Watertown
Leonard J. Sonne	Brooklyn
Michael J. Zema	Patchogue

Downstate Medical Center promotion and appointments

Stanley Friedman, M.D., has been promoted to professor of pharmacology.

Bernard J. Sicuranza, M.D, has been appointed associate professor of clinical obstetrics and gynecology.

Aaron Miller, M.D., has been appointed associate professor of neurology.

Joseph Vardi, M.D., has been appointed clinical associate professor of Obstetrics and Gynecology.

NIH appointment

Douglas D. McGregor, M.D., D. Phil., Director of the James A. Baker Institute for Animal Health, has been selected by the Secretary of Health and Human Services to serve on the National Institutes of Health Advisory Committee to the Director.

First American Surgical Association Foundation Fellow named.

Dr. Dana K. Andersen, Assistant Professor of Medicine and Surgery at Downstate Medical School (SUNY), Brooklyn, has won the distinction of being named the first American Surgical Association Foundation Fellow. The prestigious award carries a one-year $25,000 stipend, plus fringe benefits, starting July, 1982.

(continued on page 980)

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(continued from page 978)

New appointment at Lenox Hill Hospital

Harry L. Ioachim, M.D., appointed Director of the Pathology Department at Lenox Hill Hospital, New York City.

Chairman named

State University at Buffalo professor Dr. Leon E. Farhi has been named chairman of the School of Medicine's Department of Physiology.

NEW YORK COUNTY MEDICAL SOCIETY receives foreign medical graduate grant

A three-year grant from the Educational Commission for Foreign Medical Graduates was received by the New York County Medical Society on behalf of the Special Committee on Foreign Medical Graduates. The grant will help support "Operation Mainstream," a program which will pave the way for graduates of foreign schools into American medicine by addressing some of their common needs and problems. The project will promote better understanding among foreign medical graduates, the public and organized medicine: an area that is clearly in need of a great deal more attention than it has received.

HOPE helps Polish children with more medical manpower and supplies

Despite Poland's crisis, a group of medical professionals continue to make humanitarian investment in a better future for Polish children, with the sanctions of the United States government.

On January 20, a team of 14 Americans will leave this country for Krakow to begin two weeks of teaching their Polish counterparts advanced techniques in cardiology, open-heart surgery and intensive care medicine at Krakow's American Children's Hospital. The continuing program is part of Project HOPE's teaching exchange between American medical personnel and the staff of the Institute of Pediatrics there.

Since 1975, this exchange has helped the Children's Hospital as one of the major centers for pediatric congenital heart surgery in Eastern Europe. In Poland, 3,500 Polish children are born each year with congenital heart disease. There are not enough surgeons and properly equipped pediatric hospitals to help them.

Simultaneously with the HOPE medical team operation is an airlift of drugs and medical supplies. The latest January shipment will use the volunteer services of the Flying Tigers.

HOPE is also renegotiating a major medical supply and drug relief effort that has been in existence since June, 1981, at the request of the Polish government and the Solidarity Trade Union. This was interrupted with imposition of martial law in December. These supplies were distributed to the Polish people in conjunction with Solidarity.

HOPE program cordinator John T. Walsh will negotiate with appropriate representatives to assure all future supplies will once again go to the Polish people.

The HOPE team bound for Poland includes from Children's Hospital of Philadelphia: Eugene K. Betts, M.D.,

(continued on page 982)

Office Management of Common Medical Problems

A unique study/vacation opportunity for the entire family
in the heart of the Finger Lakes Region in Upstate New York
August 1–7, 1982
Cornell University, Ithaca, New York

Attention: General Internists, Family Practitioners, Emergency Room and Primary Care Physicians. Combine your CME course with a family education/vacation at our fourth annual summer program.

Program: The workshop will focus on a discussion of the physicians approach to office diagnosis and treatment of common medical problems.

Morning sessions of formal lectures and discussions. Early afternoon workshops leave afternoons and evenings free for relaxation and recreation. The program will include selected topics in Cardiology, Immune Diseases, Psychiatry, Neurology, Gastroenterology, Pulmonary, Oncology, Urology, and Surgery.

Faculty: Specialists from the Guthrie Clinic and visiting faculty from other major medical centers.

Spouse Courses (optional): A choice of several adult courses to expand your horizons.

Children's Activities (optional): A complete summer youth program for children from 3 to 16.

Credits: 24 AMA Category I Credits

Costs: $350 plus housing and meal plans from $140 per person.

Information: Call or write: Dr. Frederick Rose, Director of Medical Education, Robert Packer Hospital/Guthrie Clinic, Sayre, PA 18840, Phone: (717) 888-6666, extension 366.

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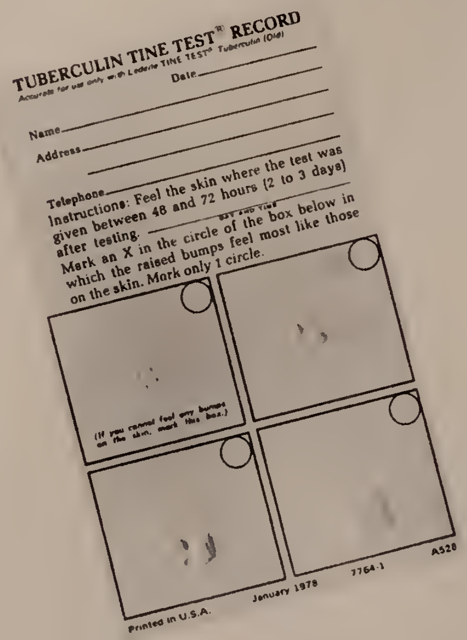

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Mark an X in the circle of the box below in which the raised bumps feel most like those on the skin. Mark only 1 circle.
(If you cannot feel any bumps on the skin, mark this box.)
Printed in U.S.A. January 1978 7764-1 A528

...and no easier method to confirm the results.

Lederle Tuberculin, Old, TINE TEST®

Indications: For screening for tuberculosis.

Precautions: Use with caution in persons with acute tuberculosis (activation of quiescent lesions is rare); and in patients with known allergy to acacia. Reactivity to the test may be suppressed in those receiving corticosteroids or immunosuppressive agents, or those who have recently been vaccinated with live virus vaccine such as measles, mumps, rubella, polio, etc. With a positive reaction, further diagnostic procedures must be considered, i.e., chest x-ray, microbiologic examinations of sputum and other specimens, confirmation of positive tine test (except vesiculation reactions) by Mantoux method. When vesiculation occurs, the reaction is to be interpreted as strongly positive and a repeat test by the Mantoux method must not be attempted. If a patient has a history of occurrence of vesiculation and necrosis with a previous tuberculin test by any method, tuberculin testing should be avoided. Similar or more severe vesiculation with or without necrosis is likely to occur.

Pregnancy Category C. Animal reproduction studies have not been conducted; whether Tuberculin, Old, TINE TEST® can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity is unknown. Tuberculin, Old, TINE TEST should be given to a pregnant woman only if clearly needed. During pregnancy, known positive reactors may demonstrate a negative response.

Adverse Reactions: Vesiculation, ulceration, or necrosis may appear at test site in highly sensitive persons. Pain, pruritus and discomfort at test site may be relieved by cold packs or by topical glucocorticoid ointment or cream. Any transient bleeding at puncture site is not significant.

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Robert G. Kettrick, M.D, Daniel F. Baranowski and Janet Ann Koehler, R.N.; from Children's Hospital Medical Center in Boston: William I. Norwood, Jr., M.D., John D. Murphy, M.D., Peter Lang, M.D., Patricia Malinowski, R.N., Paula Jean Grant, R.N., JoAnn Desilets, R.N. and Carl W. Chipman, Jr.; from the University of Virginia School of Medicine: James D. Kitchin, III, M.D. Representing Project HOPE will be the coordinator Mr. Walsh, Vice President-Development, and Walter Kaplan, A.I.A., Architectural and Health Planning Consultant.

Project HOPE, founded by William B. Walsh, M.D. in 1958, is an independent nonprofit corporation whose principal objective is health care education here and abroad. HOPE activities also help policy leaders learn new planning and administrative approaches to meeting their nation's health care needs and provide research, analysis and dissemination of health information.

Statements by Arthur Hull Hayes, Jr., M.D. Commissioner of Food and Drugs

I am pleased to announce today the Food and Drug Administration's approval of a new virus vaccine to combat hepatitis B, a debilitating liver disease.

This major advance was brought about by the cooperative effort of scientists in government, industry, and the academic community. This is the first completely new viral vaccine in ten years and the first vaccine ever licensed in the United States that is made directly from human blood.

Hepatitis B is a major public health problem in the United States. There are 200,000 to 300,000 new infections each year, and 100 to 200 victims die of acute hepatitis. Thousands more suffer from degenerative liver disease as a result of hepatitis B infection. Further, there is a reservoir of 400,000 chronically infected carriers, many of whom continue to transmit the disease.

The Centers for Disease Control estimate the cost of hospital treatment alone for hepatitis B, the minimum amount that can be saved by using the vaccine, to be about 4.3 million dollars a week.

The incidence of hepatitis B in some developing countries is much greater than here, and there are up to 200 million hepatitis B carriers worldwide. The new vaccine obviously has the potential for a dramatic effect not only on the health of the people in this country but on those in many other nations as well.

Recent research on the hepatitis B virus has suggested an association with liver cancer. On a worldwide basis, cancer of the liver is the most common form of cancer. It accounts for about 2 percent of all cancers in this country but as much as 20 to 40 percent in some areas such as Africa and Asia. Epidemiological studies show that patients with liver cancer are more likely to have had chronic infection with hepatitis B than the general population. So this vaccine may save people not only from an infectious disease, but from one form of cancer as well.

Hepatitis B used to be called serum hepatitis or post-transfusion hepatitis, because it was thought to be spread only by the transfusion of infected blood, or by unsterile needles used for illicit drug injections, ear piercing or tatooing. But the virus is now known to also be present in carriers' tears, saliva and semen and to be spread by intimate contact, including sexual activity. Thus, persons at high risk to the disease include those who handle equipment in blood banks or kidney dialysis units, surgeons, dentists and others who come into contact with chronically infected individuals. Also at high risk are drug addicts and people with a very large number of sexual contacts such as some male homosexuals.

This vaccine, though very important, is not for general, population-wide use. I want to make clear that not everyone needs to take this vaccine. Indeed, it will be recommended initially only for people at high risk of acquiring the disease, such as health care workers, institutionalized mentally handicapped patients, laboratory workers, hemodialysis staff workers and patients, contacts of certain carriers, some military personnel and persons with numerous sex contacts. Because of the very lengthy production time, the vaccine will not be available for broad distribution until mid-1982.

The vaccine will be made by Merck Sharp & Dohme of West Point, Pa.

I am announcing the approval of the first drug to be specifically labeled for use in preventing death and further heart attacks among people who have just survived an initial heart attack. The drug is timolol, which has had its major use to date as eye drops for the treatment of glaucoma.

With this drug in tablet form for its new use, and with similar drugs that may have the same effect, we are entering a new era in the treatment of heart disease, the nation's number one killer. The drugs will help prolong the lives of thousands of Americans with heart disease.

People who have survived a heart attack are at high risk of dying or having another heart attack in the first weeks and months after their first attack. But in a major study reported this year, the risk of death for these people was significantly reduced, by about a third, when they were given timolol.

Let me try to put some numbers on what the use of this drug and similar ones still being studied may accomplish.

Each year, 350,000 Americans are treated for heart attacks, survive them, and are released. These people are the prime candidates for therapy with timolol.

Of these survivors, if we apply the raw data from a recent Norwegian study conducted with timolol, about 15 percent, or 50,000, can be expected to die of their heart disease within two years. So if we can cut their death rate by about one-third, that will mean that about 17,000 of these people will live longer. Even if we can do half as well in practice as was done in the controlled Norwegian study, we may save 7–10,000 Americans a year.

I want to emphasize that these are estimates; the Norwegian population studied is likely to be different from the overall population of Americans with heart attacks. Not everyone can be given timolol. For example, people with bronchial asthma should not take it. Still, we are talking about prolonging the lives of literally thousands of Americans a year.

The approval of timolol is based on a three-year Norwegian study that was begun in 1978, and was described in a report published this past April in the New England Journal of Medicine. It was conducted in 20 clinical centers serving a third of Norway's population.

The study showed that when timolol treatment was begun soon (seven to 28 days) after an initial heart attack, and continued for up to 33 months, the risk of death was reduced by about a third, and the risk of a second, nonfatal

(continued on page 985)

An added complication... in the treatment of bacterial bronchitis*

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.$^{1-6}$

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly)

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae*[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information

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Lilly

Additional information available to
the profession on request from
Eli Lilly and Company,
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Eli Lilly Industries, Inc.
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200086

(continued from page 983)

heart attack was reduced also by about a third.

To be more specific, about 16 percent of those not getting the drug died of heart disease during the study, while only 10 percent of those treated with the drug did. And about 13 percent of patients not treated had a second, nonfatal heart attack, while only 8 percent of those receiving timolol did.

Our Bureau of Drugs has just completed its evaluation of the study and finds its conclusions are well supported by the data supplied. Timolol belongs to a class of drugs known as beta blockers, and similar results with other drugs in this class have been reported. Another beta blocker, propranolol, was recently reported in a study by the National Heart, Lung and Blood Institute to have a similar effect. A preliminary report of that study, which also began in 1978, appeared in the Journal of the American Medical Association earlier this month. And in Sweden, a study indicates significant reductions in mortality with another beta blocker, metoprolol. FDA has not yet received the data from the NHLBI study and received the data from the Swedish study just a few days ago.

The development of the beta blocker drugs began in the early 1960s. FDA approved propranolol in 1967, nearly 15 years ago, to treat heart arrhythmias. In 1973 the drug was approved to treat angina, in 1976 to treat high blood pressure and in 1979 to treat migraine headaches. Timolol eye drops were approved in 1978 to treat glaucoma.

There are now five beta blockers approved for use in the United States: propranolol, metoprolol, nadolol, atenolol and timolol. They derive their name from their ability to block, or inhibit, the usual response of the beta-adrenergic receptors — a part of the nervous system — to the stimulant secretions of the adrenal glands and of certain nerves. Blocking the adrenergic response of the heart decreases heart rate and the vigor of heart contraction. In these ways, the drugs are thought to help damaged heart muscle work more easily as its job of pumping blood to the tissues.

While these drugs have had wide use in the past decade and a half, their new use holds out great hope for people with heart disease and I am pleased that the United States is one of the first countries to approve timolol for this new use by heart attack patients to prevent deaths and second heart attacks. Today, I am also announcing approval of timolol for treatment of high blood pressure.

Let me just add a personal footnote to this announcement today, and I am speaking not only as Commissioner of FDA but also as a cardiologist who has spent a major part of my professional life treating patients with heart disease and high blood pressure:

I have witnessed during the course of my own lifetime the development of major drugs to treat diseases that once killed thousands and even millions of people. We have

(continued on page 991)

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, **which regimen was proven most effective?**[1]

Month in Washington

The American Medical Association's seven-year battle against the Federal Trade Commission on the issue of physician advertising ended in a draw before the Supreme Court.

The 4–4 tie vote on the historic case leaves standing a lower court decision upholding the FTC.

The brief "per curiam" order, with Justice Harry Blackmun abstaining from the case, did little to settle the large legal questions raised in the AMA's appeal. Justice Blackmun did not participate, apparently because he had represented medical societies in the past.

As a consequence, the 1980 decision by the U.S. Court of Appeals in New York upholding the FTC's order against the AMA is left standing. The Supreme Court decision said simply: "The judgment is affirmed by an equally divided Court."

"The AMA is disappointed by the Supreme Court decision that failed definitively to resolve the important issues raised by the FTC's attempt to regulate the medical profession," said Joseph F. Boyle, M.D., AMA Board Chairman. "This has been a long drawn-out case stretching over seven years. The AMA had hoped that the Supreme Court would decide the important issues itself. It may now be appropriate for Congress to consider the issues the Court failed to resolve and to clarify the law."

The AMA's appeal to the high court concerned an FTC order relating to the promulgation and enforcement of ethical guidelines in physician advertising and solicitation and physicians' contractual relationship with HMO's and group prepaid plans. A split decision by the U.S. Supreme Court means that no opinion is written, the names of the Justices who voted on either side are not disclosed and the decision of the U.S. Court of Appeals for the Second Circuit (N.Y.) is allowed to stand.

The New York Court's Appeals Panel by a two to one vote in 1980 upheld the FTC's 1979 order barring medical associations from interfering with physicians' attempts to advertise.

The legal issue arose in 1975 when the FTC filed a complaint against the AMA, the Connecticut State Medical Society and the New Haven County Medical Association charging that their principles of ethics forbidding false and misleading advertising were a restraint of trade. Cited by the FTC was a 1975 court decision that for the first time strictly applied the antitrust statutes to professional associations in a case involving the Virginia Bar Association and minimum fees.

The American Dental Association, which supported the AMA's position, was also affected by the Supreme Court decision, since it has agreed to abide by the rules set out by the FTC in the AMA case.

As a result of the high court's tie vote, the original FTC order remains in effect. Under the FTC's order, the AMA can not involve itself in any way with the advertising practices of physicans unless they are clearly false and deceptive. The position of the AMA has not been that dissemination of fee information and other nondeceptive information which will help enable patients to make an informed choice among competing professionals is ethical, but that misleading promotional practices, described as "solicitation," are unethical.

The Supreme Court heard arguments on the case last January. The AMA urged the justices to rule that the FTC doesn't have the power to interfere with ethical standards propounded for a professional association.

The AMA's warnings to the FTC of the impact of improper advertising on patients went unheeded, said AMA counsel Newton Minnow of Chicago. "Why should the government try to stop guidelines intended to protect and benefit the public?" he asked.

In its appeal to the Supreme Court, the AMA said the case is of "enormous importance" because it allows the government "to prevent professionals who have voluntarily associated together from taking a position against promotional practices which they believe to be deceptive."

The high court's decision had not been expected until July, but when it became clear the Court was deadlocked on the issue, and that there could be no final, definitive opinion, the Justices decided to dispose of the case with the one sentence statement.

The AMA also had argued that the FTC doesn't have the legal authority to move against nonprofessional associations such as the AMA because Congress has carefully limited the agency's jurisdiction to profit organizations.

The AMA advertising case has been regarded as a leading test of the federal antitrust powers in the health field, a burgeoning legal area with scores of cases at the lower court level. Hopes that the Supreme Court would cast definitive legal guidelines and clear up much existing confusion were dashed by the Justices' failure to reach a majority decision.

Legislation has been introduced in the Congress that would weaken the FTC's authority. In the House, 170 representatives are co-sponsoring a bill (H.R. 3722) by Reps. Tom Luken (D.-OH) and Gary Lee (R-NY) that would impose a moratorium on FTC actions against state-regulated professional associations or their state and national nonprofit associations. A Senate measure (S.1984) reauthorizing the FTC contains provisions exempting state-regulated professions from the scope of the FTC jurisdiction.

A basic restructuring of federal programs is required to solve the nation's health problems, the AMA has told Congress.

Calling for a "new course" setting priorities for the future rather than "quick-fix expediency," the AMA declined to take a position on the Administration's proposed budget cuts for Medicare.

"We believe that addressing individual items in particular programs does not provide the direction and leadership necessary to chart a course for the delivery of health care in this country for this and future decades," said Daniel Cloud, M.D., AMA President.

Prepared by the Washington D.C. office of the American Medical Association.

Accompanied by Fred Rainey, M.D., Chairman of the AMA's Council on Legislation, Dr. Cloud addressed both the House Ways and Means Health Subcommittee and the Senate Finance Committee in March on hearings concerned with Administration proposals to reduce Medicare/Medicaid expenditures. The two committees are charged with preparing estimates for the first budget resolution due in May.

Here are excerpts from the testimony of the two AMA spokesmen:

" — It is now time to step back from the pattern of looking at individual program budgets and attempt to place in perspective the role of the federal government in financing and delivering medical services in the future. Now is the time to set priorities for the future and not continue to deal with crises on an annual basis."

Outlining to the lawmakers the sweeping new AMA policy, the spokesmen said the AMA intends to take the initiative to evaluate long-term health policies that will provide proper care for our citizens within the available national resources. "The AMA will hand down recommendations on both long-term and short-term health care problems.

" — There should be no sacred programs — a primary goal should be meeting the needs through governmental resources of those not able to provide for themselves."

" — The answers to our health problems are not to be found in arbitrary caps, in inequitable benefit reductions, in arbitrary cost shifting or in quick fix expediency — solutions will be found only when all interested parties participate in a basic restructuring of federal programs.

" — A first step might be to place health matters within a distinct Department of Health, both at the federal and state levels — health care is too important to be placed within a cabinet department that has a major share of its activity devoted to welfare.

" — The AMA is committed to an economy characterized by strong, real growth and reaching this goal is necessary to ensure a quality living standard for everyone." the AMA witnesses said.

Some 20 health related and insurance organizations appeared before the House and Senate committees, each limited to a five minute oral presentation. Most of the witnesses and a number of representatives and senators were hostile to the Administration's proposal for a flat two percent across-the-board cut in Medicare hospital reimbursement.

The federal health planning program is a classic example of the pitfalls encountered in a federal regulatory approach to dealing with local problems, the AMA has told Congress.

The program has failed and should be wiped from the statute books, said Fred Rainey, M.D., Chairman of the AMA's Council on Legislation. Dr. Rainey told the House Commerce Subcommittee on Health that not only should funding be terminated but the law must be repealed. Otherwise, he noted, states would have to continue Certificate-of-Need (CON) programs or face federal sanctions including the cutting-off of public health funds.

Planning has been unpopular and controversial from the start seven years ago, Dr. Rainey said. The program

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In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study),
which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]

overrides the special needs and circumstances of states and localities, imposes a network of bureaucratic entities, carries excessive and expensive paperwork requirements, and shifts policies and directions so frequently "that those who want to comply with the law are continually uncertain of their opportunities and obligations," the AMA official testified.

The subcommittee, headed by Rep. Henry Waxman (D-CA), is considering the Administration's proposal to terminate funding for planning and counter-proposals to keep planning alive.

Dr. Rainey said that as planning evolved over the years, federal officials became less concerned with the original goal of "access to quality care," and more concerned with cost reduction. However, the program has also failed in this regard, he said. There is evidence that the certificate-of-need process actually adds to health care costs "because of the expense of preparing CON applications and appealing negative CON decisions and the greater costs of construction resulting from delays in the CON process," he said.

Another AMA witness, Lonnie Bristow, M.D., a member of the AMA Council on Medical Service, said new voluntary health planning initiatives are emerging that "are intended to address community needs and are supported by the community."

Dr. Bristow said more than 70 coalitions involving business, labor, medicine, institutions and insurance carriers are now operating. Their activities embrace various elements of health planning.

New initiatives are occurring voluntarily across the nation. "As federal involvement in health planning diminishes, we believe these positive efforts will gain greater momentum," Dr. Bristow told the subcommittee.

"When these initiatives are encouraged, there will be increased efficiency with greater emphasis on the prevention, early intervention and treatment of chronic health problems which will result in more cost-effective health delivery programs," the AMA spokesman said.

Rep. Waxman opened the hearing with a plea for continuation of the planning program, contending that it has restrained the growth of health spending. Among organizations supporting the program were the American Health Planning Association, the Hospital Association of New York State, and the American College of Physicians.

Rep. Richard Shelby (D-AL), a subcommittee member, has introduced legislation to phase out the program. He said the crackdown by planners on CAT scanners "is a classic case of the pitfalls of federal regulation" and the "planners were proved wrong."

Rep. Edward Madigan (R-IL) is drafting a bill that would keep planning alive with reduced funds and with less federal regulation.

The Administration's proposal to deny medical students' participation in the Guaranteed Student Loan (GSL) program "will have a drastic effect upon the future financing of medical education," the AMA has told Congress.

Elimination of the loan program would remove about $190 million in aid that was used by more than 40,000 medical students during the last academic year, the AMA said in a statement to the House Appropriations Subcommittee on Health.

"Access to medical education must not be allowed to become limited on the basis of individual family income," wrote James Sammons, M.D., AMA Executive Vice President. "We are very concerned that limiting GSL availability to only undergraduate students would be a most significant step toward limiting access to a medical education," said Dr. Sammons.

The loan program accounts for almost one-half the total amount of financial aid available to medical students, the AMA noted.

With other sources of student aid shrinking, "we are very concerned that the additional elimination of $190 million in GSL program funds at a time when the availability of loan funds at any interest rate are being constricted will leave many qualified medical students facing increasing educational costs with no avenue for financial assistance," said the AMA.

Dr. Sammons concluded:

"The future health of this nation is largely dependent upon our medical schools being able to attract the most qualified students. Elimination of GSL program participation by medical students could cause some of these students to alter their career choices. We strongly urge the committee to reject the proposal that will eliminate this vital source of financial aid to so many students."

The AMA has backed more explicit health warnings on cigarette packages and in advertisements.

In a statement to the House Commerce Subcommittee on Health, the AMA also said the effectiveness of rotating health warning labels should be evaluated after a time for effectiveness.

The AMA also told the House Subcommittee that it is developing an audiovisual presentation on how to quit smoking that will soon be available for physicians to use in assisting patients who wish to quit smoking.

Declaring that the Clean Air Act has done much to improve the overall quality of our air, the AMA has urged Congress to reauthorize the program.

"While it is clear that progress is being made nationally to improve air quality, the need remains for a sustained program to provide for continued efforts," the AMA said in a statement to the Senate Public Works Committee. "We strongly support a continuation of the Act.... Our primary concern remains the effect of the legislation on public health."

Discussing specific provisions, the AMA said provisions in existing law requiring standards "allowing an adequate margin for safety" should be retained. Extensions or waivers for areas that cannot comply with the national primary ambient air quality standards by the end of the year should be sparingly granted on a case-by-case basis, according to the AMA.

Current sanctions such as withholding of highway funds and sewage treatment grants are "inappropriate" and should be eliminated, the AMA said.

Strict restrictions on new emission sources are required, and there should be continued protection of pristine areas from significant air quality deterioration by requiring strict, but reasonable, emission limitations for new sources, the AMA stated.

The AMA said it "cannot, at this time, support relaxing of emission standards for motor vehicles. If appropriate peer-reviewed scientific data demonstrate that the limitations are not required to protect the public health we could endorse relaxations."

President Reagan has not made a final decision on the shape of the pro-competition national health plan due to be presented Congress soon, according to Health and Human Services Secretary Richard Schweiker.

Schweiker questioned the accuracy of a published report (the New York Times) that said the Administration had abandoned major elements of the competition plan, including placing a ceiling on the amount of private health insurance premium costs that businesses can deduct. However, the HHS official, addressing a group of reporters at a luncheon of the Washington Journalism Center, did not flatly deny the news story.

Changes have been made and will be made in the plan until the President makes the final sign-off, said Schweiker.

As much as one half of all the processed foods regulated by the Food and Drug Administration (FDA) will have sodium labeling by year's end as a result of the voluntary campaign by the FDA, health educators and the food industry.

Arthur Hull Hayes, M.D., FDA Commissioner told the AMA Conference on Sodium Labeling that some of the nation's leading manufacturers have made labeling commitments. These include General Foods, Del Monte, Procter and Gamble, Frito-Lay, General Mills, Best Foods, Quaker Oats and Campbell Soup Company.

"We've come a long way in the past eleven months," said Dr. Hayes, "but we would be deluding ourselves if we thought that this program is anything but a beginning."

The FDA chief said that by sponsoring the Washington conference, the AMA "has again demonstrated its leadership role in encouraging the availability of more information about sodium." He noted the AMA has been actively engaged in addressing public health concerns involving sodium, salt and hypertension, including a symposium in 1978.

The FDA currently is develop proposed regulations that would require that sodium be part of the standard nutrition label. A mandatory requirement for labeling is a possibility, but Dr. Hayes said that will be decided later after receiving comments from participants in conferences such as the AMA meeting and after assessing the results of the voluntary program.

"We would consider legislation to mandate virtually universal sodium labeling only if the voluntary efforts on the part of the food industry to effect sodium reduction and more sodium labeling fail."

Lowell Steen, M.D., immediate past chairman of the AMA Board of Trustees and chairman of the conference, said that maintaining moderate dietary sodium restrictions is difficult without labeling information. "A cost-effective system of sodium labeling would be beneficial to both patients and their physicians and thus be of considerable assistance in the medical management of hypertension as well as other disorders where restriction of sodium may be required," Dr. Steen told the audience of physicians, federal officials, food industry representatives, dietitians, etc.

(continued on page 990)

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?[3]**

(continued from page 989)

Reports that the Administration might relax health and safety rules for nursing homes were scotched by Health and Human Services Secretary Richard Schweiker.

"I will not turn back the clock," said Schweiker in a statement. "I will not imperil senior citizens in nursing homes, our most vulnerable population, by removing essential federal protections."

Among other provisions, current rules provide staffing levels for medical directors, a provision that the AMA had urged be retained for nursing homes. Various other health and safety regulations cover fire safety, patient privacy and dignity, infection control, etc.

The eight-year-old rules set standards for 18,000 nursing homes that receive Medicare and Medicaid payments.

Medical organizations have renewed their attack on the Administration plan to notify parents of teen-age girls who receive prescription contraceptives from federally-funded clinics.

George Ryan, M.D., President of the American College of Obstetricians and Gynecologists, told a news conference in Washington, D.C., that "pregnancy is the price that many will pay." Dr. Ryan said the plan "makes no sense on the grounds of health."

Young women face a five times greater chance of serious disease and death from pregnancy than from birth control pills or intra-uterine devices, according to the physician.

Speaking on behalf of eight organizations, including the AMA, Dr. Ryan said many teen-agers will not seek birth control services if their parents must be notified. The regulation would discriminate against poor youth because those with money could receive confidential help from private physicians, he said.

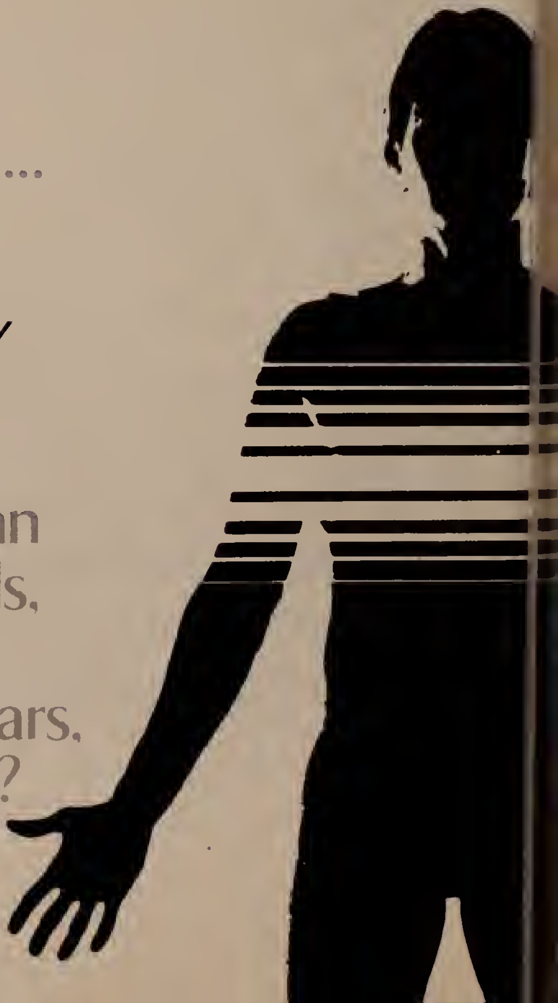
The Administration proposal would require notification of parents within 10 days after girls under 18 get birth control devices or pills at clinics funded by the federal government. The Administration position is that parents have a right to be told of decisions which have "long-term health consequences for the adolescent."

Dr. Ryan said as many as 100,000 pregnancies might result from the Administration plan.

Believe it or not, doctor,
it's the combination found in...

Salutensin®
(hydroflumethiazide 50 mg/
reserpine 0.125 mg)

And don't the results of more than
$100 million worth of clinical trials,
involving thousands of patients
who were followed for several years,
merit your serious consideration?



(continued from page 985)

seen the development of vaccines that can prevent disease — just recently I announced the approval of the first hepatitis B vaccine.

In the cardiovascular area, we have seen a number of new treatments and primary lifestyle changes that affect our heart disease rate. For example:

—There is greater emphasis and more awareness of the relation between diet and health.

—There is an emphasis on controlling body weight and on proper exercise.

—People are taking note of the relation between smoking and health.

—There has been greater attention to high blood pressure, which can lead to heart attacks and stroke, and to the relationship between sodium and high blood pressure.

—And there have been new drugs to help us treat heart arrhythmias and other heart disease.

We don't know the relative importance of these positive changes on the rate of heart disease, but we do know that there has been a 25 percent decrease in the rate of deaths from this disease since 1968.

As we enter a new era of cardiovascular protection through use of beta blockers, and as we educate more people about what they can do to protect themselves — such as controlling their weight, watching their diets, getting more exercise — I look forward to a continued decline in cardiovascular deaths. And I hope that our research community can continue to provide us, in the years and decades ahead, with new drugs that are as exciting and promising as the ones we are discussing today.

And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

Please see references and brief summary of prescribing information on last pages of this advertisement.

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☐ Journal article reprints of the clinical studies mentioned in this ad

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Books Received

PENFIELD, WILDER, 1891–1976

Something Hidden. A Biography of Wilder Penfield. By Jefferson Lewis. Garden City, New York, Doubleday & Company, Inc., 1981. Illustrated, 311 pages. Hardcover, $17.95.

History of brain surgery in the 20th century, as seen through the life of one of its prominent practitioners.

NEUROLOGY

Geriatric Neurology: Selected Topics. Edited by Walter R. Slade, Jr., M.D. Mount Kisco, New York, Futura Publishing Company, 1981. Illustrated, 386 pages. Hardcover, $39.50.

The functions of the aging organism and the implications of this process on the nervous system.

MICROBIOLOGY

Significance of Medical Microbiology in the Care of Patients. Second edition. Edited by Victor Lorian, M.D. Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, 474 pages. Hardcover, $60.00.

New concepts and solutions for an effectively managed microbiology laboratory.

MOUTH DISEASES

Physicians' Guide to Diseases of the Oral Cavity. By Harriet S. Goldman, D.D.S and Michael Z. Marder, D. D. S. Oradell, New Jersey, Medical Economics Company, Inc., Book Division, 1982. Illustrated, 230 pages. Hardcover, $39.50 (plus $1.25 for handling).

A descriptive, clinical atlas for the physician who has to recognize, diagnose, and often treat abnormalities of the oral cavity.

* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

Salutensin® Salutensin-Demi™

(Hydroflumethiazide, Reserpine Antihypertensive Formulation)

Brief Summary of Prescribing Information (12) 10/27/78

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

EMERGENCIES

Managing Ob/Gyn Emergencies. Edited by John T. Queenan, M.D. Oradell, New Jersey, Medical Economics Company, Inc., 1982. Illustrated, 157 pages. Softcover, $15.95 (plus $1.25 for handling).

A handy guidebook for physicians in Ob/Gyn to stay current and thus be able to respond to emergencies more effectively.

INVERTEBRATES

Membrane Physiology of Invertebrates. Edited by Ronald B. Podesta. New York, Marcel Dekker, Inc., 1982. Illustrated, 664 pages. Hardcover, $87.50.

An up-to-date overview of a diverse field, and an essential guide to fruitful research.

RESPIRATORY TRACT DISEASES

Respiratory Medicine. By David C. Flenley, B.Sc., Ph.D., M.B. London, England, Bailliere Tindall, 1981. Illustrated, 263 pages. Softcover, $17.95. (Distributed in the U.S. by Macmilan Publishing Company)

Basic knowledge for the diagnosis and management of respiratory illness.

BLADDER NEOPLASMS

Bladder Cancer. Edited by P. Skrabanek and A. Walsh. Geneva, Switzerland, International Union Against Cancer, 1981. (UICC Technical Report Series, Volume 60) Softcover, 192 pages. $16.00. (Distributed by Hans Huber Publishers, Langgassstrasse 76, Bern 9, Switzerland Ch 3000).

State of the art review of cancer of the bladder, with indications for future treatment and research in the field.

ADVERSE REACTIONS

Hydroflumethiazide

Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.

Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

1 tablet b.i.d.

SUPPLIED

Bottles of 100 and 1000 scored 50 mg. tablets.

References:

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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SCHEDULE OF SCIENTIFIC MEETINGS

1982 ANNUAL CME ASSEMBLY

Medical Society of the State of New York
Rye Town Hilton, Port Chester, New York

FRIDAY, JUNE 25

Morning:
Anesthesiology/Surgery (General Session)—*Westchester Ballroom C*
Emergency Medicine/Radiology (General Session)—*Westchester Ballroom A2 & 3*
Medical Legal & Workers' Compensation Matters/Occupational Medicine (General Session)—*Blind Brook*
Obstetrics & Gynecology—*Westchester Ballroom B*
Orthopedic Surgery—*Westchester Ballroom D*

Afternoon:
Chest Diseases—*Town of Rye Suite*
Dermatology & Syphilology—*Westchester Ballroom D4*
Emergency Medicine/Radiology (General Session-cont'd)—*Ballroom A2 & 3*
Gastroenterology, Colon & Rectal Surgery—*Westchester Ballroom C*
Hand Surgery (General Session)—*Westchester Ballroom D5 & 6*
Obstetrics & Gynecology (cont'd)—*Westchester Ballroom B*

SATURDAY, JUNE 26

Morning:
Cancer (General Session)—*Westchester Ballroom B*
Cardiovascular Diseases—*Westchester Ballroom A2 & 3*
Internal Medicine—*Westchester Ballroom D*
Neurology & Neurosurgery (General Session)—*Blind Brook*
Ophthalmology—*Westchester Ballroom C*
Urology—*Washington Park*

Afternoon:
Cancer (General Session—cont'd)—*Westchester Ballroom B*
Internal Medicine (cont'd)—*Westchester Ballroom D*
Ophthalmology (cont'd)—*Westchester Ballroom C*
Otolaryngology—*Westchester Ballroom A2 & 3*
Pathology—*Washington Park*

SUNDAY, JUNE 27

Morning:
Allergy & Immunology—*Westchester Ballroom B*
Physical Medicine & Rehab./Plastic, Reconstructive & Maxillofacial Surgery (General Session)—*Westchester Ballroom D*
Preventive Medicine—*Westchester Ballroom A2 & 3*
Psychiatry/Pediatrics/School Health/Family & General Practice (General Session)—*Westchester Ballroom C*
Women's Medical Society of New York State—*Town of Rye Suite*

●

CME CREDITS: Each program will be eligible for CME Category I Credits on a credit per hour basis

●

SCIENTIFIC & TECHNICAL EXHIBITS

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

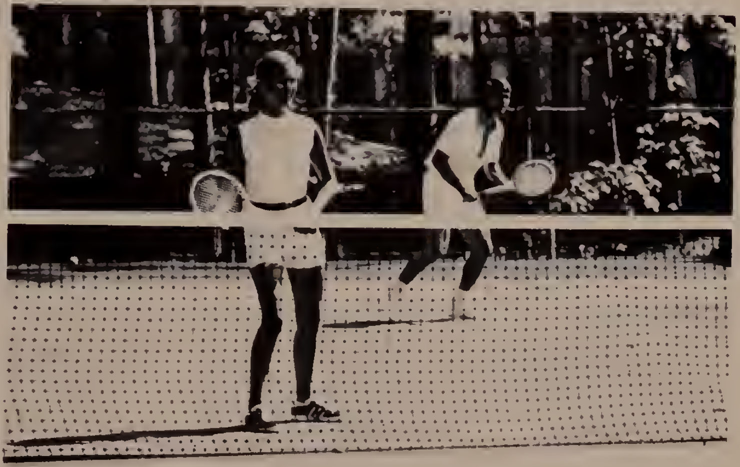
1982 Annual CME Assembly

Friday, June 25—Sunday, June 27

Medical Controversies of the 80s

All physicians are invited to attend our Annual Continuing Medical Education Program to be held at the Rye Town Hilton. You will have the opportunity to obtain Category I CME Credits during 2½ days of outstanding General Sessions, Symposia, and Panel Discussions. Our meetings are designed to inform the physician of the latest developments not only in his specialty, but in other areas of medicine as well.

As in the past, there will be Scientific and Technical Exhibits to help the physician to become acquainted with the latest research techniques, and to learn about new products and services that will help the physician provide better medical care. The opportunity to visit with friends and colleagues in a relaxed setting is an important part of the Annual Assembly. Come join us!



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SUITES:	$175 and up				

MEDICAL SOCIETY OF THE
STATE OF NEW YORK
1982 CME ASSEMBLY
JUNE 25–27, 1982
SUITES ON REQUEST TO HOTEL

☐ CONFIRMATION REQUESTED
If two or more to occupy room, name of joiner(s)
____

If a range of rates is offered and the rate requested is not available, the next available rate will be assigned. Reservation requests must be received no later than June 4, 1982, and will be held until 6:00 p.m. on the date of arrival unless otherwise specified.

If reservations are made by telephone, you must identify the Medical Society meeting for the special rate to apply. Rates subject to applicable sales tax

RESTAURANTS

Penfield's for gracious dining—an adventure in gourmet food, and Penfield's Patio for informal lunches and cocktails. Also the Tulip Tree for casual meals and buffet surrounded by the greenery of ferns and flowers.

GUEST ROOMS

Each has color TV with AM/FM radio, refrigerator and coffee maker. Rooms are beautifully appointed with large windows overlooking the wooded grounds and gardens.

TRANSPORTATION

Convenient regularly scheduled ground transportation is available from LaGuardia and Kennedy Airports. On arrival, go to the baggage claim area and look for Airport Transportation Services free courtesy phone (it's red). From airports, service is throughout the day and evening with departures every hour (½ hour service during peak travel times). Last departure leaves Kennedy at 11:30 p.m. and LaGuardia at 11:15 p.m. One-way fare: $11.00. Round-trip fare: $21.00. By train from Manhattan (Grand Central Station), take the New Haven line to Rye, New York (about 45 minutes). From the Rye Station, it is a 5 minute taxi ride to the Rye Town Hilton.

HOTEL RESERVATIONS

Physicians must make their own hotel reservations no later than June 4, 1982, direct with the Rye Town Hilton. In order to take advantage of the special rates for sleeping rooms, please mention that you will be attending the Medical Society CME Assembly.

BROADWAY SHOW & SUPPER

Friday, June 25th. Round trip transportation by private bus. Supper at the Tavern on the Green. Per person: $90.00. See this section for details and reservation form.

RECEPTION & DINNER DANCE

All physicians and their guests are invited to attend the Medical Society dinner dance on Saturday, June 26th. Ronald Dougherty, M.D., Chairman, MSSNY Committee on Drug Abuse, will be the guest

speaker. A reception sponsored by the Medical Society of the State of New York will begin at 7:00 p.m. Dinner will be served at 8:00 p.m. $39.00 per person.

MEETING & EXHIBIT HOURS

Friday, June 25: 8:30 a.m.–5:00 p.m.
Saturday, June 26: 8:30 a.m.–5:00 p.m.
Sunday, June 27: 8:30 a.m.–12:30 p.m.

INTERMISSIONS

There will be morning and afternoon intermissions for coffee, and to allow time to visit the exhibits.

REGISTRATION

Registration is open to MSSNY members and their guests, nonmember physicians, medical students, and members of the allied professions. There is no registration fee. Registration hours will be: Thursday, June 24 from 4:00 p.m. to 8:00 p.m., Friday & Saturday, June 25 & 26, from 8:00 a.m. to 5:00 p.m., and Sunday, June 27, from 8:00 a.m. to 12:00 Noon. All meetings and exhibits will close at 12:30 p.m. on Sunday.

PRE-REGISTRATION

Please fill out the pre-registration form and mail to the Medical Society address as indicated on the form. Your badge and tickets will be held at the MSSNY Registration Desk located in the Grand Ballroom exhibit area.

PRE-REGISTRATION FORM

1982 Annual CME Assembly, June 25–27
RYE TOWN HILTON

(please print)

Name____
(last) (first) (Initial)

Address____

City & State_________________________________Zip__________

Member of MSSNY: Yes________No________Specialty____________________

Note: There is no registration fee.

Saturday Reception & Dinner/Dance________tickets @ $39.00. Total____________

Please make checks payable to: Medical Society of the State of New York, clip and mail to Division of Advertising & Meeting Services, Medical Society of the State of New York, 420 Lakeville Rd., P.O. Box 5404, Lake Success, New York 11042.

DOCTOR . . . while attending the CME

Assembly, why not join us!

RECEPTION and DINNER DANCE

at the Rye Town Hilton's beautiful Weschester Ballroom

SATURDAY, JUNE 26, 1982

The Reception, sponsored by the Medical Society of the State of New York, will take place at 7:00 p.m., and Dinner at 8:00 p.m.

Per Person: $39.00

GUEST SPEAKER:
Ronald Dougherty, M.D.,
Chairman, MSSNY Committee
on Drug Abuse

We can assure you of gourmet food, wine, and fine music by Joseph Trongone and his musicians. Doctor, may we suggest that you bring your wife and enjoy a pleasant summer weekend together at the Rye Town Hilton.

To reserve tickets, see the pre-registration form in this issue.

Directions to the Rye Town Hilton

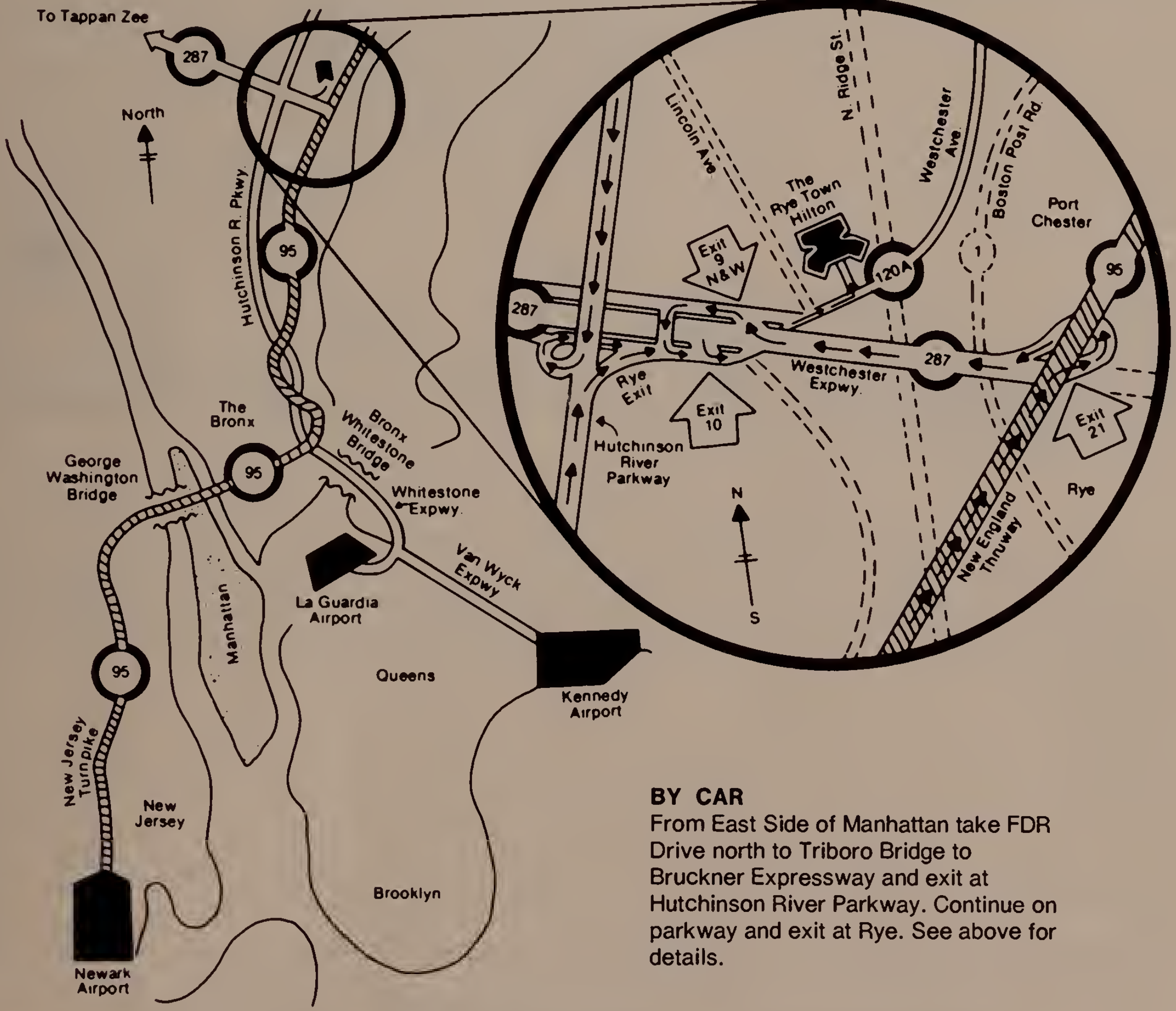
699 Westchester Avenue Town of Rye Port Chester, New York

from major New York Metropolitan Airports

FROM LAGUARDIA AIRPORT
Take the Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave. following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

FROM KENNEDY AIRPORT
Take Van Wyck Expressway to Whitestone Expressway. Proceed on Whitestone Expressway over the Bronx-Whitestone Bridge. Follow signs to Hutchinson River Parkway. Proceed on Hutchinson River Parkway to the Rye Exit to Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).

FROM NEWARK AIRPORT
Take New Jersey Turnpike (95) to the George Washington Bridge. Proceed on U.S. 95 to Cross Westchester Expressway Exit 21. Proceed west on Cross Westchester Expressway (287) to Exit 9NS. Turn left at first traffic light onto Kennilworth Road. Turn left immediately at second traffic light onto Westchester Ave. (120A). Proceed east on Westchester Ave., following signs to Port Chester. Turn left at Rye Town Hilton entrance (at stop light).



BY CAR
From East Side of Manhattan take FDR Drive north to Triboro Bridge to Bruckner Expressway and exit at Hutchinson River Parkway. Continue on parkway and exit at Rye. See above for details.

THE BIG APPLE

➧ JUNE 25

***** BROADWAY SHOW AND SUPPER *****

Including:

☐ TICKETS TO "SOPHISTICATED LADIES" or "CHORUS LINE" or "WOMAN OF THE YEAR". (Specific show subject to availability at time of receipt of reservation)

☐ COCKTAILS & "AFTER THEATRE SUPPER" at the glass enclosed, spectacular TAVERN ON THE GREEN in Central Park . . .

☐ PRIVATE DELUXE MOTORCOACH THROUGHOUT from pick up at the RYE TOWN HILTON to THEATRE—THEATRE TO TAVERN ON THE GREEN—TAVERN ON THE GREEN return to the RYE TOWN HILTON

$90

per person
including tax & tips

Note: THIS PRICE IS BASED ON A MINIMUM OF 40 PAYING PASSENGERS PER MOTORCOACH

TO MAKE YOUR RESERVATION: Please complete the items on this reservation form, enclose a check in the amount of $90.00 per person, payable to: GROUPS UNLIMITED Inc., 422 MADISON AVENUE, NEW YORK, N.Y. 10017. Tel: (212) 838-4730. Address all reservations and/or enquiries to Mrs. Marilyn R. Cooper, Vice President.

NAME(S): ____________________

ADDRESS: ____________________

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Telephone: Home__________ Business__________ No. in Party______

Note: Theatre ticket(s), boarding pass(s) and final itinerary will be mailed to your home address approximately 2 weeks prior to June 25, 1982.

**** PLEASE BOOK EARLY TO AVOID DISAPPOINTMENT — SPACE IS LIMITED ****

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32 FEMALE BOARD ELIGIBLE Pediatrician, looking for full time, part time positions in Emergency Room, ambulatory care or private practice in New York City. Reply Dept. 233, c/o NYSJM.

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BOARD CERTIFIED INTERNIST looking for full or part time E.R. or locum tenens position for June 1982. If found to be suitable, will be available on a permanent basis from July 1982. Please call (212) 548-0193.

PRACTICES AVAILABLE

FOR SALE, VERY ACTIVE PARTNERSHIP (2 man) practice, general and internal medicine. Established 28 years, south shore eastern Nassau County. Grosses 6 figures annually. Partners will retire upon sale of practice. Reply to Dept. 211, c/o NYSJM.

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PRACTICES AVAILABLE—CONT'D

ROCHESTER, NY, LARGE, VERY ACTIVE GENERAL practice in pleasant area. 90% internal medicine, additionally some slight injuries. Purchase real estate or rent office only. Will introduce or participate as long as desired. Short C.V. first letter. Reply Dept. 238, c/o NYSJM.

M.D. OFFICE FOR RENT, PRACTICE FOR SALE—excellent central Nassau location. 34 years General Practice in one location for sale. 800 sq. ft. office for rent. Large waiting room, 2 examination rooms, large consulting room, nurse station, full bath, ample parking. $825/mo. Sale of practice includes office furnishings and equipment. 9 am–5 pm (516) 822-9359.

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PHYSICIANS WANTED

PHYSICIANS—NEEDED for 75 summer camps for children, located in Northeastern states, July and/or August. Contact: Association of Independent Camps M, 157 West 57th Street, New York, N.Y. 10019. (212) 582-3540.

PHYSICIAN DURING JULY AND AUGUST, 1982 for children's camp located at Beach Lake, Pa., accommodates 350 campers, age 6–16; complete modern Health Center; 2 R.N.'s in attendance; will accept one M.D. for each month; no children accepted who are of camp age. Camp opens June 29 and closes August 23. Private room and facilities. Write, and include your phone number, to Trail's End Camp, c/o Beach Lake, Inc., 215 Adams Street, Brooklyn, N.Y. 11201.

EMERGENCY DEPARTMENT PHYSICIAN needed for 316-bed modern, general hospital with complete facilities from cardiovascular surgery to neonatal intensive care. Excellent salary with incremental raises over 2 year period. Excellent fringe benefits: retirement plan; malpractice insurance; long term disability and supplemental life insurance; 4 weeks vacation; 2 weeks educational leave with expense account; 40 hour week of 8 hour shifts. Regional hospital serves multi-county area of 250,000 plus population. City of 40,000 with excellent schools and college. Outstanding outdoor recreational opportunities near Finger Lakes. Charles H. Kinley, M.D., Director, Emergency/Outpatient Department, Arnot-Ogden Memorial Hospital, Elmira, New York 14901. (607) 737-4258.

OBSTETRICIAN/GYNECOLOGIST NEEDED to join two others 50 miles from New York City in mid-Hudson Valley. Salary leading to full partnership. Beautiful area, growing population. Send C.V. to Drs. M. L. Giampe and P. W. O'Daly, Box 990, Beacon, N.Y. 12508.

PRIME POSITIONS AND PRIME PRACTICE locations now available throughout sunny Texas for physicians in the following specialties: OB/GYN, E.N.T., Internal Medicine, Urology, Orthopedic Surgery, Radiology, Anesthesiology, Pediatrics and Family Practice. These practice locations are located in medium-sized towns. Most offer salary guarantee and free office rent the first year. For further information, contact Denise Michaels, Director of Professional Relations, The Methodist Hospital Health Care System, 6560 Fannin Street, Suite 1824, Houston, Texas 77030, (713) 790-6372.

OB/GYN: MULTISPECIALTY HOSPITAL BASED group in rural upstate New York seeks Board Certified/eligible OB-GYN for established practice. Position will be available in July 1982. Certified nurse-midwife is part of group. Salary negotiable. Beautiful recreational area in upper Catskill mountain region. JCAH hospital with excellent medical staff and support services. Contact: Thomas E. Lavell, M.D., 1 Titus Place, Walton, N.Y. 13856.

PARTNER WANTED for busy General Office Practice, in Astoria, New York. Daily Hours. Call or write: Dr. S. Didner, 30-36 34th St., Astoria, NY 11103, (212) 278-5651.

OB/GYN BOARD ELIGIBLE OR CERTIFIED: Immediate opening located in Herkimer, New York. 70-bed community hospital. Negotiable guaranteed salary. Respond with curriculum vitae to AHS North, Director of Physician Recruitment, 15 Salt Creek Lane, Hinsdale, IL 60521.

PHYSICIANS WANTED—CONT'D

DIRECTOR PEDIATRIC ORTHOPEDICS. A Board Certified or Eligible Orthopedic Surgeon is needed to assume direction of an active pediatric orthopedic surgery service. This is a full time position with teaching responsibility in a university based residency program. Specialty training in pediatric orthopedics is required. Respond with curriculum vitae to: Frank M. Hudak, M.D., Acting Chairman, Department of Orthopedic Surgery, Nassau County Medical Center, East Meadow, N.Y. 11554.

CARDIOLOGY—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in cardiology. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

INTERNAL MEDICINE—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in internal medicine. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

BECAUSE NATIONWIDE IS ON YOUR SIDE—we need doctors statewide to do independent exams on people injured in automobile and industrial accidents—must agree to appear in Arbitration if necessary—regular fees paid. Send curriculum vitae to: Joyce Chace, R.N., Rehabilitation Consultant, Nationwide Insurance Company, Box 4848, Syracuse, N.Y. 13221.

OTOLARYNCOLOGY—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in Otolaryncology. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

DIAGNOSTIC RADIOLOGIST-BOARD CERTIFIED or eligible to join 5-member practicing fee-for-service hospital and private office diagnostic radiology. Prefer candidate to have training in C.T. and arteriography. Practice located in Northern New York with unlimited opportunities for skiing, sailing, hunting, camping, fresh air and clean water. Send C.V. to Donald J. Blodgett, M.D., Northern Radiology Associates, P.C., 161 Clinton Street, Watertown, New York, 13601.

DIRECTOR TRAUMA ORTHOPEDICS. A Board Certified or Eligible Orthopedic Surgeon is needed to assume direction of an active orthopedic trauma service. This is a full time position with teaching responsibility in a university based residency program. Specialty training in trauma orthopedics is required. Respond with curriculum vitae to: Frank M. Hudak, M.D., Acting Chairman, Department of Orthopedic Surgery, Nassau County Medical Center, East Meadow, N.Y. 11554.

LOCUM TENENS—4 weeks of July, Monday through Thursday, noon to 5 p.m. No house or hospital visits. 107 E. 38th St., New York City. Call (212) 696-1471.

PULMONARY MEDICINE—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in pulmonary medicine. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

EMERGENCY DEPARTMENT PHYSICIAN—Immediate opening, Watertown, N.Y., 220 bed general hospital. Community of 30,000 near Thousand Island resort area and 2½ hours from Lake Placid's Olympic facilities. Salary and fringe benefits definitely competitive. Reply in confidence to: Martin V. Berrigan, M.D., Director, Emergency Services, Mercy Hospital, Watertown, N.Y. 13601.

ORTHOPEDICS—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in orthopedics. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

CHIEF EXECUTIVE OFFICER

The Medical Society of the State of New York invites applications for the position of Executive Vice-President to succeed retiring incumbent December 31, 1983. Position will start July 1, 1983, allowing orderly transition.

Nonphysicians may apply. Salary and benefits negotiable. All replies will be considered in confidence.

Send Curriculum Vitae to:
Chairman, EVP Search Committee

Medical Society of the
State of New York
420 Lakeville Road
Lake Success, NY 11042

MISCELLANEOUS

TAX ATTORNEY & PENSION PLAN SPECIALIST—Former IRS Pension Plan Specialist and Revenue Agent—Professional Incorporation, Pension and Profit Sharing Plan annual administration including initial IRS qualification, annual filings, actuarial certification and employee statements of participation—No Insurance Required—References upon request—Jack Wachstock, P.C., 300 Garden City Plaza, Garden City, N.Y. 11530. (516) 294-9470.

BAD DEBTS AND ACCOUNTS RECEIVABLE professionally collected by experienced attorney. For details write to Edward D. Gewirtz, Esq., 3250 Lawson Blvd., Oceanside, N.Y. 11572, or call (516) 764-0300 or (212) 454-9595.

JUNE 7-11, 1982: UPDATE YOUR MEDICINE 1982. The New York Hospital-Cornell Medical Center, New York City, AMA accredited, sponsored by the Office of Continuing Medical Education of Cornell University Medical College and the Association of Practicing Physicians of the New York Hospital. Director: Lila A. Wallis, M.D. Co-Director: Stephen Scheidt, M.D. Information: Office of Continuing Medical Education, Cornell University Medical College, Room F-436, 1300 York Avenue, New York, N.Y. 10021. (212) 472-5600.

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MISCELLANEOUS—CONT'D

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FOR SALE: 1) "Medallic Tribute to Surgical History". 36 medals—antique finish, sterling silver, 1¾" diameter, mint condition, in display wooden case, $1,800. 2) "Medallic History of Medicine". 60 medals—sterling silver, 1½" diameter, in display album. Available biographic data included. Inquire Box 1531, Englewood Cliffs, N.J. 07632.

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PRACTICES WANTED

GYNECOLOGIST-OBSTETRICIAN, Well trained (Laparoscopy, infertility, colposcopy, etc.) with 12 year established practice in Queens, N.Y., wishes to purchase an OB-GYN practice or establish an association in Suffolk or Westchester County. Reply Dept. 200, c/o NYSJM.

DESIRES TO PURCHASE INTERNAL MEDICINE/General Office Practice in Greater New York City metro area including Queens with top price. Reply to Dept. 235, c/o NYSJM.

INFECTIOUS DISEASE INTERNIST—34, Board Certified, University Hospital based seeks private practice opportunity in New York City area. Reply Dept. 242, c/o NYSJM.

MEDICAL PRACTICES—wanted for purchase in Hicksville, Huntington and vicinity on Long Island. Unique financial arrangements available. Call National Medplex (516) 935-4100.

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PROFESSIONAL CONDOMINIUMS: Your profit potential in converting your Medical Arts or Professional building into a commercial condominium is excellent. Learn more about this profitable, flexible concept. Contact Paul Gellert, Gelco Associates, 155 W. 68th St., New York, NY 10023. Phone: (212) 223-1130.

HOUSE FOR SALE—Fishkill Colonial, 1 year old, corner plot, new development, 4 bedrooms, 2½ baths, vinyl siding and brick, gas heat, central air, gas burning fireplace, pool and tennis privileges, gorgeous view overlooking the valley—$110,000. (914) 896-9297.

MODERN MEDICAL OFFICE BUILDING with 20 physicians on a main street with busline, opposite 320-bed active General Hospital. Off-street parking lot and garage. Available space of 1,600 sq.ft. which for 10 years was occupied as a successful orthopedic. Ideal for any specialty or general practice. Contact G. Segal, M.D., St. Elizabeth Hospital, Utica, New York. (315) 798-8114.

PROFESSIONAL APARTMENT FOR SALE in luxury co-op building, 201 East 37th Street, corner of 37th St. and Third Avenue. 2 bedroom apartment approximately 925 sq. ft., doorman building, lobby level, maintenance $795/month, asking $225,000. No fee. Dwelling Managers, Inc. Call Mr. Levy (212) 867-9700.

CONVENIENT COUNTRY HOME—4.81 acres, pond. Main level: large kitchen, LR/Fpl, 2 bedrooms, 2 baths. Lower level: finished rec room, bedroom, screened slate patio. 2-car saltbox garage/studio loft. Taxes $802. Near lake, schools, 79 miles NYC. $155,000. V. F. Mitchell, POB 218, Sherman, Conn. 06784. (203) 354-8991.

HUNTINGTON—PROFESSIONAL OFFICES. Elegant office space available full time, solo part-time; suitable most medical specialties or therapists. Call National Medplex (516) 935-4100.

SOUTH SHORE, LONG ISLAND—Professional office: large waiting room, secretarial area, 2 consultation rooms, 3 examining rooms, 2 lavatories, small lab, furnace room, unfinished attic, adjoins gracious 4 bedroom home plus maids, 19th century English architect's design. One block to general hospital, 10–15 minutes to 4 major Nassau county hospitals. Established pediatric and allergy practice until illness. Mr. Bratt, Attorney (516) 561-7444.

what goes on
IN
CONTINUING MEDICAL EDUCATION

NEW YORK STATE **JUNE 1982**

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Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK CITY

The Jewish Hospital and Medical Center of Brooklyn in Association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY Downstate Medical Center

555 Prospect Place
Brooklyn
*B-51 Conference Room
Basement, Leviton Bldg.
3:30–4:30 p.m.
June 2
CANCER AND THE AGED
Larry Nathanson, M.D.
June 9
IMMUNOGLOBULIN DEFICIENCY DISEASES
Frederick Siegal, M.D.
NO FEE. CREDIT: AMA Cat. 1
For further information contact the Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212/240-1211.

Saint Mary's Hospital of Brooklyn

170 Buffalo Avenue
Brooklyn
*Third Floor Board Room
8:00–9:00 a.m.
June 2
PRIMARY SIDERBLASTIC ANEMIA: NEW DEVELOPMENTS AND PRACTICAL APPLICATIONS
Emil Popescu, M.D.
CREDIT: AMA Cat. 1
For further information contact Saint Mary's Hospital of Brooklyn, 170 Buffalo Avenue, Brooklyn 11213. Tel: 212/774-3600. Ext. 2044 or 2045.

Doctors Hospital

170 East End Ave.
4:15 p.m., Thursday
June 3
CLINICAL LECTURES
ADVANCES IN ANTIMICROBIAL THERAPY
James J. Rahal, Jr., M.D.
CREDIT: AMA Cat. 1 (1½ hrs.)
For further information contact Secretary of CME, Doctors Hospital, 170 East End Ave., New York 10028. Tel: 212/870-9118.

Westchester Square Hospital in collaboration with Albert Einstein College of Medicine

1625 St. Peters Avenue
Bronx
*Conference Room
2475 St. Raymond Avenue
4:00–5:30 p.m.
June 3, Thursday
ESOPHAGEAL SURGERY, HIATUS HERNIA & MOTILITY DISABILITY
Frank Migliorelli, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
June 10, Thursday
CEPHALOSPORIN UPDATE
Michael H. Miller, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
June 17, Thursday
STROKES AND TIA'S
David Kaufman, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)

SUNY Downstate Medical Center, Kings County Hospital Center in Cooperation with District I, NYSSA—Department of Anesthesiology

450 Clarkson Avenue
Brooklyn
June 7. 4:00–5:00 p.m.
VISITING PROFESSOR PROGRAM
BLOOD COMPONENTS AND THEIR UTILIZATION
D. David Glass, M.D.
June 8, 8:00–9:00 p.m.
ALTERATIONS IN THE COAGULATION SYSTEM IN THE PERIOPERATIVE PERIOD
D. David Glass, M.D.
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D., Clinical Associate Professor, Department of Anesthesiology, SUNY Downstate Medical Center, 450 Clarkson Ave., Brooklyn 11203. Tel: 212/735-2133.

Metropolitan Hospital Center in affiliation with New York Medical College

1901 First Avenue
*Metropolitan Hospital
June 16, Wednesday
HEMATOLOGY SLIDE SEMINAR
Bong G. Hyun, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
For further information contact Victor Tchertkoff, M.D., Metropolitan Hospital Center, 1901 First Avenue, New York 10029. Tel: 212/360-6253.

The New York State Society of Anesthesiologists, Inc.

30 East 42nd Street
*The Barbizon Plaza Hotel
June 6 thru 11
19TH ANNUAL BASIC SCIENCE SYMPOSIUM ON ANESTHESIOLOGY AND CRITICAL CARE MEDICINE
CREDIT: AMA Cat. 1 (39 hrs.)
For further information contact The New York State Society of Anesthesiologists, Inc., 30 East 42nd Street, Suite 1501, New York 10017. Tel: 212/867-7140.

NYU Medical Center, Post-Graduate Medical School

550 First Avenue
*Schwartz Lecture Hall
301 East 30th Street
June 7–9
THE ULTRASOUND REVOLUTION IN OBSTETRICS
COURSE #370
FEE: $350. CREDIT: AMA Cat. 1 (16 hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295.

NYU Medical Center, Post-Graduate Medical School and Bellevue Hospital Center

550 First Avenue
June 14–17
EMERGENCY MEDICINE 1982
COURSE #315
FEE: $555. CREDIT: AMA Cat. 1 (23 hrs.) & AAFP
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295.

NYU Medical Center, Post-Graduate Medical School and the Department of Pediatrics

550 First Avenue
*Schwartz Lecture Hall
401 East 30th Street
8:00 a.m.–1:30 p.m.
June 21 thru June 24
PEDIATRIC & ADOLESCENT MEDICINE 1982
Dr. Joseph Dancis, Dr. Emilia Sedlis, M.D.
FEE: $365. CREDIT: AMA Cat. 1 (22 hrs.) & AAFP
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295.

Beth Israel Medical Center co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
*Loeb Auditorium
Hospital for Joint Diseases
Orthopaedic Institute
301 East 17th Street
8:30 a.m.–12:00 Noon
June 23
THE CURRENT STATUS OF GASTROINTESTINAL CANCER: A REVIEW AND UPDATE
Alvin M. Gelb, M.D.
NO FEE. CREDIT: AMA Cat. 1 (3½ hrs.)
For further information contact Beth Israel Medical Center, 10 Nathan D. Perlman Place, New York 10003. Tel: 212/420-2000.

New York University Medical School

Post-Graduate Medical School
550 First Avenue
*Schwartz Lecture Hall
401 East 30th Street
June 25–26
ADVANCES IN ANESTHESIA FOR THE CARDIAC PATIENT
Ketan Sheude, Stephen Thomas, Herman Turndorf
FEE: $210. CREDIT: AMA Cat. 1 (11½ hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295.

NYU Medical Center, Post-Graduate Medical School

550 First Avenue
June 28–July 2
FORENSIC SCIENCES SYMPOSIUM-1982
Michael M. Baden, M.D., Werner Spitz, M.D.
FEE: $315. CREDIT: AMA Cat. 1 (32 hrs.)
For further information contact NYU Medical Center. Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212/340-5295. (24 hour telephone)

NYU Medical Center Post-Graduate Medical School

550 First Avenue, New York 10016
*N.Y.U. Dental Center, Arnold & Marie Schwartz Hall of Dental Sciences
345 East 24th Street, N.Y.C.
Thursday, June 24, 1982 through Saturday, June 26, 1982
COURSE 307 MEDICINE IN DENTISTRY
William Greenfield, D.D.S.
Steven Lam, M.D.
Irwin W. Scopp, D.D.S.
FEE: $290. CREDIT: 17 CDE CREDIT HOURS
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York 10016 at 212/340-5295.

NYU Medical Center Post-Graduate Medical School

550 First Avenue
New York 10016
*Schwartz Lecture Hall
401 East 30th Street
New York City
June 10–13, 1982—Thursday through Sunday
COMPUTED TOMOGRAPHY
Normal E. Chase, M.D.
R. Thomas Bergeron, M.D., Morton A. Bosniak, M.D. and Irvin I. Kricheff, M.D.
FEE: $395. CREDIT: AMA Cat. 1 (22½ hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York. Tel: 212/340-5295.

NYU Medical Center Post-Graduate Medical School

550 First Avenue, New York
*Schwartz Lecture Hall
Classroom F
401 East 30th Street, N.Y.
June 5–6, 1982—Saturday and Sunday
INTERNATIONAL RADIOLOGY
Norman E. Chase, M.D.
Morton A. Bosniak, M.D., Robert Rosen, M.D.
FEE: $350. CREDIT: AMA Cat. 1 (15 hrs.)
For further information contact Registration Office, NYU Post-Graduate Medical School, 550 First Avenue, New York. Tel: 212/340-5295.

The New York State Society of Anesthesiologists, Inc.

30 East 42nd Street, Suite 1501
New York, New York 10017
*SUNY at Buffalo
Buffalo, New York
June 7 & 8th, 1982—Monday and Tuesday
UPDATE ON ANESTHETIC TOXICITY
CREDIT: AMA Cat. 1 (4 hrs.)

*NYU Medical Center

New York, New York
June 25 & 26th, 1982—Friday and Saturday
ADVANCES IN ANESTHESIA FOR THE CARDIAC PATIENT
CREDIT: AMA Cat. 1 (11½ hrs.)
For further information contact Mr. Kurt G. Becker, The New York State Society of Anesthesiologists, Inc., 30 East 42nd Street, Suite 1501, New York, N.Y. 10017, at 212/867-7140.

New York University Post-Graduate Medical School

550 First Avenue
New York 10016
*Alumni Hall
Monday to Friday, June 21–25, 1982
RADIATION PHYSICS AND BIOLOGY
A Five Day Review Course
Donald J. Pizzarello, Ph.D.
FEE: $520. CREDIT: AMA Cat. 1 (35 hrs.)
For further information contact Registration Office, N.Y.U. Post-Graduate Medical School, 550 First Avenue, New York. Tel: 212/340-5295.

QUEENS COUNTY

The Jamaica Hospital Medical Center

89th Avenue & Van Wyck Expressway
Jamaica
June 2
The following *PULMONARY DISEASE LECTURE* is held on Wednesday from 9:00–10:30 a.m., in the Trump Pavilion:
MEDICAL GRAND ROUNDS—PROGRESS IN MEDICINE
PULMONARY MANIFESTATIONS OF SYSTEMIC DISEASES
Nathan Seriff, M.D.
*Community Room
10:45–11:45, Tuesday
June 1
ENDOCRINOLOGY & METABOLISM REVIEW OF THYROID—PART IV
Lawrence Rosman, M.D.
ENDOCRINOLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room, on Tuesdays—Amar Jit Singh, M.D.
*Community Room
10:45–11:45 a.m., Tuesday
June 8
HEMATOLOGY
PLATELET FUNCTION ABNORMALITIES
Robert Reiss, M.D.
HEMATOLOGY CASE PRESENTATION are conducted monthly, from Noon to 1:00, the Community Room, on Tuesdays—Malcolm E. Levine, M.D. and Staff
HEMATOLOGY GRAND ROUNDS are conducted bi-monthly on Fridays, from 1:00 to 2:30 in the Community Room
NEPHROLOGY CASE PRESENTATIONS are conducted monthly, from Noon to 1:00 in the Community Room, on Tuesdays—Amarjit Singh, M.D. & Emmanuel B. Masih, M.D. and Staff
NEUROLOGY CASE PRESENTATIONS are conducted monthly, from noon to 1:00 in the Community Room, on Tuesdays—Neurology Staff
TUESDAYS: 8:00–9:00, Rheumatology Case Presentations conducted by William A. O'Connell, M.D.
3:30–4:30, Infectious Disease Case Presentations conducted by Robert H. Lapin, M.D.
*Trump Pavilion
9:00–10:30 a.m., Wesnesday
June 2
MEDICAL GRAND ROUNDS & PROGRESS IN MEDICINE
PULMONARY MANIFESTATIONS OF SYSTEMIC DISEASES
Nathan Seriff, M.D.
June 9
TO BE ANNOUNCED
WEDNESDAYS, 1:00–2:00, TUMOR BOARD-Fourth Wednesday—*CLINICAL PATHOLOGY CONFERENCE*, Assembly Room
*Community Room
8:30–9:30 a.m., Thursday
June 3
CARDIOLOGY
MANAGEMENT OF POST-MYOCARDIAL INFARCTION PATIENT—CLINICAL & NONIVASIVE ASSESSMENT
Steven M. Zeldis, M.D.
ECG & ARRHYTHMIAS CONFERENCES are held monthly, on Thursdays, from 9:30–10:30, Thomas A. Bizzaro, M.D.
*Community Room
9:30–10:30 a.m., Thursday
June 10
INFECTIOUS DISEASES
ANTIBIOTICS: NEW AND OLD
Robert H. Lapin, M.D.
INFECTIOUS DISEASES CASE PRESENTATIONS are conducted monthly, from 3:30 to 4:30 in the Community Room, on Tuesdays—Robert H. Lapin, M.D.
TUMOR BOARD 1:00–2:00, Wednesdays, Fourth Wednesday—*CLINICAL PATHOLOGY CONFERENCE*, Assembly Room
RHEUMATOLOGY CASE PRESENTATIONS are conducted monthly, from 8:00–9:00 in the Community Room, on Tuesdays, William A. O'Connell, M.D. and Staff
*Community Room
10:45–11:45 a.m., Friday
June 4
MEDICAL GASTROENTEROLOGY
ROLE OF SURGERY IN PANCREATITIS
Saul C. Futterman, M.D.
MEDICAL GASTROENTEROLOGY CASE PRESENTATIONS are conducted on alternate Fridays, in the Community Room, 10:45–11:45—Robert T. Todaro, M.D., and Staff
FRIDAYS, Noon to 1:00, Assemby Room *RADIOLOGY CONFERENCES*, Emerick Demeter, M.D. & Staff, alternating with *MEDICAL-PATHOLOGY-MORTALITY CONFERENCE*, Elizabeth Khayat, M.D. & Staff, or *PATHOLOGY GRAND ROUNDS*, Department of Pathology, Cornell Medical Center
FRIDAYS, bimonthly, 1:00–2:30 Community Room, *HEMATOLOGY GRAND ROUNDS*

NASSAU COUNTY

Nassau County Medical Center sponsored by Department of Medicine, co-sponsored by The Office of Continuing Medical Education, Nassau County Medical Center

2201 Hempstead Turnpike
East Meadow
*Amphitheater Dynamic Care Building
10:00 a.m., Thursdays
June 10
TREATMENT OF VENTRICULAR TACHYCARDIA AND PREVENTION OF SUDDEN DEATH
John C. Somberg, M.D.
For further information contact Nassau County Medical Center, 2201 Hempstead Turnpike, East Meadow, 11554.

Nassau Hospital

259 First Street
Mineola
June 22
Family Practice
THE APPROACH TO THE PATIENT WITH RASH AND FEVER
Burke Cunha, M.D.
INTERNAL MEDICINE
PRIMARY CARE CONFERENCES
*Conference Room B
11:00 a.m.–12:00 noon
June 7
THE PAINFUL BACK
Herbert Fett, M.D.
June 14
GLAUCOMA
Victor F. Villadolid, M.D.
June 21
THE RED EYE
Joseph Crapotta, M.D.
June 28
CATARACTS
Jack Cook, M.D.
CRITICAL CARE
**Breed Conference Room*
11:00 a.m.–12:00 noon
June 1
ACUTE COMPLICATIONS OF MYOCARDIAL INFARCTION
Steven Zeldis, M.D.
June 8
INFLAMMATORY BOWEL DISEASE
Bertram Fuchs, M.D.

June 15
NEW CONCEPTS IN LIVER FAILURE
Robert Bartolomeo, M.D.
June 22
ACUTE STROKE
Robert Sherman, M.D.
ADVANCES IN MEDICINE
*Breed Conference Room
10:00 a.m.–11:00 a.m.
June 2
WHAT'S NEW IN PLATELET FUNCTION—PROSTAGLANDINS
Barry Coller, M.D.
June 9
RECENT ADVANCES IN THE PHYSIOLOGY AND TREATMENT OF ASTHMA
Joe H. Dwek, M.D.
June 16
ALCOHOLISM—MEDICAL MANAGEMENT
Gordon Ifill, M.D.
June 23
ACUTE AORTIC REGURGITATION
Steven M. Zeldis, M.D.
PROBLEM SOLVING
*Breed Conference Room
11:00 a.m.–12:00 noon
June 4
UREMIA
Louis Imbriano, M.D.
June 11
IMMUNOGLOBULIN DISORDERS
Norbert Felber, M.D.
June 18
VASCULITIS
James Sullivan, M.D.
NUCLEAR RADIOLOGY
*Breed Conference Room
3:30 p.m.–4:30 p.m.
June 2
SPECIAL PROBLEMS IN GALLIUM SCINTIGRAPHY
Stanley Goldsmith, M.D.
OBSTETRICS AND GYNECOLOGY
Medical-Surgical Lecture Series
*Maternal-Child Conference Room-Lower Level
8:00 a.m.
June 12
THE DIAGNOSIS AND TREATMENT OF ACUTE NEUROLOGICAL DISEASES IN PREGNANCY
Sydney Louis, M.D.
UPDATE IN GYNECOLOGIC ONCOLOGY
*Maternal-Child Conference Room
Lower Level
9:00 a.m.
June 25
PALLIATION & SUPPORT OF THE CANCER PATIENT
PATHOLOGY UPDATE
*Maternal-Child Conference Room
Lower Level
8:00 a.m.
June 4
PATHOLOGY OF THE OVARY II
Marian Waxman, M.D.
June 18
PATHOLOGY OF CURRENT MATERIAL
Marian Waxman, M.D.
PERINATAL LECTURE SERIES
*Maternal-Child Conference Room
Lower Level
9:00 a.m.
June 18
MEDICO-LEGAL ASPECTS OF OBSTETRICAL CASES
ONCOLOGY-MULTIDISCIPLINARY TUMOR CONFERENCE
*Breed Conference Board
8:00 a.m., Tuesdays
June 1
RADIOTHERAPY
June 8
SURGERY
June 15
RADIOTHERAPY
June 29
SURGERY
OPHTHALMOLOGY
*Board Room
5:00 p.m.
June 1
MANAGEMENT OF THE DRY EYE
Henry D. Perry, M.D.
PATHOLOGY
DIAGNOSTIC CYTOPATHOLOGY
*Pathology Conference Room
June 21
CYTOLOGY OF THE BREAST
June 21
QUIZ ON GASTRO-INTESTINAL TRACT AND BREAST CYTOLOGY
COURSE IN BASIC IMMUNOLOGY
*Pathology Conference Room
11:00 a.m.
June 22
IMMUNOLOGY LABORATORY INVESTIGATION AND CLINICAL APPLICATION VI
SURGICAL PATHOLOGY
Gross and Microscopic Demonstrations
*Pathology Conference Room
June 2, 8:00 a.m.
SLIDE REVIEW
June 3, 3:30 p.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
June 9, 8:00 a.m.
SLIDE REVIEW
June 10, 11:00 a.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
June 16, 8:00 a.m.
SLIDE REVIEW
June 17, 3:30 p.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
June 23, 8:00 a.m.
SLIDE REVIEW
June 24, 11:00 a.m.
GROSS AND MICROSCOPIC REVIEW OF CURRENT CASES
PEDIATRICS
NEONATAL LECTURE SERIES
*Maternal-Child Conference Room
Lower Level
1:00 p.m.
BREECH PRESENTATION
Paul F. Twist, D.O.
June 10
TETRALOGY OF FALLOT
Paul Twist, D.O.
June 17
NEONATAL GENITAL URINARY PROBLEMS
Paul Twist, D.O.
June 24
NEONATAL EFFECTS OF ANTICONVULSANTS
Paul Twist, D.O.
PERINATAL/NEONATAL CONFERENCE
*Maternal-Child Conference Room
Lower Level
12:00 noon
June 4
MORBIDITY AND MORTALITY CONFERENCE
June 11
POST-DATE PREGNANCIES

June 18
PERINATAL CASE PREGNANCIES
PSYCHIATRY
*One Conference Room
12:15 p.m.
June 2
APPRAISAL OF PSYCHOTROPIC MEDICATIONS USED IN ANXIETY STATES
June 9
APPRAISAL OF PSYCHOTROPIC MEDICATIONS USED IN SCHIZOPHRENIC DISORDERS
June 16
APPRAISAL OF PSYCHOTROPIC MEDICATIONS USED IN AFFECTIVE DISORDERS
June 23, 30
APPRAISAL OF DRUG REACTIONS AND TREATING DRUG REACTIONS
UROLOGY
GUEST LECTURES
9:00–11:30 a.m.
June 12
MANAGEMENT OF THE NUTRITIONALLY DEPLETED GU PATIENT
Terry W. Hensle, M.D.
BASIC SURGICAL EDUCATIONAL CORE PROGRAM FOR JUNE 1982
June 1, 4:00 p.m., HOAG 5
TRAUMA OVERVIEW & EMERGENCY MANAGEMENT
Dr. Call
June 2, 4:00 p.m. Room B
PEDIATRIC SURGERY I: COMMON PEDIATRIC SURGICAL PROBLEMS
Dr. Coryllos
June 7, 3:00 p.m., Room B
ARTERIAL INJURIES
Dr. Hines
June 8, 4:00 p.m., HOAG 5
KIDNEY, URETER & BLADDER NEOPLASM
Dr. Ferragamo
June 9, 4:00 p.m., Room B
RADIATION THERAPY IN BREAST & OTHER CANCERS
Dr. Saxe
June 14, 3:00 p.m., Room B
RENAL RESPONSE TO HYPOVOLEMIA
Dr. Imbriano
June 15, 4:00 p.m., HOAG 5
PEDIATRIC SURGERY II: SURGICAL EMERGENCIES IN THE NEWBORN
Dr. Coryllos
June 16, 4:00 p.m., Room B
ENDOSCOPY IN THORACIC SURGERY INCLUDING ANATOMY OF BRONCHOPULMONARY TREE
Dr. Mohtashemi
June 21, 3:00 p.m., Room B
PHYSIOLOGY OF PORTAL HYPERTENSION
Dr. Addei
June 22, 4:00 p.m., HOAG 5
COLONOSCOPY AND COLON DISEASES II
Dr. Edinburgh
June 23, 4:00 p.m., Room B
LOW BACK PAIN SYNDROME
Dr. Cerruti
For further information contact Nassau Hospital, 259 First Street, Mineola 11501. Tel: 516/663-2382.

Long Island Jewish-Hillside Medical Center—Sponsored by Department of Surgery, LIJ Medical Center, The Post-Graduate Institute for Medical and Dental Education, New Hyde Park, New York and the Health Sciences Center State University of New York at Stony Brook

New Hyde Park
June 3
CARCINOMA OF THE PANCREAS
Gerard Burns, M.D.
June 10
ADVANCES IN THE MANAGEMENT OF CARCINOMA OF THE ANAL REGION
Mary Ann Tinker, M.D.
June 17
FACTORS IN MAKING SURGICAL DECISIONS
Ira Teicher, M.D.
June 24
OVERVIEW OF THE YEAR
Leslie Wise, M.D.
For further information contact Long Island Jewish-Hillside Medical Center, New Hyde Park 11042.

SUFFOLK COUNTY

Brookhaven Memorial Hospital Medical Center

101 Hospital Road
Patchogue
*1st Floor Conference Room
8:30 a.m., Saturday
June 5
MEDICAL GRAND ROUNDS
Martin Roginsky, M.D.
CREDIT: AMA Cat. 1 & AAFP
*2nd Floor Conference Room
8:00–9:00 a.m., Tuesday
June 15
PEDIATRIC GRAND ROUNDS
EMERGENCY ROOM: WHEN TO ADMIT
Joseph D'Agrosa, M.D.
CREDIT: AMA Cat. 1 & AAFP
*1st Floor Conference Room
8:00–9:00 a.m.
June 1
PEDIATRIC CONFERENCES
COMMON ORTHOPEDIC INJURIES IN CHILDHOOD
Stuart Polisner, M.D.
FEE: $10. CREDIT: AMA Cat. 1 & AAFP
*1st Floor Conference Room
8:00–9:00 a.m.
June 4
CLINICAL PROBLEMS IN FAMILY MEDICINE
ACUPUNCTURE
Mathew H. M. Lee, M.D.
June 11
TREATMENT OF CHRONIC PAIN
Ronald Dougherty, M.D.
June 18
DEPRESSION
Steven Secunda, M.D.
June 25
BIOCHEMICAL EVALUATION OF EMOTIONAL DISEASE
Eugenia Liteanu, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Dorothy S. Lane, M.D., Director of Medical Education, Brookhaven Memorial Hospital Medical Center, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.

St. Charles Hospital

200 Belle Terre Road
Port Jefferson, New York 11777
*Classroom "A"
Friday, June 4, 1982 at 8:00 a.m.
PEDIATRIC ELECTRIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
Friday, June 11, 1982 at 8:00 a.m.
PEDIATRIC ELECTRONIC BLACKBOARD

PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
Friday, June 18, 1982 at 8:00 a.m.
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
*St Charles Lecture Room
Friday, June 18, 1982 at 8:00 a.m.
FAMILY PRACTICE PROGRAM
PEDIATRIC ELECTROLYTES
Platon Collipp, M.D.
*CLASSROOM "A"
Monday, June 21, 1982 at 7:30 a.m.
OPHTHALMOLOGY CONFERENCE
OPHTHALMIC GENETICS
Vincent P. Basilice, M.D.
Friday, June 25, 1982 at 8:00 a.m.
PEDIATRIC ELECTRONIC BLACKBOARD
PEDIATRIC GRAND ROUNDS WITH LONG ISLAND JEWISH-HILLSIDE MEDICAL CENTER
For further information contact Jesse W. Mahoney, M.D., Director at 516/473-2800.

Mather Memorial Hospital

North Country Road
Port Jefferson, New York 11777
*Conference Room
Tuesday, June 1, 1982 at 11:30 a.m.
WEEKLY EDUCATIONAL SERIES
PERCUTANEOUS RENAL ANGIOPLASTY IN RENAL HYPERTENSION
Harry L. Stein, M.D.
Monday, June 7, 1982 at 11:45 a.m.–1:15 p.m.
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
Monday, June 7, 1982 at 7:00 p.m.–10:00 p.m.
POST GRADUATE DENTAL PROGRAM
EVALUATION OF THE NEUROLOGICAL SYSTEM
Frederic A. Mendelsohn, M.D.
Tuesday, June 8, 1982 at 11:30 a.m.–1:00 p.m.
WEEKLY EDUCATIONAL SERIES
STRESS TESTING—INDICATION AND COMPARISON BETWEEN CONVENTIONAL TREADMILL AND THALIUM METHODS
Monday, June 14, 1982 at 11:45 a.m.–1:15 p.m.
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
Tuesday, June 15, 1982 at 11:30 a.m.–1:00 p.m.
WEEKLY EDUCATIONAL SERIES
DIAGNOSIS AND MANAGEMENT OF MENINGITIS
Nicholas T. Carnevale, M.D.
Monday, June 21, 1982 at 7:00 a.m.
ANESTHESIOLOGY CONFERENCE
ANESTHESIA CONSIDERATION IN THE ANEMIC PATIENT
Edward A. Norris, M.D.
Monday, June 21, 1982 at 11:45–1:00 p.m.
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
Tuesday, June 22, 1982 at 11:30 a.m.–1:00 p.m.
WEEKLY EDUCATIONAL SERIES
NOW THAT I HAVE MADE IT, HOW DO I KEEP IT?
Larry Wachtel, M.D.
Monday, June 28, 1982 at 11:45 a.m.–1:15 p.m.
TUMOR CONFERENCE
DANAZOL IN THE TREATMENT OF FIBROCYSTIC DISEASES OF THE BREAST
Philip Strax, M.D.
Tuesday, June 29, 1982 at 11:30 a.m.
WEEKLY EDUCATIONAL SERIES
NEW PHARMACOLOGICAL APPROACHES TO ISCHEMIC HEART DISEASE
John Morrison, M.D.
For further information contact Mather Memorial Hospital, North Country Road, Port Jefferson, New York 11777 at 516/473-1320.

State University of New York at Stony Brook

Health Sciences Center
Stony Brook, New York
Saturday, June 19, 1982
AEROMEDICAL CARE OF THE ILL AND INJURED
FEE: $60.
CREDIT: AMA Cat. 1 (6 hrs.)

***Health Sciences Center**

Saturday, June 26, 1982
PROGRESS IN ANESTHESIOLOGY: MONITORING AND CRITICAL CARE MEDICINE
FEE: $60.
CREDIT: AMA Cat. 1 (6 hrs.)
For further information contact Tamarath K. Yolles, M.D., SUNY at Stony Brook, New York. Tel #516-246-2094/2135

NYACK

Nyack Hospital

North Midland Avenue
Nyack
*Schroeder Conference Room
June 25, 8:00–9:00 a.m.
WHAT'S NEW IN BURN CARE
Roger E. Saisbury, M.D.
CREDIT: AMA Cat. 1
For further information on the above programs contact S. Sheldon Katz, M.D., Director, Department of Surgery 914/358-6200 x 2509.

ROCHESTER

Rochester Eye Institute and the Department of Ophthalmology
Park Ridge Hospital

Rochester, New York 14626
*Genesee Plaza
Holiday Inn
Rochester, New York
June 10 & 11th, 1982—Thursday and Friday
SEVENTH ANNUAL OPHTHALMIC SEMINAR
"CONTROVERSIES IN OPHTHALMOLOGY"
Drs. Frederick C. Blodi, Michael A. Lemp, J. James Rowsey, C. William Simcoe and Richard J. Simmons
For further information contact Miss Katherine Sgabelloni, R.N., Park Ridge Hospital, 1555 Long Pond Road, Rochester, New York at 716/225-7150, Ext. 4054.

BUFFALO

State University of New York at Buffalo
Children's Hospital

219 Bryant Street
Buffalo
*Sheridan Brock Hotel
Niagara Falls, Ontario, Canada
June 21-25

The 2nd INTERNATIONAL SYMPOSIUM ON INFANT NUTRITION AND THE DEVELOPMENT OF THE GASTROINTESTINAL TRACT
FEE: $325. CREDIT: AMA Cat. 1 (33 hrs.)
For further information contact Rayna Dutton, Coordinator, Continuing Medical Education, SUNY at Buffalo, Children's Hospital, 219 Bryant Street, Buffalo 14222. Tel: 716/878-7630.

State University of New York at Buffalo Department of Neurosurgery

135 Cary Hall
3435 Main Street, Buffalo, N.Y.
*Hilton Hotel
Buffalo, N.Y.

June 2–5, 1982
CONTEMPORARY STEREOTACTIC TECHNIQUES SEMINAR
FEE: $250.
CREDIT: AMA Cat. 1 (22 Hrs.)
For further information contact Patrick J. Kelly, M.D. 2121 Main Street, Suite 308, Buffalo, N.Y. Tel. #716-834-2601.

OUT-OF-STATE

WASHINGTON, D.C.

American Cancer Society National Conference The Primary Care Physician and Cancer in cooperation with the American Academy of Family Physicians

*Hyatt Regency Washington on Capitol Hill
Washington, D.C.

June 24–26
THE PRIMARY CARE PHYSICIAN AND CANCER
NO FEE. CREDIT: AMA Cat. 1 (17½ hrs.)
ADVANCE REGISTRATION IS REQUESTED
For further information write: Nicholas G. Bottiglieri, M.D., American Cancer Society National Conference, The Primary Care Physician and Cancer, 777 Third Avenue, New York 10017.

NEW HAMPSHIRE

State University of New York Downstate Medical Center, Department of Anesthesiology

450 Clarkson Avenue, Brooklyn, N.Y.
*Mary Hitchcock Memorial Hospital
Hanover, New Hampshire

June 7 and 8, 1982
VISITING PROFESSORS
D. David Glass, M.D.
For further information contact Abraham I. Raskob, M.D., Program Coordinator at 212/270-1233.

AMA'S PHYSICIANS' PLACEMENT SERVICE

Physicians seeking placement opportunities outside New York State should contact AMA, Physicians' Placement Service, 535 N. Dearborn Street, Chicago, Ill. 60610. Tel: 312/751-6000 and also refer to the physicians' opportunities listed in the classified ad section of *JAMA,* the Journal of the AMA.

NOTICE

The Medical Society of the State of New York invites the Deans of Medical Schools and the Administrators of Hospitals to send notices of continuing medical education including teaching days, important lectureships, courses, and similar programs for publication in WHAT GOES ON to: The Editor, WHAT GOES ON, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100. This is a free service.

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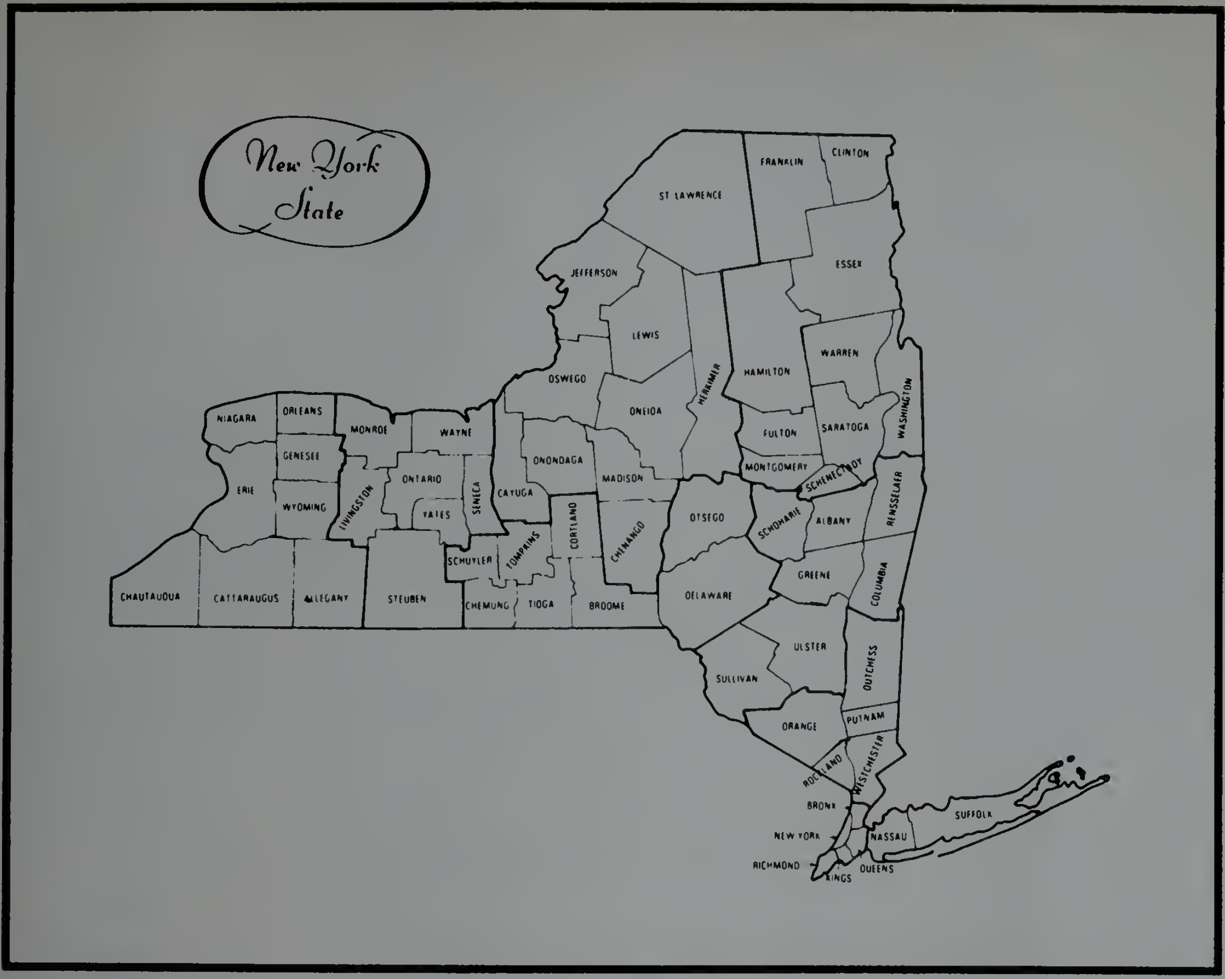

physicians' placement opportunities

Compiled by the
Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100

ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello, N.Y. 12701. Tel: 914/794-4900.

ANESTHESIOLOGIST

MONTICELLO, N.Y., contact Carl K. Heins, M.D., Hamilton Avenue Hospital, Monticello 12701. Tel: 914/794-4545.
NORWICH, N.Y., contact Martin H. Jacobi, M.D., Norwich, N.Y. 13815 at 607-334-2832.
SARATOGA SPRINGS, N.Y., contact Allen T. Jones, 384 Broadway, Saratoga Springs 12866. Tel: 518/584-1978.
WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

COMMISSIONER OF HEALTH

POUGHKEEPSIE, N.Y., contact Andree F. Sullivan, New Tower, Vassar Brothers Hospital, Poughkeepsie 12601. Tel: 914/452-2140.

EMERGENCY ROOM

BUFFALO, N.Y., contact Lafayette General Hospital, 113 Lafayette Avenue, Buffalo 14213. Tel: 716/885-8900.
ONEONTA, N.Y., contact Randolph E. Knob, M.D., Director or Mr. F. M. Isbell, Adm., A. O. Fox Memorial Hospital, 1 Norton Avenue, Oneonta 13820. Tel: 607/432-2000.
UTICA, N.Y., contact Irving Cramer, M.D., Medical Director, St. Luke's Memorial Hospital Center, P.O. Box 479, Utica 13503.

ENT

GLENS FALLS, N.Y., contact Orei Friedman, M.D., 591 Glen St., P.O. Box 444, Glens Falls 12801. Tel: 518/792-1404.
LONG BEACH, N.Y., contact Oscar Sreter, M.D., 270 Edward Blvd., Long Beach 11561. Tel: 516/431-7861.
OLEAN, N.Y., contact Dr. Edward R. Mountain, 1909 West State St., Olean, 14760. Tel: 716/372-2788.
ORCHARD PARK, N.Y., contact R. M. Patel, M.D., 55 Melroy Avenue, Lackawanna, N.Y. 14218

FAMILY PHYSICIAN

ADAMS, N.Y., contact South Jefferson Recruiting Comm., c/o Mrs. Fred Spinner, RFD#2, P.O. Box 1114, Adams 13605.
ALBION, N.Y., contact Jay Scott Parisella, Administrator, Arnold Gregory Memorial Hospital, 243 South Main Street, Albion, N.Y. 14411 Tel. #716-589-4422.
ATHENS, N.Y., contact Village Clerk, 2 First Street, Athens 12015. Tel: 518/945-1551.
AUBURN, N.Y., contact Charles D. Hicks; Director, Physician Procurement Committee, 157 Ross Street, Auburn 13021. Tel: 315/253-3388.
BATH, N.Y., contact W. A. Klepack, Box 831, Bath 14810. Tel: 607/776-6438 call collect.
BINGHAMTON, N.Y., contact Broome County Medical Society. Tel: 607/729-9261.
BROCKPORT, N.Y., contact James P. Goetz, M.D., 80 West Avenue, Suite 204, Brockport 14420. Tel: 716/637-3905.
BROOKHAVEN, N.Y., contact Dorothy S. Lane, M.D., Dept. of Community Medicine, Brookhaven Memorial Hospital, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.
GROTON, N.Y., contact Dorothy Ambis, M.D., 100 Sykes Street, Groton, New York. Tel: 607/898-3631
HICKSVILLE, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.
HUNTINGTON, N.Y., contact Douglas R. Phillips, M.D.,1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.
LATHAM, N.Y., contact Mrs. Joan Mosca, Latham Medical Group, Latham, New York. Tel: 518/785-5881
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Physicians seeking placement opportunities outside New York State should contact AMA, Physicians' Placement Service, 535 N. Dearborn Street, Chicago, Ill. 60610. Tel: 312/751-6000 and also refer to the physicians' opportunities listed in the classified ad section of *JAMA*, the Journal of the AMA.

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Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely. The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.

Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets daily or decreased to two tablets daily as required. Limbitrol 5-12.5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.
How Supplied: White, film-coated tablets, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50.

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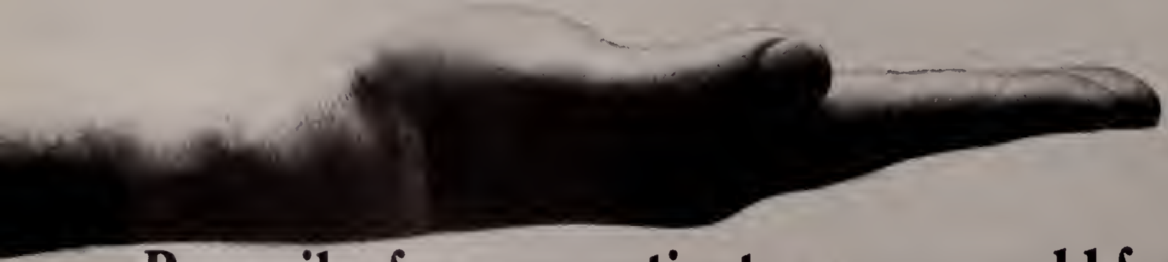

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New York State Journal of Medicine

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INDERAL is contraindicated in 1) bronchial asthma, 2) allergic rhinitis during the pollen season 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta-blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure INDERAL acts selectively without abolishing the inotropic action of digitalis on the heart muscle (i e that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by INDERAL's negative inotropic effect The effects of INDERAL and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, e g isoproterenol or levarterenol However, such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e g CHRONIC BRONCHITIS EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure intensification of AV block hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type thrombocytopenic purpura

Central Nervous System lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION *Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

INTRAVENOUS

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Abstracts in Interlingua

Smith J J, Schinfeld J, e Schulman H: Placenta previe; Reevalutation e un nove classification therapeutic, **New York State J. Med. 82:** 0000 1982.

Un revision retrospective de 10 annos (1966–1976) de omne casos de placenta previe in le Albert Einstein College of Medicine Complex (private e public) es presentate. Un total de 189 casos de placenta previe intra 48.000 partos (frequentia de 0.39 pro cento) presentava un mortalitate perinatal de 58 per 1000. Es presentate un classification therapeutic nove denominate "HALO." Iste acronysmo representa Hemorrhagia (de moderate a grave), Abruption (con placenta previe), Labor (parto) (con placenta previe) e O per placenta previe con hemorrhagia solmente leve e irregulari. Le importantia clinic del classification de placenta previe in central, partial e marginal es questionate. Le examination duple ("Double Setup Examination"), un aspecto importante in cata caso de placenta previe, non es indicate como procedimento diagnostic rutinari donde un examination ultrasonographic bon es disponibile. Le classification "HALO," depost quantification, debe esser un guida clinic utile pro reducer le indice total del mortalitate perinatal intra le casos de placenta previe.

Olsen C L, Matte T D, Rothenberg R B, Cohen J, Curtis G B, Healion R M e Jesserer: Attention podiatric a patientes diabetic in le Stato de Nove York, **New York State J. Med. 82:** 0000 1982.

Le complicationes del pedes presenta un problema sanitari principal in le patientes diabetic, mais con attention adequate iste complicationes pote esser evitate. In iste articulo es reportate un studio includente le 1306 podiatricos licentiate in le Stato de Nove York e facite durante le Autummo de 1980 per le Diabetes Control Program del New York State Health Department. Le objectivo del studio esseva primemente definir le rolo del podiatrico in le attention del diabeticos. Le resultatos de iste studio (resultatos promedie) indicava que le 19 pro cento del patientes del podiatricos esseva diabeticos; mais iste proportion variava significativemente de accordo al location geographic, le tempore de practica, e le installation del consultorio pro practicar le profession in le qual le podiatrico tracta al majoritate del patientes diabetic.

Notani P N, Varma A O, Leske M C, e Janerich D T: Cancer mammari in le Stato de Nove York; tendentia del mortalitate del feminas inter 1970 e 1977, **New York State J. Med. 82:** 0000 1982.

Le mortalitate per cancer mammari in le Condatos de Nove York (exclusive le Citate de Nove York) esseva analisate durante le periodo 1970–1977 intra le population blanc e non blanc. Ben que le mortalitate intra le feminas blanc (32 per 100.000) non cambiaba durante iste periodo, ille intra le feminas non blanc augmentava de 17 per 100.000 in 1970 a 24 per 100.000 in 1977. Le examination del tendentia specific per etate permite le observation del

(*continued on page 1026*)

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Letters to the Editor

Biochemical mechanisms of steroid-induced psychosis

To the Editor: Recent neurochemical studies have provided additional insight into the mechanisms of steroid-induced psychosis discussed in an excellent recent paper in the *Journal.*[1] Murine neuroblastoma cells respond to glucocorticoids by increased catecholamine synthesis and increased activity of tyrosine hydroxylase (TH), the rate-limiting enzyme in catecholamine synthesis.[2–5] The effect is concentration-dependent and specific for glucocorticoids. Five to seven days are required for maximal TH increases (reminiscent of the time course of steroid-induced psychosis). The effects of glucocorticoids appear to be mediated by a specific cytosol receptor protein, which undergoes translocation to the nucleus, causing mRNA synthesis with subsequent production of new TH protein.

Cyclic adenosine 3′,5′-monophosphate (cyclic AMP) is also involved in the control of TH activity. Direct application of cyclic AMP derivatives, or inhibition of cyclic AMP catabolism by phosphodiesterase inhibitors (eg, theophylline, or Ro20-1724) produces increased TH activity. However, the mechanism by which glucocorticoids and cyclic AMP increase TH activity may differ: both Ro20-1724 and glucocorticoids increase TH activity in neuroblastoma, but glucocorticoids do not alter cyclic AMP levels.[4]

Cyclic AMP may increase TH activity by two different mechanisms. (1) Nicotinic cholinergic receptor activation increases cyclic AMP levels, causing increased protein kinase activation and translocation to the nucleus to induce *de novo* TH synthesis.[6–8] (2) Cyclic AMP activates a protein kinase, causing increased phosphorylation of previously synthesized TH by reducing the Km for the pteridine cofactor.[9–11] Both mechanisms may be responsible for the increases in TH activity produced by cyclic AMP.[6]

Overdosage with catecholamines or related drugs (especially amphetamines) produces a psychosis difficult to distinguish from paranoid schizophrenia. Induction of *de novo* TH synthesis may partially account for the ability of glucocorticoids to induce euphoria and more overt psychosis (eg, Cushing's syndrome), as well as the depression of mood seen in glucocorticoid withdrawal and Addison's disease.[12] In humans, dexamethasone produces EEG changes similar to those due to dextroamphetamine or methylphenidate.[13]

The synergistic effects of glucocorticoids and cyclic AMP on TH activity may have clinical implications. Asthma is treated with methylxanthine phosphodiesterase inhibitors such as theophylline. If steroid-induced psychosis is at least partially a consequence of increased catecholamine synthesis, theophylline could potentiate the psychotogenic effects of glucocorticoid. More research will be required to differentiate the roles of glucocorticoids, catecholamines, and methylxanthines in the production of psychosis.

It would be premature to suggest that catecholamine and serotonin neurons are the primary site of the psychotogenic action of glucocorticoids, since these steroids can produce states which mimic almost any form of psychiatric disorder.[14] Our present understanding may owe more to the technical ease of studying catecholamine and serotonin neurons than to their importance for steroid-induced psychosis. We may be like the proverbial drunk who searches for his car keys by the illumination of a streetlight rather than in the dark alley in which he lost them. For example, glucocorticoid binding in the hippocampus is localized primarily in the excitatory pyramidal and granule cells,[15] but the neurotransmitter for these cells appears to be glutamate.[16] Further advances in fundamental CNS neurochemistry, neuroanatomy, and neuropharmacology will be required for full understanding of the mechanisms responsible for steroid-induced psychosis.

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Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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(*continued from page 1023*)

augmento del mortalitate intra le feminas non blanc esseva evidente in omne gruppos de plus que 30 annos. In cambio, intra le feminas blanc un augmento del mortalitate esseva observate solmente intra le feminas de plus que 80 annos. Hasta le etate de 40 annos, le mortalitate intra un etate specific del feminas blanc e non blanc esseva le mesmo, mais intra le feminas non blanc esseva demonstrate un proportion levemente plus elevate que intra le feminas blanc. Nonobstante, depost le etate de 40 annos habeva un elevation acute e uniforme del mortalitate parallel al etate del feminas blanc, e non intra le feminas non blanc (le major parte, feminas del ratia Negre). Untendentia similar esseva observate in le frequentia national del cancer mammari e le mortalitate intra feminas blanc e negre. Le differentia in le mortalitate intra le feminas post-menopausic del ratia blanc e negre pote esser debite al differente typos de reproduction e forma de vita, con factores additional como le alimentation que possibilimente pote haber un rolo in iste materia. Esseva observate differentias intra le indices de mortalitate per carcinoma mammari intra le differente Condatos, con le indices plus elevate in Nassau, Suffolk e Erie. Le multiple studios retrospective del mortalitate per cancer mammari intra le feminas blanc, per Condato, revelava un forte association con le areas con population plus elevate. Iste variabile explicava un 60 pro cento del variationes intra le differente proportiones, con un coeficiente de regression positive e significative.

Translated by Edwardo I. Juliet, M.D.

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Dr. Kaufmann's reply

To the Editor: Thank you for allowing me the privilege of reading Dr. Black's letter entitled "Biochemical Mechanisms of Steroid-Induced Psychosis." My only comment is that Dr. Black presents an elegant summarized description of the current biochemical hypotheses involved in the mechanisms of steroid-induced psychoses.

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Small intestinal bleeding

To the Editor: It was with mixed feelings that I read Howard L. Beaton's informative paper concerning "Small Intestinal Bleeding" in the February 1982 issue of the *Journal.*

I was extremely gratified to see that the technique originally described by Dr. Edward Golembe and myself in 1978 was still being used for the intraoperative location of bleeding from the bowel. We have continued to use this technique with reasonably good results, but, until now had received no feedback from our colleagues in the medical community. The one resentment I do have is Dr. Beaton's reference to our method as cumbersome. We have never found the technique cumbersome, nor have we ever had difficulty utilizing it in most situations. Certainly, I congratulate Dr. Beaton for further simplifying the technique and bringing the state of the art to its present status.

This paper could have represented a pleasant interchange between surgical colleagues instead of merely a standard scientific presentation of one-upmanship. It would have been more appropriate if Dr. Beaton had given credit where credit was due for the use of the intra-arterial methylene blue injection for isolation small bowel bleeding. His contribution would then have certainly been received as an efficient and effective modification which updated a previously reported technique.

I hope that this criticism will not overshadow the absolute validity of the combination of angiography and dye injection techniques in the management of this trying and difficult problem.

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Dr. Beaton's reply

To the Editor: I greatly appreciate the opportunity to review and respond to Dr. Fogler's letter regarding my article entitled "Small Intestinal Bleeding: A Guide for Intra-operative Localization," which appeared in the February 1982 issue of the *New York State Journal of Medicine.*

I thank Dr. Fogler for his interest in my paper and contribution to the management of this troublesome problem. As discussed in my paper, Fogler and Golembe[1] were the first to describe the intraoperative dose of methylene blue injection directly into the superior mesenteric artery in a single patient with an arteriovenous malformation of the jejunum. Recent advances in radiologic techniques, however, have enabled the preoperative placement of a supraselective catheter directly into the vessel supplying the lesion in question, further simplifying the operative technique. Proper credit for first describing this modification, I believe, goes to Athanasoulis and colleagues[2] at the Massachusetts General Hospital, as mentioned.

My purpose in reporting our series of three patients was twofold. First of all, I wished to further document the simplicity and efficacy of the methylene blue technique as described by Athanasoulis. The second reason was to make a plea for close cooperation between angiographers and surgeons in the management of these patients to facilitate early diagnosis and direct proper surgical treatment, as the two are closely related. I believe that Dr. Fogler would agree with both of these points.

Once again, I wish to express my thanks to Dr. Fogler for his interest in my paper and to the Editor for the opportunity for this reply.

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Abstracts

Smith JJ, Schinfeld J, Schulman H: Placenta previa: Reappraisal and new therapeutic classification, **New York State J Med** 82: 1037 (June) 1982.

A 10-year retrospective review (1966 to 1976) of all placenta previa cases at the Albert Einstein College of Medicine complex (private and public) is presented. A total of 189 cases of placenta previa in 48,000 deliveries, an incidence of 0.39%, resulted in a perinatal mortality rate of 58 per 1,000.

A new therapeutic classification called HALO is presented. The acronym represents Hemorrhage, (moderate to severe), Abruption (with placenta previa), Labor (with placenta previa) and 0 for placenta previa with only mild, irregular bleeding). The clinical importance of the classification of placenta previa into central, partial, and marginal is questioned. The DSU (double setup examination) as an important aspect of every placenta case is not indicated as a routine diagnostic procedure where good ultrasonography is available. The HALO classification, after quantitation, should be a useful clinical guide in lowering the overall perinatal mortality rate in placenta previa.

Olsen CL, Matte TD, Rothenberg RB, Cohen J, Curtis GB, Healion RM, Jesserer JJ: Delivery of podiatric care to persons with diabetes in New York State, **New York State J Med** 82: 1041 (June) 1982.

Foot complications pose a major health problem for persons with diabetes, but with proper care many can be avoided. This article reports on a survey of the 1,306 licensed podiatrists in New York State, undertaken in the fall of 1980 by the Diabetes Control Program of the State of New York State Department of Health. The purpose of the survey was to begin to define the role of the podiatrist in the care of diabetics. Results indicated that, on the average, 19% of podiatrists' patients have diabetes, but this proportion varies significantly according to geographic location, duration of practice, and the practice setting in which the podiatrist sees the majority of his diabetic patients.

Notani PN, Varma AO, Leske MC, Janerich DT: Breast cancer in New York State: Trends in female mortality, 1970 — 1977, **New York State J Med** 82: 1044 (June) 1982.

Breast cancer mortality in the New York State counties (exclusive of New York City) was analyzed for the period 1970 through 1977 for white and nonwhite females. While the mortality rate for white females (32 per 100,000) did not change over this period, the mortality for nonwhites increased from 17 per 100,000 in 1970 to 24 per 100,000 in 1977. On examination of age-specific trends, the increased mortality for nonwhites over time was evident at all age groups over 30 years, whereas for whites an increase was observed only for women over 80 years. Up to age 40, age-specific mortality for whites and nonwhites was about the same, with nonwhites showing slightly higher rates than whites. After 40 years, however, there was a sharp and consistent rise in mortality with age for whites but not for nonwhites (mostly blacks). A similar pattern was observed in the national breast cancer incidence and mortality of white and black females. The difference in postmenopausal breast cancer rates for whites and blacks may be due to differences in reproductive patterns and life-style, with factors such as diet possibly playing a role. Differences in breast cancer mortality were observed among the counties, with rates being highest in Nassau, Suffolk and Erie counties. Multiple regression analysis of breast cancer mortality for white females by county revealed a strong association with high population density areas. This variable explained 69% of the variation in rates, with regression coefficient being positive and significant.

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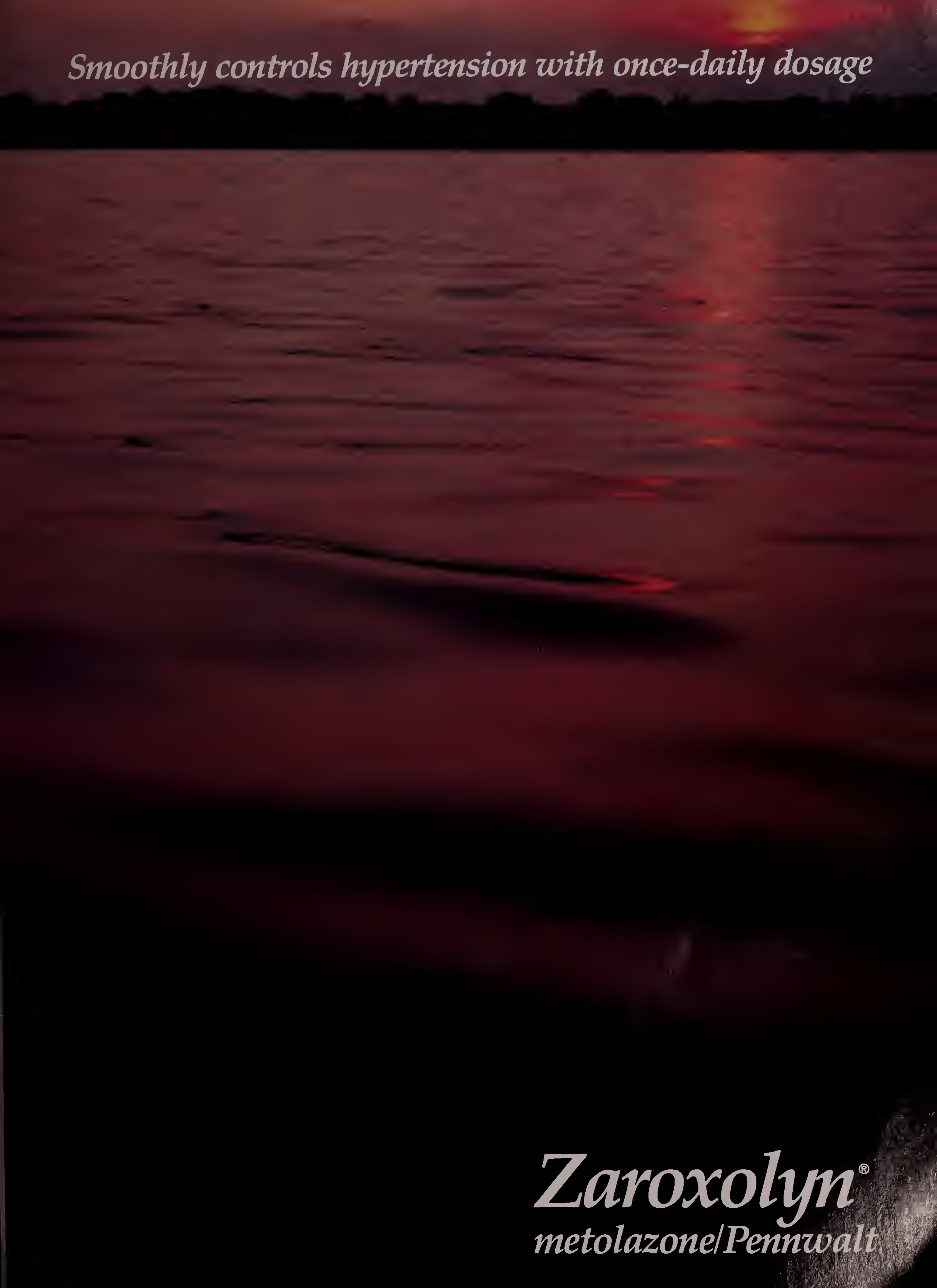
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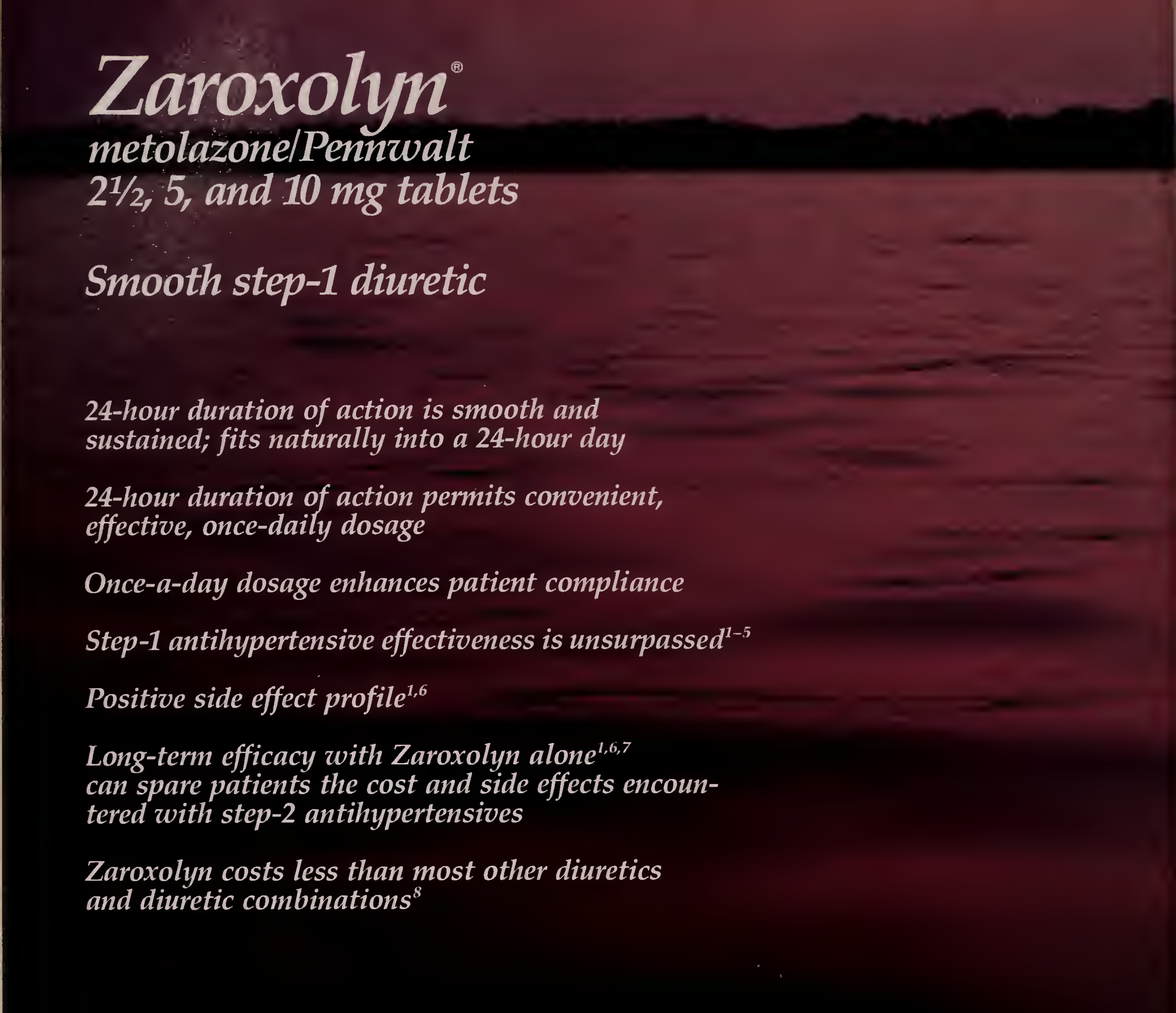

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Placenta Previa

Reappraisal and new therapeutic classification (HALO)

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A 10-year retrospective review (1966 to 1976) of all placenta previa cases at the Albert Einstein College of Medicine complex (private and public) is presented. A total of 189 cases of placenta previa in 48,000 deliveries, an incidence of 0.39 percent, resulted in a perinatal mortality rate of 58 per 1,000.

A new therapeutic classification called HALO is presented. The acronym represents Hemorrhage, (moderate to severe), Abruption (with placenta previa), Labor (with placenta previa) and 0 for placenta previa with only mild, irregular bleeding). The clinical importance of the classification of placenta previa into central, partial, and marginal is questioned. The DSU (double setup examination) as an important aspect of every placenta case is not indicated as a routine diagnostic procedure where good ultrasonography is available. The HALO classification, after quantitation, should be a useful clinical guide in lowering the overall perinatal mortality rate in placenta previa.

Placenta previa remains a serious complication of pregnancy because of its associated fetal and maternal morbidity and mortality occurrences.[1–5] Expectant management is the current mode of nonemergency management.[1,2,4–10] Rarely has there been a detailed presentation of the dilemmas, problems, and conflicts encountered between expectation and management.

A retrospective study of 189 patients with placenta previa delivered at the Hospital of the Albert Einstein College of Medicine (HAECOM) between July 1, 1966, and July 1, 1977, is presented. Expectant management occurred in only 50% of the women; all diagnostic methods had at least a 13% error rate, and the interval from diagnosis to delivery was the same regardless of the gestational age or whether the delivery procedure was carried out on an elective or emergency basis. All correctable perinatal deaths were due to asphyxia.

Method

A retrospective 10-year analysis (July 1, 1966 to July 1, 1977) of all patients delivered with a diagnosis of placenta previa was made at the HAECOM and the Bronx Municipal Hospital Center (BMHC). All HAECOM patients are private patients with their own attending obstetrician–gynecologist, whereas BMHC is a city hospital with management primarily under the aegis of supervised residents. Both institutions are under the direct supervision of the department of gynecology and obstetrics, the Albert Einstein College of Medicine.

Results

Table I presents the age and parity of women having placenta previa. No significant difference between patients with placenta previa and the population in general was found. This is at variance with other reported series.[2,3,6]

Table II indicates the trimester when the bleeding first occurred. No significant relationship was noted between the trimester of the first bleed and congenital abnormality, type of previa, or the delivery time. Seven days was chosen as the minimal significant period for inclusion of expectant management since this reflects a measurable increase in fetal weight of approximately 150 g. This study showed 56.6% of 102 patients had expectant management indicated.

Table III shows that only 5 of 107 (4.6%) could be maintained for less than 7 days; over 69% (74) of patients having expectant management were delivered after 36 weeks.

---

*Presently Assistant Professor, Obstetrics and Gynecology, University of Tennessee, Memphis, Tennessee.

TABLE I. Age and Parity of Placenta Previa Study Group

Age of Patients*	No. Patients
<15	1
15 to 19	3
20 to 24	47
25 to 29	71
30 to 34	47
35 to 39	18
≥40	2
	189
Parity†	**No. Patients**
0	44
1	61
2	39
3	20
4	10
≥5	15
	189

* Range: 14 to 44; median: 28; mean: 1.6.

† Median: 1; mean: 1.6.

Table IV examines the role of the interval from diagnosis to delivery on whether the ultimate management was carried out electively or on an emergency basis. No difference is noted.

Table V indicates that 88 of 119 cases had double setup examinations (DSU) and 31/119 (26%) patients utilized it as an elective procedure.

Radioiodinated human serum albumin (RISA) and flat film of abdomen (KUB) are no longer used as diagnostic tools. Ultrasound has greatly improved so that its current degree of accuracy approaches the high nineties.[11]

The method of delivery has been shown to affect outcome with "the most favorable perinatal salvage when the cesarean section rate is 70% or greater." [12] Only 17% of our patients delivered vaginally, and that was usually because labor was far advanced, or the DSU examination was in error, or when the baby was considered too small for survival. Our concern is clearly that of the uncompromised infant, not a low cesarean section rate. Notwithstanding in this survey, 83% of the patients with placenta previa, those with hemorrhage (estimated blood loss greater than 600 cc in two hours), with abruption, with labor, and those with only bleeding but with a mature infant, were delivered by cesarean section.

TABLE II. Trimester When Bleeding First Occurred

Trimester	No. Patients (%)
1	13 (7.0)
2	28 (14.0)
3	124 (65.6)
1 and 2	17 (9.0)
No bleeding	7 (4.5)

TABLE III. Length of Expectant Management When Bleeding Is Not Expectant

107 (56.6%) of 189 women having expectant management Length of management	No. Patients (%)
Less than 24 hours	4 (3.7)
Less than 7 days	5 (4.6)
Less than 32 weeks	20 (18.6)
Less than 36 weeks	33 (30.8)
Greater than 36 weeks	74 (69.2)

TABLE IV. Interval From Diagnosis to Delivery

Average*	Days
Interval in 107	36.3
With delivery before 36 weeks	30.4 (n = 33)
With emergency termination after 36 weeks	38.2 (n = 39)
With elective termination after 36 weeks	36.6 (n = 39)

* No significant difference between intervals.

TABLE V. False Negative Percentage of Diagnostic Techniques

Technique	No. Patients (%)
RISA	4/30 (13.3)
Ultrasound	8/60 (13.3)
KUB	1/5 (20.0)
DSU	21/119 (17.6)

The classification of placenta previa into central, partial, marginal, and low-lying appears to be without much clinical significance. The type of placenta previa in this review and in others[1,3] bore little or no relationship:

> (1) regarding whether a patient would have a heavy bleed or a light one, or (2) between the type of implantation and expectant management (Hibbard,[3] with only 25% of his patients having a partial placenta, accounted for 50% of the failed expectant management cases), or (3) to the total number of bleeding episodes during expectant management, or (4) to a statistical relationship between the total blood loss or fetal survival to the type of placenta previa.

We are in agreement with Hibbard[3] that "The type of placenta previa bore no relationship to the total blood loss, number of bleeding episodes or fetal outcome."

Proposal

A therapeutic classification with the acronym HALO is presented to highlight clinical events leading to perinatal mortality occurrences (Tables VI and VII).

Termination of a placenta previa patient is either by election at or near term, or by the exigency of the circumstance. These factors have been incorporated in the term HALO:

H: Moderately severe or severe hemorrhage is present.
A: Separation of a placenta previa takes place.
L: Labor in association with a placenta previa.
O: Where mild bleeding is the only manifestation of a patient with a placenta previa.

TABLE VI. HALO Classification at Time of Delivery

Classification	No. Patients (%)
H emorrhage (500 mL blood loss)	33 (18)
A bruption (placenta previa and abruptio)	14 (8)
L abor	84 (45)
O nly bleeding	581 (29)

TABLE VII. Perinatal Mortality by Weight, Etiology, and HALO

Classification	No. Patients	%
H 1,760 (asphyxia), 1,850 (asphyxia), 2,500 (severe RDS)	3/33	33
A 2,500 (intrapartum deaths)	1/14	7
L 1,150 (unknown, 1,460 (asphyxia), 2,070 (major congenital abnormality)	3/84	4
O 2,800 (congenital heart disease)	1/58	2*

* P: .05 from hemorrhage group.

Out of 189 pregnancies, 8 viable babies were lost, 7 (87.5%) of whom weighed 2,501 g. Table VIII represents perinatal and maternal mortality occurrences at this group. The majority of preventable deaths occurred in babies weighing between 1,000 to 2,500 g, especially in patients who had hemorrhage as a dominant part of their clinical picture. Mothers who manifest labor and abruption also lost salvageable babies.

Most of the perinatal deaths were associated with emergency termination prior to term. Five babies who died, weighing less than 2,500 g, were acidotic, hypoxic, or anoxic related to the pathophysiology of events associated with the complications of placenta previa (hemorrhage, labor, or abruption).

HALO highlights the major complications occurring with placenta previa, reflecting the well-being of mother and/or infant. To utilize expectant management properly HALO must be quantitated to be used by the obstetrician as a therapeutic guide. Often the zeal and good intention of the clinician in stretching expectant management beyond its physiologic limits are reflected in a compromised or dead infant.

TABLE VIII. Perinatal and Maternal Mortality Incidence

Mortality Rate	No. Patients
Perinatal	74/1,000—Corrected (n = 11) 58/1,000
Nonpreventable	3 (major congenital anomalies)
Inmature fetus	3 (less than 651 g)
Viable fetus	8 (5 less than 2,500 g)
Maternal	158/10,000) (n = 3), 158 percent
Sepsis	
Postoperative defibrination	
Hypovalemic cardiac arrest	

Comment

A number of interesting and seldom appreciated observations were encountered in this review.

The cause of placenta previa remains unknown. Previous studies[2,3,6,8] had suggested an age–parity correlation; these data showed an age profile similar to our general population.

The first bleeding episode in this study occurred in the first trimester in 7% and in the second trimester in 14% of patients. This probably does not differ significantly from pregnant women who report some bleeding in pregnancy and do not have placenta previa. Hence, the supposition that earlier diagnosis of placenta previa, related to first- and second-trimester bleeding or by routine ultrasonic evaluation before the third trimester, might lead to improved results does not appear to be promising in clinical management.

The DSU examination demands reevaluation. For a half century it has been considerd the definite diagnostic procedure. Originally the DSU was diagnostic and therapeutic. The therapy, based on the findings, would be delivery by cesarean section or by the vaginal route. As a diagnostic procedure, the overall accuracy of the DSU is not commendable. In our series there was a false negative rate of 17.6% (21 of 119 cases).

The increased accuracy and accessibility of ultrasound questions the role of the DSU examination as a prerequisite for delivery.[11] Although there has been extensive reporting on the accuracy of various diagnostic methods used to diagnose placenta previa, few have commented on the accuracy and hazards of the digital examination. This study showed an incidence of 18% false negative results. All methods suffer false negative as well as false positive findings, and this must be programmed into the decision-making process. Surprisingly, no differences were noted from the average interval of diagnosis to delivery of 35 days. Early diagnosis still implied early delivery; later diagnosis implied only a 50% chance of elective versus emergency delivery.

The importance of close surveillance must be maintained from the initial diagnosis of placenta previa if fetal and maternal mortality and morbidity incidences are to be minimized. Two of the three maternal deaths occurred in women under observation, one for sepsis and the other following emergency surgery for fetal distress in a woman with hemorrhagic shock.

It appears that current methods of diagnosis and management are leading to improved perinatal outcome. The HALO classification offers the lead that intensive fetal heart-rate monitoring should be carried out when there is hemorrhage, superimposed placenta separation, or labor. Deceleration of heart-rate patterns in premature fetuses greatly increases the incidence of severe respiratory distress syndrome (RDS). Prompt delivery may be lifesaving for the baby, but one of our maternal deaths occurred when a cesarean section was carried out for fetal bradycardia when there was hypovolemia.

Summary

A 10-year review of 189 cases of placenta previa—from the Albert Einstein Medical School Complex, Jacobi Hospital, a municipal hospital, and the Hospital of Albert Einstein College of Medicine, a private hospital—has been presented.

The perinatal mortality rate was 58/1,000 and the maternal mortality rate was 158/10,000.

HALO, a new therapeutic classification of placenta previa, can be quantitated so that the obstetrician can quickly evaluate management related to the status of the patient, the fetus, and the placenta previa. Emphasis is directed to the three outstanding clinical problems associated with placenta previa, namely hemorrhage, labor, and abruption.

Expectant management (56.6%) is still a useful method, with HALO as a restraint.

The double setup (DSU) examination is commented on with a suggestion that the ultrasonic diagnosis of placenta previa is probably an overall better method of diagnosing a placenta previa. The DSU may not need to be a prerequisite diagnostic method before delivery.

Three maternal deaths in 189 cases reflect the seriousness of hemorrhage and surgery in the management of placenta previa.

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Delivery of Podiatric Care to Persons with Diabetes in New York State

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Foot complications pose a major health problem for persons with diabetes, but with proper care many can be avoided. This article reports on a survey of the 1,306 licensed podiatrists in New York State, undertaken in the Fall of 1980 by the Diabetes Control Program of the State of New York State Department of Health. The purpose of the survey was to begin to define the role of the podiatrist in the care of diabetics. Results indicated that, on the average, 19% of podiatrists' patients have diabetes, but this proportion varies significantly according to geographic location, duration of practice, and the practice setting in which the podiatrist sees the majority of his diabetic patients.

Foot problems are a major cause of morbidity and mortality among persons with diabetes. Diabetic neuropathy and diabetes-associated vascular disease predispose to injury and infection in the foot, often resulting in gangrene and amputation. Persons with diabetes are five times more susceptible to gangrene than the general population. About 10 to 15 percent of persons who have diabetes eventually require an amputation.[1]

But foot complications are not inevitable, and may in fact be far more amenable to prevention through proper care than are other diabetes-related problems. Little information is currently available concerning the involvement of podiatrists in the care of persons with diabetes. Such data are vital to determine the potential impact of public health programs in this area and the specifics of their focus and implementation. In this study, we present the results of a survey in New York State, the purpose of which was to begin to define the role of the podiatrist in the care of the diabetic.

Methods

In the fall of 1980, the New York State Diabetes Control Program contacted all 1,306 licensed podiatrists in the state with a brief questionnaire eliciting information about length of practice, practice setting, referral sources, and the prevalence of diabetes in the patient population. Questionnaires were distributed at the local meetings of the 14 Podiatry Society chapters. Those not in attendance (and nonmembers) were mailed the questionnaire, with a follow-up telephone call and another mailing, if appropriate, to individuals not responding within two weeks.

For purposes of analysis, the state was divided into four major regions, corresponding approximately to the four major administrative regions: northern, western, southern, and N.Y.C. (New York City). The proportion of diabetics seen was the variable of major interest, and data were stratified on the basis of the other parameters measured. A two-way analysis of variance was used to assess differences within subgroups.[2]

Results

Response rate. The 861 podiatrists (66 percent) who responded to the survey included 75 percent of Society members and 38 percent of nonmembers. The response rate was somewhat higher among upstate podiatrists compared with those in the southern and N.Y.C. regions (Table I).

Years in practice. The mean and median years in practice among respondents was 21, with no significant geographic variation (Table I). A frequency distribution for length of time since graduation reveals peaks in the 1 to 5 year and 26 to 30 year intervals (Fig. 1). This parallels the national podiatry manpower survey in 1974, which showed a post-World War II peak, followed by attenuation, and a resurgence of podiatry school graduates in the 1970s.[3]

Practice setting. Virtually all podiatrists spend at least part of their time in private practice, most alone, but some in a group (Table I). About 26 percent practice in clinics and 39 percent in nursing homes, but both these figures vary substantially by region. For example, the northern area has a relatively high percentage of podiatrists who practice in nursing homes. New York City, on the other hand, is low on the proportion with a nursing home practice (Table I). This is particularly striking since, by comparing the ratio of podiatrists to nursing homes in each region, New York City has twice as many podiatrists per nursing home as does the northern

TABLE I. Characteristics of podiatrists and their practices, by geographic area

	Geographic Area				
Variable	N.Y.C.	South	North	West	Total
Number Podiatrists					
Member Podiatry Society	502	299	85	106	992
Nonmembers	216	75	6	17	314
Total	718	374	91	123	1306
Respondents					
Number members	365	209	71	97	742
Percent total members	73	70	84	92	75
Number nonmembers	73	30	4	12	119
Percent total nonmembers	33	41	67	71	38
Total N	438	239	75	109	861
Mean years in practice	21.9	19.1	21.8	20.2	20.9
Practice settings:					
Solo (percent)	95.2	95.4	92.0	93.6	94.8
Group (percent)*	5.9	13.0	14.2	14.7	9.8
Clinic (percent)	26.9	28.2	13.3	28.4	26.3
Nursing home (percent)*	29.2	45.8	66.7	47.7	39.4
Nursing home practice					
Number facilities	137	118	104	140	499
Podiatrists per nursing home	0.93	0.92	0.52	0.36	0.68
Clinic practice					
Number facilities	78	44	16	26	164
Podiatrists per clinic	1.64	1.64	0.75	1.19	1.38
Mean percent diabetic patients†	20.0	16.84	16.77	19.77	18.79
Principal setting where diabetic patients are seen**					
Private practice (percent)	77.3	71.9	87.3	89.2	78.4
Clinics (percent)	10.9	11.7	1.4	2.2	9.1
Nursing homes (percent)	11.7	16.3	11.3	8.6	12.5

* Regions differ significantly by chi square: $P < .05$.
† $P = .0167$ for difference of means by ANOVA (analysis of variance).
** Regions differ significantly in distribution of types of principal setting: chi square = 19.3325, $P = .0036$.

region. Another striking observation is the marked deficiency of podiatrists in the northern region who practice in clinics (13 percent), coupled with the lowest podiatrist-to-clinic ratio in the state (Table I).

Referral sources. Other patients are clearly the most important source of new clients for podiatrists. Uniformly, in each region 70 to 80 percent reported that "all" or "many" of their referrals were from other patients (Table II). Self-referral was next in importance, and only 22 percent of podiatrists overall reported they obtained "all" or "many" of their referrals from physicians. It is of interest, however, that 40 percent of podiatrists who practice in a clinic setting and who see the majority of their diabetic patients in this setting reported large numbers of referrals from physicians, indicating the importance of proximity in the physician-podiatrist interaction.

Proportion of diabetics. Podiatrists were asked to report diabetics as a percentage of total patients. Overall, 19 percent of patients seen by podiatrists are diabetic, and this varied significantly according to geographic location, length of time in practice, and practice setting. Northern- and southern-region podiatrists reported seeing fewer diabetics than those in the western and N.Y.C. areas (Table I). Younger podiatrists, in the first few years of their practice, see approximately 21 percent and this declines linearly with years in practice to 15 percent for the oldest group (F ratio = 6.196; $P = .0004$).

The principal settings in which podiatrists see diabetics are also associated with statistically significant differences in the percentage seen. Those who see the majority of their diabetic patients in nursing homes have an average of 22.5 percent diabetics among their patients; those who see the majority in clinics average 20.3 percent; and those who see the majority of their diabetic patients in their private practice average 18.6 percent diabetics (F

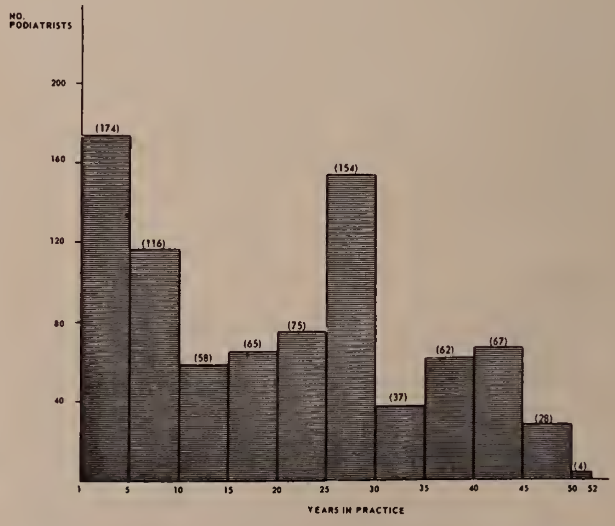

FIGURE 1. Distribution of number of years in practice for podiatrists surveyed in New York State, 1980.

TABLE II. Referral sources for podiatrists (percent)

Number of Referrals	Self Referral	Another Patient	Physician	Other Health Professional
All or many	40.0	73.8	22.6	8.7
Some	35.1	21.0	37.8	32.0
Few or none	24.9	5.2	39.6	59.3

ratio = 5.055; P = .006). It is of interest that duration of practice and principal setting are strongly associated in the data and exert a combined effect on the proportion of diabetics seen. Podiatrists with solo private practice of long duration report seeing 15.9 percent diabetic patients, compared with those recently graduated who practice in clinics and nursing homes (22.6% percent). Other groups are intermediate, at about 20 percent (Fig. 2).

Comment

The survey was an attempt to provide a qualitative assessment of the distribution of podiatric practice, the settings in which diabetics are seen by podiatrists, and the proportion of diabetic patients among those who seek podiatric care. These data alone are inadequate to determine whether or not diabetics in some settings and areas are underserved, but the study does point to differences in practice in New York State that are worthy of further consideration.

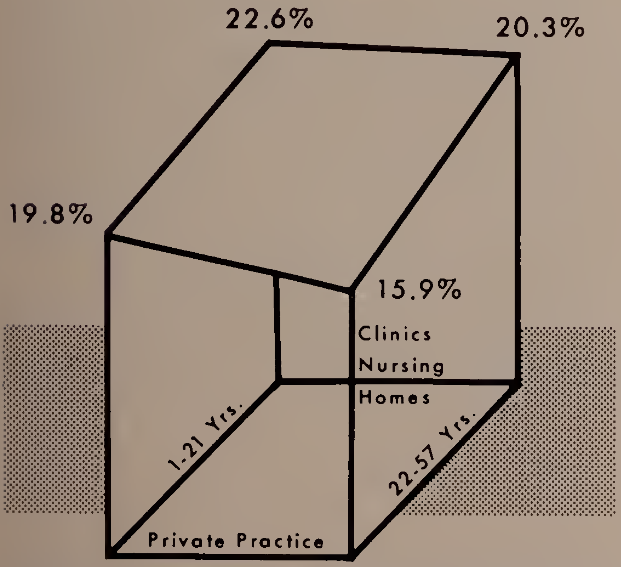

FIGURE 2. Relationship of principal practice setting and length of time in practice to percentage of diabetic patients.

It would appear that podiatrists are not uniformly distributed throughout the state, and the frequency with which they practice in clinics and nursing homes—two very important sites of access to diabetics—varies by geographic region. Further, the characteristics of the podiatrists themselves (length of practice, practice setting) influence the proportion of diabetics that they treat. Physicians are clearly an important referral source of diabetics but podiatrists in exclusive private practice may have less opportunity for interaction with other medical providers.

This study indicates the need for more precise delineation of care for diabetics by podiatrists. It would also be helpful to know more specifically, and quantitatively, about the nature of the diabetic problems that podiatrists treat, the approach to treatment, and the relationship between the podiatrist and the physician. This overview of a larger number of podiatric practices is the basis for a more detailed study, currently being planned, of these issues.

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Breast Cancer in New York State

Trends in female mortality, 1970–1977

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Breast cancer mortality in the New York State counties (exclusive of New York City) was analyzed for the period 1970 through 1977 for white and nonwhite females. While the mortality rate for white females (32 per 100,000) did not change over this period, the mortality for nonwhites increased from 17 per 100,000 in 1970 to 24 per 100,000 in 1977. On examination of age-specific trends, the increased mortality for nonwhites over time was evident at all age groups over 30 years, whereas for whites an increase was observed only for women over 80 years. Up to age 40, age-specific mortality for whites and nonwhites was about the same, with nonwhites showing slightly higher rates than whites. After 40 years, however, there was a sharp and consistent rise in mortality with age for whites but not for nonwhites (mostly blacks). A similar pattern was observed in the national breast cancer incidence and mortality of white and black females. The difference in postmenopausal breast cancer rates for whites and blacks may be due to differences in reproductive patterns and life-style, with factors such as diet possibly playing a role. Differences in breast cancer mortality were observed among the counties, with rates being highest in Nassau, Suffolk, and Erie counties. Multiple regression analysis of breast cancer mortality for white females by county revealed a strong association with high population density areas. This variable explained 69% of the variation in rates, with regression coefficient being positive and significant.

Breast cancer is the leading type of cancer in females in the United States and the incidence in white American females is the highest in the world.[1] For the period 1969 to 1971, an annual age-adjusted incidence rate of 73.8 per 100,000 women was reported by the TNCS (Third National Cancer Survey).[2] From 1935 to 1974, breast cancer incidence in the United States changed very little; the rates are stable since 1950 for white females and show a slight increase for nonwhite females.[3] White females have considerably higher breast cancer incidence rates than nonwhites (73.3 per 100,000 and 53.7 per 100,000, respectively).[3]

Breast cancer mortality has been increasing for nonwhites but not for whites. The time trends in mortality for white females show practically no change, since the rate was 24.9 per 100,000 in 1935 and 25.3 per 100,000 in 1973 and 1974. For nonwhites, however, the mortality rate increased from 18.2 per 100,000 to 24.2 per 100,000 during the same period.[3] In the United States, breast cancer mortality is high in the northeast and other urban centers and low in the south. The published mortality data by county for the period 1950 to 1969 indicates that breast cancer mortality in white females was the highest (31.53 per 100,000) in New York State and the lowest in Arizona (17.49 per 100,000).[4] Within New York State, Nassau County had the highest rate (35.8 per 100,000). Blot, Fraumeni, and Stone[5] studied the relation between sociodemographic variables and mortality by county. They found that premenopausal breast cancer mortality was associated with fertility patterns and ovarian cancer mortality, while the postmenopausal breast cancer mortality was associated with socioeconomic status (particularly income), German ancestry, and colon cancer mortality. However, these factors could explain only a small portion of the excess in postmenopausal cancer deaths in the northeastern United States.

The objectives of this study were (1) to determine the patterns of breast cancer mortality in New York State for the period 1970 to 1977, for whites and nonwhites, and (2) to study this mortality at the county level and determine factors that could explain possible differences in breast cancer mortality between counties.

We restricted the study to mortality data because cancer incidence from New York City became reportable to the State only since 1973. For counties bordering the city, this probably resulted in an underestimate of the actual incidence before this date.

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Methods

Female breast cancer deaths by race and age (in five-year age groups) for 57 counties of New York State, excluding New York City, were made available to us by the Cancer Control Bureau of the State of New York Department of Health. For the period 1970 to 1977, the number of breast cancer deaths were 15,017 in white and 474 in black females. The county populations for the years 1971 to 1977 were estimated by linear interpolation between the 1970 census population and a population projection for 1975 and 1980 by the New York State Economic Development Board (1978).[6] The nonwhite fraction of the population was considered to be the same as reported for each county at the 1970 U.S. census.

Average age-specific rates for the period 1970 to 1977 were calculated and used to compute age-adjusted rates for each county by the direct method, using the 1960 U.S. population as standard.

Time trends of age-adjusted and age-specific breast cancer death rates for whites and nonwhites were studied. To describe the change in mortality during this period, a weighted linear regression was fitted to the observed rates (the weights were the inverse of the variances). The slope of the line was used to evaluate the change in rates over time and was tested for significance.

To compare the counties, the expected number of deaths was obtained for each county based on age-specific rates of the State (excluding New York City) and the age distribution of the county's population. The observed and expected numbers were compared by a normal approximation to the Poisson distribution and a map was made to show the scaled differences between the observed and expected cases.

In addition, a weighted multiple regression model was fitted to the rates to evaluate the effect of the variables listed here. The reciprocal of the variance was used as weight. The independent variables used in the model were indicators of socioeconomic/demographic status such as median family income, living in one-unit house, proportion of the population (>25 years) completing four years of college or more, relative size of the female labor force, proportion of urban population, proportion of all land used in farming, proportion of farm population, population density, and birth rate. Information for each county was obtained from the 1970 census.[7]

Results

Mortality patterns in New York State. Figure 1 presents the age-specific mortality for white and nonwhite females for the combined New York State counties. Up to age 40, whites and nonwhites have a comparable mortality, with nonwhites showing slightly higher rates than whites. After 40 years, however, there is a sharp and consistent rise in mortality with age in whites, but not in nonwhites. This pattern is similar to the one observed in the United States.[8]

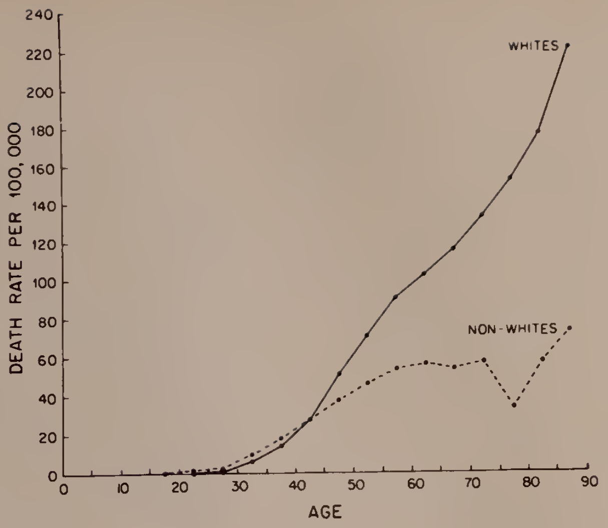

FIGURE 1. Age-specific breast cancer mortality by race, New York State (excluding New York City), 1970–1977.

Figure 2 shows the trend of the standardized rates for whites and nonwhites from 1970 to 1977. The mortality for whites has not changed over the interval; it was 31.95 per 100,000 in 1970 and is 31.85 per 100,000 in 1977, a figure comparable to the rate of 31.53 per 100,000 for the period 1950 to 1969 reported by Mason and McKay in 1974.[4] Although the breast cancer mortality for nonwhites increased from 16.82 per 100,000 in 1970 to 23.61 per 100,000 in 1977, the difference is not statistically significant (P = .08).

The trends of age-specific rates for whites and nonwhites are shown in Figure 3. There are practically no changes in the rates for whites except for those older than 80 years, where the increase is significant at the 5-percent level. In contrast, nonwhites show a consistent increase in mortality over

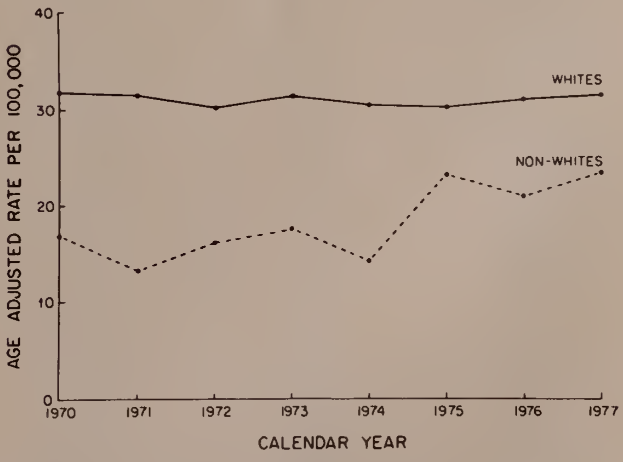

FIGURE 2. Trends in age-adjusted breast cancer mortality by race, New York State (excluding New York City).

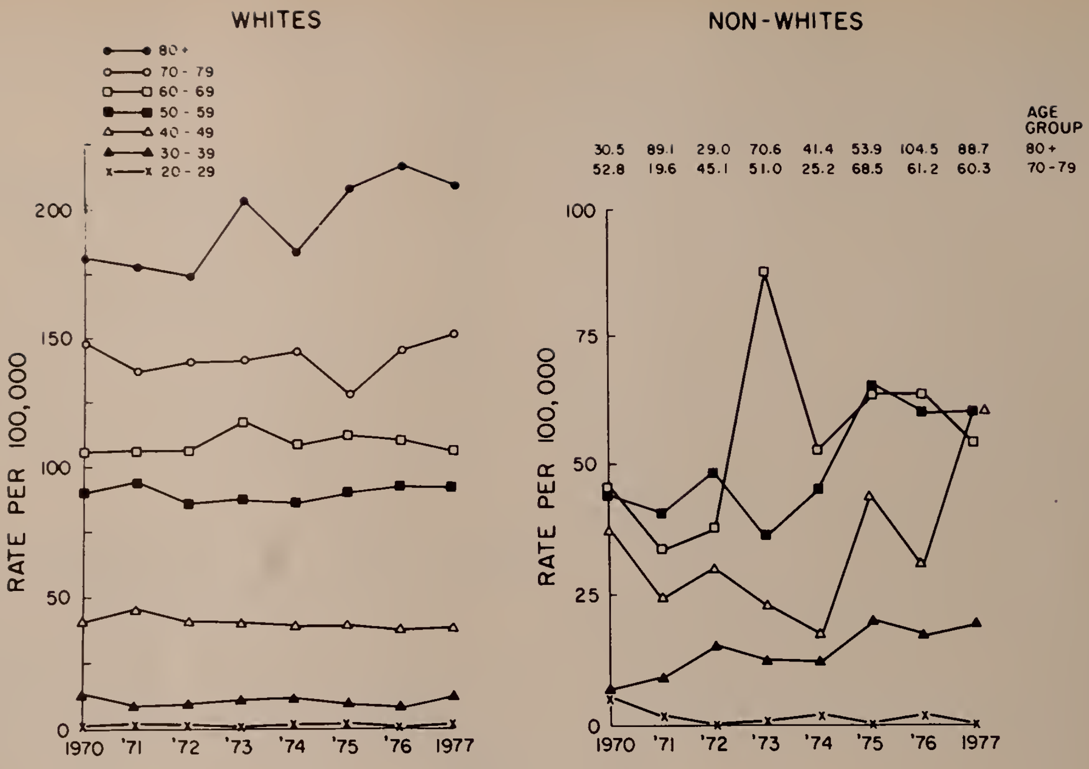

FIGURE 3. Trends in age-specific breast cancer mortality by race, New York State (excluding New York City).

TABLE I. Age-adjusted breast cancer mortality rates per 100,000 population (white females) by county, New York State (excluding New York City), 1970–1977

County	Age-Adjusted Rate	Standard Error
Albany	31.0	1.48
Allegany	30.5	3.76
Broome	26.4	1.57
Cattaraugus	29.9	2.79
Cayuga	23.3	2.49
Chautauqua	25.4	1.86
Chemung	26.5	2.36
Chenango	31.8	3.92
Clinton	24.5	2.99
Columbia	36.3	3.81
Cortland	28.9	3.90
Delaware	26.0	3.32
Dutchess	31.1	1.81
Erie	32.7	0.82
Essex	25.4	3.76
Franklin	25.9	3.54
Fulton	36.7	3.58
Genesee	30.1	3.31
Greene	34.1	4.33
Hamilton	27.6	9.43
Herkimer	24.7	2.60
Jefferson	26.4	2.49
Lewis	20.8	4.55
Livingston	25.6	3.36
Madison	36.8	3.89
Monroe	31.4	1.03
Montgomery	28.3	3.02
Nassau	35.9	0.76
Niagara	30.0	1.66
Oneida	27.7	1.46
Onondaga	30.2	1.23
Ontario	27.8	2.81
Orange	30.4	1.76
Orleans	33.9	4.70
Oswego	28.5	2.58
Otsego	28.8	3.30
Putnam	29.0	3.42
Rensselaer	29.1	2.02
Rockland	32.3	1.91
St. Lawrence	25.4	2.27
Saratoga	28.9	2.31
Schenectady	29.4	1.94
Schoharie	33.7	5.24
Schuyler	28.6	5.87
Seneca	18.4	3.26
Steuben	26.2	2.36
Suffolk	33.1	0.87
Sullivan	30.6	3.46
Tioga	31.1	4.13
Tompkins	24.7	2.97
Ulster	29.9	2.11
Warren	33.4	3.66
Washington	32.9	3.66
Wayne	24.2	2.66
Westchester	32.8	0.89
Wyoming	30.9	4.44
Yates	33.5	5.44

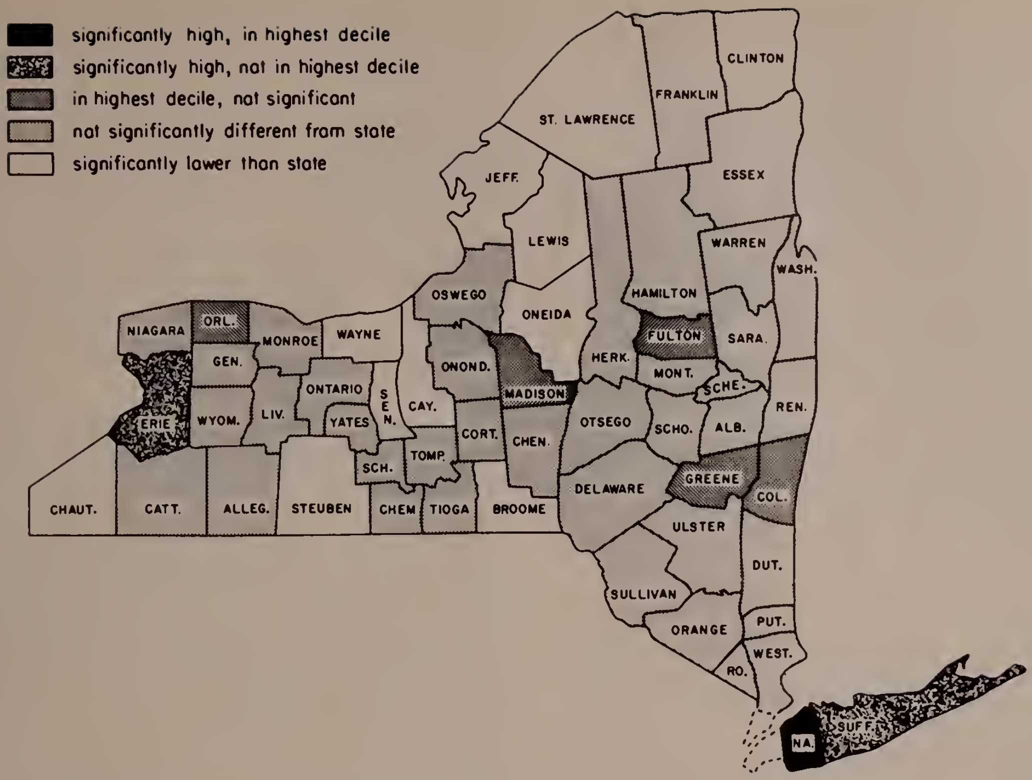

FIGURE 4. Breast cancer mortality, 1970–1977, by counties of New York State (excluding New York City), white females.

time, especially in the younger age groups, that is, 30 to 39 years (P = .005), 40 to 49 years (P = .519), and to some extent 50 to 59 years (P = .052). The fluctuations in rates may be explained by the rather small nonwhite population. Because these fluctuations are considerable in the older age groups, the rates are presented in tabular form above Figure 3.

Mortality by county. Further analysis of the breast cancer mortality by county was restricted to white females because of the small number of nonwhite deaths in some counties.

Table I gives the age-adjusted breast cancer death rates by county for white females and their standard errors.* The observed number of deaths in each county from 1970 to 1977 is compared with the expected number for the county based on the rates of the whole state (excluding New York City), generating a map which is shown in Figure 4.

The observed number of deaths in Nassau County is much greater than expected (P <.001). Suffolk and Erie counties also have significantly more deaths than expected (P <.05). These three counties rank among the top six in population density. As seen in Figure 4, there are ten counties which have significantly lower than expected number of deaths (for Broome, Chautauqua, and Seneca, P <.01; for the remaining counties, P <.05). However, their population density ranks range from eleventh to fifty-sixth. Thus, although the high-population-density counties do have a higher number of deaths than expected, the reverse is not true and low mortality is not associated with a low population density.

Other differences existed between the three high-mortality counties and the others. For example, median family income and proportion of urbanized population were found to be correlated (r = .58) with population density. In fact, Nassau County ranked first on both these variables and Suffolk and Erie ranked among the top 10. The average income for the 3 counties combined ($12,587) was significantly higher (P <.01) than the average income ($9,312) of the 10 counties with low breast cancer death rates. Similarly, the proportion urbanized ranged from 88 percent to 99.7 percent in the three high-mortality counties, whereas for the 10 counties with low breast cancer mortality, it ranged from 15 percent to 73 percent. With regard to fertility, it should be noted that Nassau County had the lowest birth rate in New York State.

To investigate the relative contribution of these and other sociodemographic variables (see methods) to breast cancer mortality, a weighted stepwise multiple regression model was used. The variable that explained most of the variation (69 percent) was population density. The regression coefficient was positive and significant (beta coefficient = .46). The

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* Preliminary U.S. Census data (1980) for New York State (excluding New York City) show a smaller total population (4 percent decline) than that projected for 1980.[6] If so, our rates would be underestimates.

TABLE II. Average annual age-specific female breast cancer incidence per 100,000 population by source

Source	Race	Age Group 20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85+
Alameda County, California*	W	1.4	7.7	22.3	64.3	117.1	194.6	211.0	231.8	307.3	256.5	265.8	294.1	286.3	390.0
	B	2.6	12.8	39.8	73.5	107.0	103.4	181.9	166.3	146.5	185.6	225.3	170.9	180.6	320.0
San Francisco Bay Area, California*	W	1.7	8.6	21.9	69.5	124.0	199.8	231.0	248.7	289.2	275.8	300.7	331.1	320.8	365.8
	B	2.5	14.0	31.8	64.7	101.4	121.8	161.1	146.0	203.3	199.7	238.5	242.3	209.2	222.6
Detroit, Michigan*	W	0.7	11.5	27.4	51.4	106.5	170.7	165.5	190.2	250.9	229.1	243.0	268.7	274.8	325.4
	B	1.9	11.1	37.5	54.1	91.7	127.2	126.4	167.2	122.0	143.3	183.1	321.3	209.4	237.7
TNCS (all areas combined)†	W	1.1	8.7	22.5	52.5	103.7	159.2	171.7	191.8	226.2	234.2	259.8	294.9	301.3	307.9
	B	2.5	10.7	29.3	55.6	92.9	121.1	133.4	145.8	163.1	153.8	165.3	226.6	203.2	223.5

* From Cancer Incidence in Five Continents, vol. III.[17]

† From Third National Cancer Survey.[8]

inclusion of other variables increased the proportion of the explained variance by only 3 percent. This is in agreement with the previously mentioned relation between mortality rates and population density.

Comment

From Figure 1 it appears that up to age 40, breast cancer mortality is almost the same or even slightly higher in nonwhites (predominantly blacks) than in whites. After age 40, both populations diverge radically in their breast cancer mortality. This was not only observed in the present study but was also observed in national mortality data (1971).[9] Data from three U.S. cancer registries that reported rates for whites and blacks have been summarized in Table II together with data from the Third National Cancer Survey (1975).[2] Again, up to age 40, the incidence rates for blacks are slightly higher than for whites, but after age 40 the rates for whites rise rapidly.

The difference in this age pattern may be due to several factors. Buell's (1973)[10] data on incidence patterns of Japanese migrants and their U.S.-born offspring suggested environmental factors. He showed that the age-adjusted breast cancer incidence in Japan (1966) was only one-fifth that in the United States. However, in the migrant population (35 to 44 years old) of San Francisco, the rates increased almost three times that of Japanese women living in Japan. Furthermore, a stepwise increase in incidence in successive generations approaching that of the host country was shown. Anderson in 1972[11] presented data that indicated association with family history to be strongest in premenopausal women; Blot, Fraumeni, and Stone[5] also suggested that reproductive and genetic patterns had a primary role in younger women, whereas extrinsic risk factors remained to be identified in older women. Recently, three known risk factors, early age at menarche, late age at first birth, and late menopause, have been explored by Gray, Henderson, and Pike[8] to explain the differences in breast cancer rates for whites and blacks. Based on available data, the authors suggest that an earlier age at menarche increases the risk of developing breast cancer at younger ages in black women, while an earlier age at first birth, followed by earlier age at menopause, lowers their risk of developing breast cancer later in life. The authors conclude that the differences in rates between blacks and whites are partially explained by these three risk factors.

One of the environmental factors suggested in recent years is that of diet and, in particular, a high-fat diet. Animal studies have shown that a high-fat diet (saturated and polyunsaturated) promotes the development of both spontaneous and chemically induced mammary tumors in rats.[12,13] Data from human case-control studies have been suggestive but inconclusive.[14] Furthermore, Chan and Cohen[15] have shown that this promotional activity may be mediated through alterations in circulating levels of prolactin.

It would be of interest to compare the dietary patterns of white and black women that prevailed 20 to 40 years ago, but this information is not available. Data from the first Health and Nutrition Examination Survey provide information on the frequency of intake of 19 food items for whites and blacks for the period 1971 to 1974.[16] Using these data as very crude indicators of past food habits, several differences are apparent. The frequency of intake of fats and oil, whole milk, and cheese, is higher in whites than in black women for all age groups. In contrast, food items such as bread, eggs, salty snacks, candy, and sweetened beverages, are consumed more frequently by blacks of all ages.

Although animal experiments and correlational studies suggest that diet plays a role in breast cancer etiology, it could be that high-fat diet and breast cancer risk are both associated with other causative factors. It is possible that hormonal as well as environmental factors related to life-style and diet could all contribute to the observed differences in postmenopausal breast cancer rates between whites and nonwhites.

Examination of time trends from Figures 2 and 3 reveals that breast cancer mortality has not changed for white women over the period 1970 through 1977 and is 31.9 per 100,000, a figure comparable to that reported for the period 1950 to 1969 (31.5 per 100,000).[4] But study of time trends of individual age groups shows a significant increase in mortality for white women over the age of 80 years. Since the period covered is very short (eight years) it is difficult to interpret this as a cohort effect. The mortality for nonwhites has increased, although not significantly so, from 16.8 per 100,000 in 1970 to 23.6 per 100,000 in 1977. This increase is evident at all age groups over 30 years and is significant at the 5-percent level for the age groups 30 to 39 and 50 to 59. The reported mortality for New York State blacks for the period 1950 to 1969 is 25.5 per 100,000, so that the year-to-year fluctuation in the present data may be due to the small nonwhite population.[4]

The analysis of breast cancer mortality among whites by county indicates a correlation with population density. This has also been observed by Levin et al.[17] in their study of cancer incidence in urban and rural areas of New York State for the period 1949 to 1951, as well as by Nasca et al. in 1980 for the period 1968 to 1972.[18] The small number of breast cancer deaths among nonwhites does not permit comparisons between the individual counties. However, it is possible to combine the data for nonwhite breast cancer deaths into two groups, one consisting of the three counties for which whites showed significantly high rates and the second group comprising the remaining counties. The age-adjusted rates for nonwhites in the three high-population-density counties is 19.9 per 100,000 (based on 217 deaths), which is higher than the rate of 17.2 per 100,000 (based on 257 deaths) in the other counties ($P = .057$). These findings support the association between population density and breast cancer mortality that was found among whites. However, as mentioned earlier, population density stands for a number of explanatory variables that may be directly related to risk of developing breast cancer.

In our data, population density was correlated with median family income and urbanization. Whether these variables are in turn related to industrialization and its chemical pollution or to the life-style of highly urbanized communities, or both, is not possible to determine from our data.

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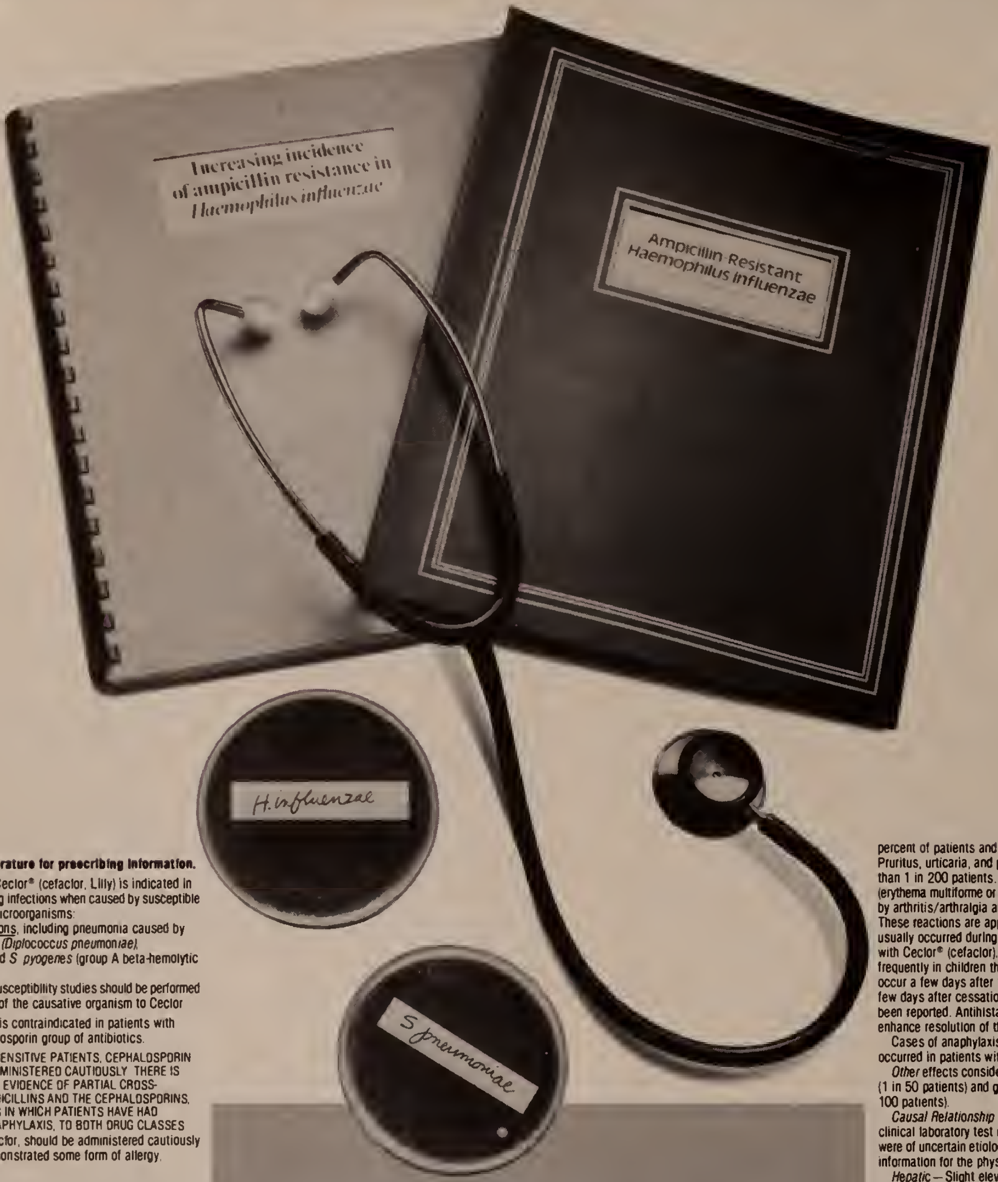
An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin-Resistant Haemophilus influenzae
H. influenzae
S. pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae)*, *Haemophilus influenzae*, and *S pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g , pressor amines, antihistamines, or corticosteroids

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2 5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90)

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S. pneumoniae* or *H influenzae*.[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Lilly

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

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Selected Highlights

Recommendations of the National Advisory Committee on Immunization Practice

Pneumococcal Polysaccharide Vaccine*

Recommended for publication by Duncan W. Clark, M.D., Professor of Preventive Medicine and Community Health, State University of New York—Downstate Medical Center; Member of Medical Society of the State of New York Committee on Preventive Medicine

Polyvalent polysaccharide vaccine against disease caused by *Streptococcus pneumoniae* (pneumococcus) was licensed in the United States in 1977. This statement includes a summary of current knowledge about the vaccine and a guide to its use in selected persons and groups.

Vaccine-preventable pneumococcal disease

Data on the precise occurrence of serious pneumococcal diseases in the United States are not available. Estimates come from limited surveys, research reports, and several community-based studies (see table).

Community studies indicate that pneumococcal pneumonia usually represents less than 25% of all cases of pneumonia. Yet, it remains an important problem, even in the antibiotic era, because of the substantial annual numbers of cases and deaths that occur.

Pneumococcal pneumonia occurs in all age groups, although incidence increases with age over 40 years. Pneumococcal meningitis is seen primarily in young children, particularly those two years old or under. Mortality from pneumococcal disease is highest in patients who have bacteremia or meningitis, in patients with underlying medical conditions, and in older persons.

Patients with certain chronic conditions are clearly at increased risk of developing pneumococcal infection as well as experiencing more severe pneumococcal illness. These conditions include sickle cell anemia, multiple myeloma, cirrhosis, renal failure, splenic dysfunction, and having had a splenectomy or organ transplant. Other patients may be at greater risk of developing pneumococcal infection or having more severe illness as a result of being alcoholic or having diabetes mellitus, congestive heart failure, chronic pulmonary disease, or conditions associated with immunosuppression. Patients with cerebrospinal fluid leakage complicating skull fracture or neurosurgical procedure can have recurrent pneumococcal meningitis.

Surveillance of the antibiotic susceptibilities of recent *S. pneumoniae* isolates has not indicated any trend toward increased resistance to penicillin. From 1978 to 1980, less than 2% of clinically significant isolates of *S. pneumoniae* were relatively penicillin resistant (minimum inhibitory concentration 0.1 to 0.9 μg/mL). Penicillin remains the antimicrobial agent of choice for treatment of invasive pneumococcal disease.

Pneumococcal polysaccharide vaccines

The pneumococcal vaccine licensed in 1977 for use in the United States contains purified capsular material of 14 types of *S. pneumoniae* (Danish types 1,2,3,4,6A,7F,8,9N,k2F,14,18C,19F,23F, and 25). When the vaccine is being prepared, polysaccharides are extracted separately and combined in a final product. Each dose of vaccine contains 50 mg of each polysaccharide. The 14 bacterial types represented in the vaccine are responsible for 68% of bacteremic pneumococcal disease in the United States.[3] An additional 17% of bacteremic pneumococcal disease is due to serotypes immunologically related to types in the vaccine. Studies of the cross-reactivity of human antibodies against related types suggest that cross-protection may occur among some of these types (for example, 6A and 6B).[4]

Most healthy adults respond to the vaccine and in

* Reprinted from *Morbidity and Mortality Weekly Report* (1981; 30:410–419), Centers for Disease Control, Atlanta, Ga.

Estimated Occurrence of Serious Pneumococcal Disease, United States

Pneumococcal Disease	Estimated cases, thousands/yr	Estimated Incidence*	Case-Fatality Ratio, %
Pneumonia	150-570	68-260	5-7
Meningitis[1]	2.6-6.2	1.2-2.8	32
Bacteremia[2]	16-55	7-25	20

* Per 100,000 population/yr.

two to three weeks show a twofold rise in type-specific antibody, as measured by radioimmunoassay. The titer of antibody which is protective against each serotype has not been determined.

Effectiveness of pneumococcal polysaccharide vaccines

Several pneumococcal vaccines were developed and tested in the 1920s, 1930s, and 1940s. An unblinded trial of a trivalent vaccine was performed from 1937 to 1943 in an elderly institutionalized population.[5] Protection was demonstrated against pneumonia and bacteremia due both to pneumococcal types in the vaccine and to ones that were not in the vaccine. A tetravalent polysaccharide vaccine tested in 1944 in a young male military population with a high endemic rate of disease prevented pneumonia caused by types in the vaccine.[6] Disease due to other types was not prevented. A combined pneumococcal polysaccharide vaccine was distributed in the United States from 1945 to 1947. However, when effective antibiotics became available, the vaccine was infrequently used, and the manufacturer voluntarily discontinued production.

In the 1970s, a 12-valent pneumococcal vaccine was field tested in South Africa in healthy, young, adult gold-miner recruits among whom there was a high annual incidence of pneumococcal pneumonia—200 cases per 1,000 persons per year.[7] This vaccine conferred type-specific protection, significantly reducing the frequency of pneumococcal pneumonia and general respiratory morbidity. When a 14-valent vaccine was tested in a native population in New Guinea, where there was a large amount of acute and chronic respiratory disease, much of it caused by the pneumococcus, pneumonia morbidity and mortality was significantly reduced.[8]

Two randomized controlled trials of pneumococcal vaccine in older-age adults have been conducted in the United States.[9] One was in outpatients over 45 years old and the other was in inpatients of a chronic-care psychiatric facility. In neither study was there any difference in the occurrence of respiratory morbidity and mortality between those vaccinated with a polyvalent pneumococcal vaccine and those given a placebo. In the first study, data suggested some vaccine protection against bacteremic pneumococcal disease, but the incidence of pneumococcal disease was low (less than 2.5 per 1,000 population per year) and may not have enabled a valid assessment of vaccine efficacy. In the other study there were no fewer cases of radiologically diagnosed pneumonia among vaccines than among controls.

The data from these two trials were analyzed using a case definition based on seroconversion to a vaccine serotype of radiographic documentation of pneumonia. With this case definition, vaccine efficacy of 80% to 100% was calculated. However, because persons who have been vaccinated do not show an increase in antibody titer on revaccination, vaccinees may have been unable to seroconvert to a natural infection, making it difficult to document cases in vaccinees. The vaccine efficacy based on this case definition could therefore be overestimated.

There have been only a few studies of pneumococcal vaccine in children. The vaccine was generally found to be less antigenic for children under two years old than for other vaccinees. However, in a small, nonrandomized study of children and young adults two to 25 years old who had sickle cell anemia or had had splenectomy, occurrence of bacteremic pneumococcal disease was found to be significantly reduced by immunization with an 8-valent vaccine.[10]

A recently proposed method to evaluate protection with pneumococcal vaccine compares the distribution of serotypes of pneumococci isolated from the blood or cerebrospinal fluid of vaccinated and unvaccinated patients.[11] When this method was used to compare 36 vaccinated patients over ten years old—unclassified with respect to underlying medical conditions—with about ten times that many comparable unvaccinated controls, a vaccine efficacy rate of 49% was found (66%, if only patients with blood isolates were considered). As more patients become available for evaluation, estimates for specific diagnostic categories can be made, and the broad confidence intervals now associated with the analysis can be reduced.

The duration of protection induced by vaccination is unknown. Studies of persistence of elevated antibody titers are ongoing; currently available data show elevation of titers three to five years after immunization.

Side effects and adverse reactions

About one half of those given pneumococcal vaccine develop side effects such as erythema and mild pain at the site of injection. Severe adverse effects such as anaphylactoid reactions have been quite rare—about 5 per million doses administered.

Severe local and systemic reactions have been common among adults given second doses.[12] They are thought to result from localized antigen-antibody reactions involving antibody induced by previous vaccination. Whether prior infection with the *S. pneumoniae* types represented in the vaccine will result in comparable local reactions after vaccination is unknown. Several studies indicate that pneumococcal vaccine and influenza vaccine can be given at different sites at the same time without an increase in side effects,[13] but it should be emphasized that pneumococcal vaccine should be given only once to adults. Data on revaccination of children are not yet sufficient to provide a basis for comment.

Vaccine usage

The currently available 14-valent pneumococcal vaccine (as well as the earlier pneumococcal vaccines) has been shown in selected population to reduce by approximately 80% the incidence of pneumonia with bacteremia caused by *S. pneumoniae* types represented in the vaccines. In extrapolating this information for recommendations on vaccine use, it is important to recognize that data on effectiveness have come predominantly from studies in groups of adults who were at increased risk of disease but who were not chronically ill. Because age and some chronic illnesses apparently predispose individuals to more severe pneumococcal disease, it would be ideal if recommendations on immunization could be based on definitive clinical trials in groups of elderly patients and patients with chronic illnesses. While data on pneumococcal vaccine effectiveness in chronically ill persons and in others continue to accumulate, they are not yet sufficient for conclusive interpretations. Therefore, the Committee's recommendations that follow are derived from admittedly limited data.

1. On the basis of preliminary evidence, persons over 2 years old who have splenic dysfunction or anatomic asplenia should benefit from immunization. Vaccine failures have been reported, perhaps due to impairment of antibody responsiveness, but vaccination is recommended for such patients because they are known to be at high risk of developing fatal bacteremia.
2. Adults and children over two years old with chronic illnesses which are or appear to be associated with an increased risk of pneumococcal disease or its complications (see above) should be considered candidates for vaccination. Vaccine may be increasingly beneficial as these patients grow older because the elderly are at increased risk of dying from pneumococcal infections. Vaccine efficacy in these groups needs further evaluation and is currently under study.
3. There can be acute outbreaks or a high rate of endemic pneumococcal disease in some populations, such as in nursing homes and other institutions where there is increased risk that the disease will be severe. Under these conditions, vaccination of the entire closed population should be considered.
4. Localized outbreaks of pneumococcal disease caused by types represented in the vaccine can occur in the general population, albeit rarely. In such instances, selective immunization of those at high risk should be considered.
5. There are not yet sufficient data with which to formulate a recommendation on routine use of pneumococcal vaccine in immunization programs for the general population, including the elderly. This should not preclude health-care providers from giving vaccine to unimmunized healthy persons who, in their judgment, might benefit.

Precautions

The safety of pneumococcal vaccine in pregnant women has not been evaluated. It should not be given during pregnancy unless the risk of infection is substantially increased.

Because of a marked increase in adverse reactions with reinjection of pneumococcal vaccine, second or "booster" doses should not be given, at least at this time.

Complete records on vaccination can help to avoid repeat doses.

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Radiologic Problem of the Month

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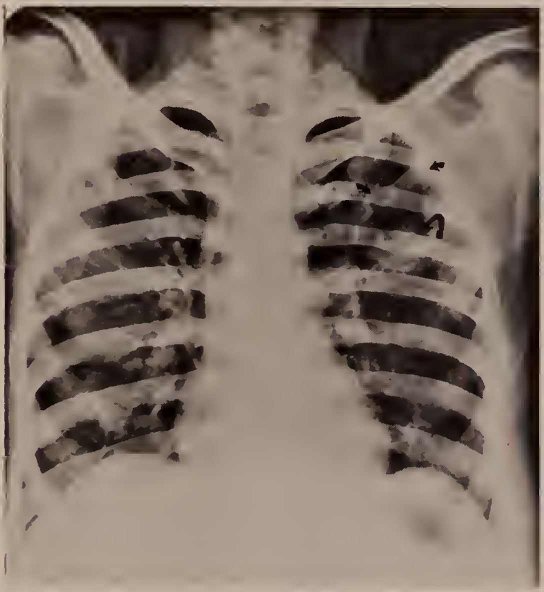
Mass Within Cavity of Lung



A 31-year-old man, otherwise healthy, had a chest roentgenogram for investigation of recent hemoptysis.

Elucidation

Posteroanterior view of the chest reveals a thin-walled lucency (arrows) in the left upper lobe. At the base of the cavity, a lobulated mass (curved arrow) is observed. No hilar adenopathy or any healed lesions in the lungs are observed. In a young person appearing with hemoptysis, a cavitary pulmonary lesion in the lung poses several diagnostic possibilities. The most common cause of a lucent lesion such as this is tuberculosis. However, other disorders such as fungal infections, pyemic abscess, sarcoidosis, emphysematous bulla, pulmonary cyst, or a cavitating infarct and malignant condition have to be entertained in the differential diagnosis of a lucency. The age of this patient, the otherwise normal lungs, and the lack of other clinical symptoms should rule out malignant condition, infarct, abscess, granulomatous lesions, and bronchiectasis. Solitary emphysematous bulla of this size is rare. Pulmonary cyst is a possibility but not an echinococcal type of parasitic cyst. The lobulated mass in the cyst may represent a blood clot or a fungus ball, and the latter is a good possibility.

Mycetoma or fungus ball is generally produced by the saphrophytic fungus *Aspergillus fumigatus.*[1-3] Aspergilloma is a synonym for fungus ball. Dévé described the first case in 1938 and called the process "Megamycetoma Intrabronchiectasique."[1] Clinically, the most characteristic symptom is hemoptysis in spite of good health. Precipitins for *Aspergillus* are positive for a high titer. Sputum cultures may be positive. Pathologically, fungus ball consists of a dense meshwork of intertwined mycelia with epithelial elements and degenerated blood products. Minute calcific deposits are observed occasionally.

Radiologically, an oval or rounded density is present in a lucent cavitary or cystic lesion located in one of the upper lobes of the lungs. A lobulated or smooth density surrounded by a halo in a cavity should suggest a fungus ball. Most of these fungus balls are not attached to the wall and hence shift their position in supine, erect, and decubitus lateral roentgenograms of the chest. In general, the cavity is due to tuberculosis or other granulomatous process. Any chronic infection, infarct, or neoplasm may result in cavitation and contain a fungus ball. A bulla or air-containing bronchogenic cyst can entertain a fungus ball. More than one fungus ball may be present at a single site. Tomography generally helps in delineating the fungus ball quite well. Computerized axial tomography is unnecessary in making a firm diagnosis. Previous films of the chest often help to determine the nature and chronicity of the lesion.

The differential diagnosis of a mass in a cavitary lucency includes inspissated pus, blood clot, necrotic material, membranes of echinococcal cyst, Rasmussen aneurysm, and fungus ball. The fungi responsible may include *Candida*, *Coccidiodes*, and *Aspergillus.* Spontaneous disappearance of the fungus ball is observed on occasion and medical treatment is not generally effective. Surgical excision is mandatory in instances of persistent hemoptysis. This patient had surgery and the fungus ball was found to be due to aspergillosis in a pulmonary cyst.

Diagnosis

Fungus ball in a pulmonary cyst

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Electrocardiograms of the Month

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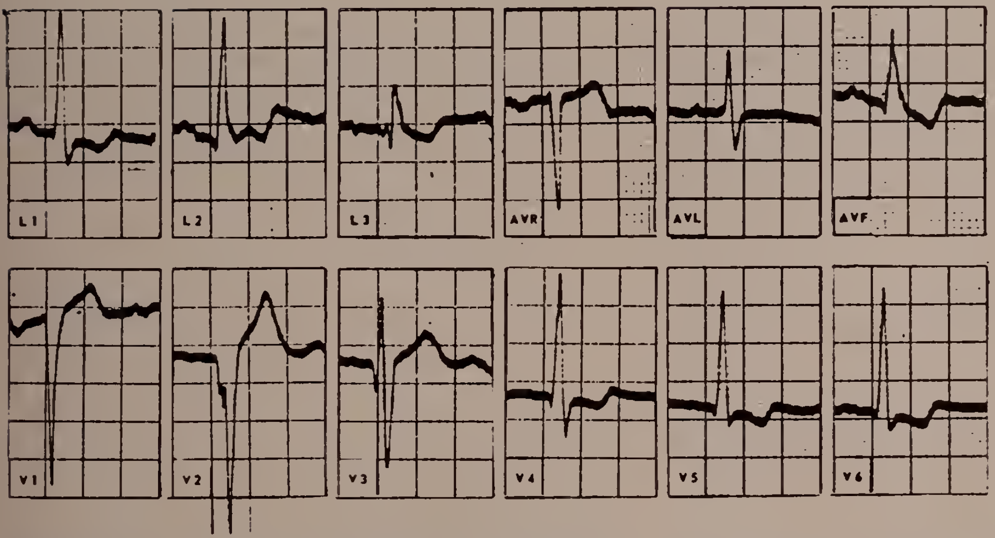
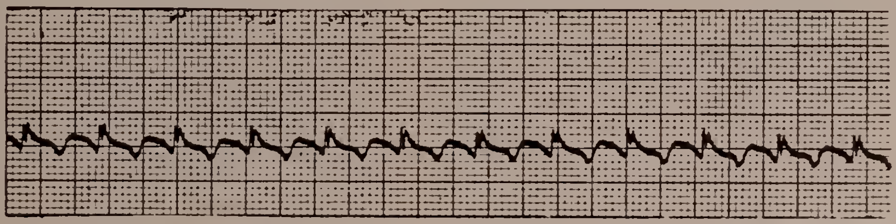
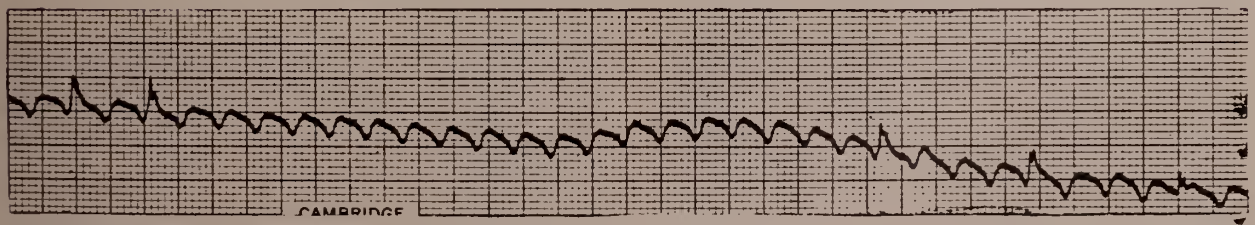


QUESTION 339. The electrocardiogram was obtained on a routine office visit. The patient was a 60-year-old man with anginal syndrome of approximately seven years' duration. What is the electrocardiographic interpretation?





QUESTION 340. The patient arrived in the emergency room with a history of palpitations of several hours' duration. What is the rhythm?

Electrocardiograms of the Month

ELUCIDATION

Answer 339. The rhythm is regular sinus. The PR interval is 0.20 second. The QRS duration is 0.12 second. In V_2 there is a QS pattern with slurring of the downstroke of the QS. A Q wave is visible in V_3. The abnormalities in V_2 and V_3 are indicative of anterior wall myocardial infarction of indeterminate age. There are diffuse ST abnormalities with significant depression of the ST segment in leads I, II, III, aV_F and V_4 to V_6. The ST segment abnormalities are nonspecific but are probably an indication of diffuse myocardial disease. The intraventricular conduction time is delayed to 0.12 second. This is a nonspecific conduction abnormality often seen in patients with severe myocardial disease. The increased voltage in the V leads is suspicious of left ventricular hypertrophy but is not diagnostic in the presence of an intraventricular conduction defect.

Answer 340. The top strip shows a ventricular rate of approximately 140. Between the QRS complexes the baseline undulates. There are two waves to every QRS. These waves are flutter waves with 2 : 1 A-V block.

The bottom strip was obtained during carotid massage. The initial two beats resemble those in the top lead. There is then an absence of QRS complexes and the visible beats are all F waves at a rate of 280 per minute. The diagnosis of 2 : 1 flutter was therefore confirmed by carotid massage which increased A-V block transiently and clearly demonstrated flutter waves. The sudden onset of a ventricular rate of approximately 140 to 150 beats per minute is often a manifestation of 2 : 1 flutter. It is frequently difficult to be certain that undulations are truly atrial flutter; a vagotonic maneuver, such as carotid massage, slows A-V conduction, and simplifies the identification of the flutter waves.

Pediatricians call for end of government support for tobacco industry

Ending governmental programs which support the tobacco industry "is long overdue" in view of scientific evidence which indicates that cigarette smoking poses a significant health hazard to both smokers and nonsmokers, the American Academy of Pediatrics (AAP) says in a policy statement issued this week.

The AAP statement "strongly recommends that all direct and indirect support by local, state, or federal governments of the production, distribution, or consumption of tobacco and tobacco products be phased out as rapidly as possible."

The new policy is described in the April issue of *News and Comment*, the Academy's monthly newsletter for members.

The policy explains that the Academy "considers tobacco smoking to constitute one of the most important sources of environmental contamination and a significant threat to the health of children."

Citing studies summarized in a report issued recently by the U.S. Surgeon General, the Academy notes that children of parents who smoke have more bronchitis, pneumonia and reduced lung function than children of nonsmokers. The AAP also points out that birth weight and fetal growth may be adversely affected by smoking during pregnancy.

Death rates are directly proportional to the number of years a smoker continues the habit and are higher for those who start smoking at young ages. Twenty percent of high school seniors still smoke each day.

While tobacco's effects on smokers are generally accepted, the AAP points out that less attention is paid to the environmental hazards of cigarettes to nonsmokers. Studies show that nonsmokers who are chronically exposed to tobacco smoke have reduced function of small respiratory airways, similar to the effect found in light smokers. In addition, smoking in enclosed areas can increase carbon monoxide levels well above air quality standards — even when ventilation is adequate.

Recent increases in the price of gasoline and heating oil have proven to be an effective method of reducing consumption — suggesting to the Academy that a cost increase for cigarettes might have a similar effect. In that context, the Academy "finds it incongruous that, in spite of all the scientific evidence summarized in the Surgeon General's report indicating that tobacco is a health hazard, the federal government continues to subsidize the production of tobacco . . . Such funds would be better used for the support of research and education."

To help reduce the environmental hazards of tobacco smoking further, the Academy also urges that physicians support legislation prohibiting smoking in public places frequented by children, particularly in hospitals and other health facilities.

The American Academy of Pediatrics is an organization of more than 23,000 pediatricians dedicated to the health, safety and well-being of infants, children and young people in North and South America.

Imported Dengue Fever in New York State

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Several arthropod-borne viruses are known to cause infections in humans in New York State. Since 1966 we have surveyed febrile patients with or without central nervous system manifestations and found evidence of continuing endemicity of CE (California encephalitis) virus and POW (Powassan) virus.[1] In addition, in 1971, one five-week-old child became infected with EEE (Eastern equine encephalitis) virus in upstate New York where an epizootic of this virus occurred in equines.[2] During an outbreak of SLE (St. Louis encephalitis) in Ohio and Illinois in 1975 several human infections with SLE virus were detected in the western part of New York State. With few exceptions, human infections with CE, POW, EEE, and SLE viruses appeared to have been acquired within the State. This note describes the first observations of imported laboratory-confirmed infections with another arbovirus, dengue virus, which are thought to have been acquired in an epidemic area outside the continental United States.

Early in the summer of 1977, an epidemic of dengue fever began in Jamaica, spreading all over the Caribbean region, including Puerto Rico and the U.S. Virgin Islands.[3] The disease was caused by dengue type 1 which had not been found previously in the western hemisphere. Earlier epidemics in the Caribbean which occurred at five- to seven-year intervals were due to dengue types 2 or 3.[4] These types were also responsible for outbreaks of dengue fever in Puerto Rico and the Dominican Republic before the epidemic of dengue type 1 in 1977 to 1978.

Dengue viruses are members of the flavivirus group to which the indigenous POW and SLE viruses also belong. These viral agents share common antigens which are most noticeable in the HI (hemagglutination-inhibition) and less by Neut (neutralization) tests. Sera from a dengue fever patient may therefore show reactions in HI tests with the SLE antigen, but little or none in Neut tests with SLE virus. Serum samples were routinely tested at the New York State Laboratories by the HI technique with antigens prepared from arboviruses known to occur in the state, such as EEE, WEE (Western equine encephalitis), SLE, POW, and CE viruses. HI-positive sera were then tested by CF (complement-fixation) and/or Neut techniques with appropriate antigens. Paired samples that showed reactions in the HI test against group B arboviruses (SLE and POW) and weak or no reactions in CF and/or Neut tests were forwarded for a definitive diagnosis to the San Juan Laboratories where antigens and assay systems for the various types of dengue virus were available. The antigen with which the serum showed the highest antibody titer was considered to indicate the virus type involved in the cause of the disease (Table I). Thus, it was possible at the New York State laboratory, where only antigens for the indigenous arboviruses were available, to become alerted to a possible dengue fever etiologic strain.

Findings

The first case of imported dengue fever in New York State was diagnosed in the late summer of 1977. A four-year-old girl, a resident of Yonkers, became ill with fever immediately after returning from Jamaica where an epidemic of dengue fever had been flourishing. Three days later she was hospitalized at the Westchester County Medical Center with cough, maculopapular rash, and stiff neck. Blood drawn on admission did not react with CE, POW, SLE, EEE, and WEE virus hemagglutinins. A convalescent-phase sample, collected one month later, had an HI antibody titer of 1:80 to SLE virus, but results of Neut tests for SLE with her paired sera were negative. A preliminary diagnosis of current infection with one of the flaviviruses was made.

Presented in part at the 79th Annual Meeting of the American Society for Microbiology in Los Angeles, California, May 6, 1979.

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Consequently, the paired sera were retested at the San Juan Laboratories and, based on HI antibody titers, a dengue type 1 infection was identified in this patient (Table I).

TABLE I. Hemagglutination-inhibition antibody titers in paired sera of a four-year-old febrile female patient resident of New York State, onset August 10, 1977

Antigens (4 Hemagglutinating Units)	Patient's Sera: Acute Phase, 8/13/77	Patient's Sera: Convalescent, 9/12/77
Alphavirus		
Eastern equine encephalitis	0	0
Western equine encephalitis	0	0
Flavivirus		
Dengue 1	0	1 : 160[*][†]
Dengue 2	0	1 : 20[†]
Dengue 3	0	1 : 80[†]
St. Louis encephalitis	0	1 : 80
Yellow fever	0	1 : 80[†]
Powassan	0	1 : 10
Bunyavirus		
California encephalitis	0	0

0 = <1 : 10

[*] Highest titer, considered diagnostic.

[†] Tests performed at San Juan Laboratories.

An additional 31 suspected cases of dengue fever in New York State were referred for laboratory studies in 1977 and 1978. Seven of these patients, all with a history of travel in the Caribbean area immediately prior to onset of illness, were confirmed by seroconversion as dengue type 1, and two patients had serum conversions for dengue type 2, but a travel history was not obtained. Eight of the remaining 22 patients had been in the Caribbean, and presumptive diagnoses of dengue fever were made on the basis of HI and/or CE antibody levels. Frequencies of different signs and symptoms in the 18 confirmed and presumptive cases were: fever (16), headache (10), chills (7), rash (6), arthralgia or myalgia (5), gastrointestinal disturbance (4), stiff neck (2), malaise (1), and dizziness (1).

During the same observation period, 11 immigrant farm workers from Jamaica who developed fever of unknown origin after their arrival came to our attention. One had a serum conversion of HI for SLE without reactions in both CF and Neut tests. The amounts of the sera were insufficient for dengue fever tests and the case was diagnosed as a flavivirus infection, most likely dengue. The other 10 migrant workers showed HI reactions in acute and/or convalescent-phase sera without rises in titer. We presume that these findings are serologic evidence for dengue fever infection acquired in the past in their native country.

Comment

Our observations are further evidence of imported human infections with nonindigenous arboviruses.[5] Physicians should consider this possibility in patients with onset of fever, headache, myalgia, or rash within four weeks of leaving affected areas. A detailed travel history will provide laboratory guidance for the selection of appropriate tests.

Following the decline of imported dengue fever in New York State in the summer of 1978, there were no additional cases detected. However, dengue cases can be expected from travelers from abroad during the next cycle of epidemics in the Caribbean Islands or other affected areas. The need for a continuing alert is further emphasized by a recent report that dengue virus type 4, which was never before observed in the Western Hemisphere, has been confirmed early in 1981 in two United States travelers who returned from a small island in the French West Indies.[6] Also in 1981, an epidemic of dengue type 2 involving several thousand people occurred in 4 provinces of Cuba, including Havana.[7]

An important concern was always the possibility that dengue virus might spread and reestablish itself in the United States mainland. This concern was strengthened by results of the 1980 surveillance conducted by the Mexican Ministry of Public Health and the United States Center for Disease Control which detected a probable focus of dengue activity only 300 miles south of the Texas border.[8] Dengue virus type 1 was isolated from an acutely ill Mexican resident, and several patients were shown to have antibody levels compatible with current dengue infection. The widespread distribution of the vector mosquito, *Aedes aegypti*, in Mexico and the Gulf coast and in the southeast Atlantic states in the United States raised the possibility that dengue might spread farther into and become established in Mexico and the United States mainland. Indeed, by midsummer of the same year, the first instance of indigenous transmission of dengue in the United States since 1945 was detected in a five-year-old female resident of Brownsville, Texas, from whom dengue 1 was isolated.[9] Thus far, 11 indigenous dengue infections have been documented in residents of Texas communities. None of the patients had traveled across the United States-Mexican border during the time they became infected.[10]

In New York State, fortunately, there appears to be little or no potential for an epidemic spread of dengue fever since extensive mosquito surveillance in the State has not revealed the presence of any vector species for dengue virus.[11] For this reason, even though several patients with imported dengue fever were in our area, presumably during the viremic state of their illness, chances of the virus spreading through infection of arthropod vectors were considered remote.

Laboratories that do not have dengue fever antigens available can utilize the cross-reactivity between dengue viruses and domestic flaviviruses such as SLE for low-cost screening of patients with febrile diseases returning from epidemic or endemic areas; reactions in the HI test for SLE can be considered as an alert. However, differentiation between SLE and dengue fever at reference laboratories is necessary to confirm the diagnosis and to allow effective control measures.

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"...sex and violence
everywhere!"

Electron Microscopy and Biopsy

Diagnostic clue provided on routine formalin-fixed material

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An open liver tumor biopsy by light microscopy was initially interpreted to be a bile duct type hepatoma. Because of differences of opinion among the pathologists, further study of the formalin-fixed biopsy material was carried out by electron microscopy. Finding of dense core granules in the tumor cells provided a clue as to the precise nature of the tumor. Serum hormone determinations, including serotonin, VIP (vasoactive intestinal polypeptide), and gastrin were done, along with 24-hour urinary determination for 5-HIAA (hydroxyindoleacetic acid). Of these, only the gastrin level was increased up to 6,844 Pg. per milliliter (normal 0-300 Pg. per milliliter), thus proving a diagnosis of gastrinoma.

The therapeutic and prognostic implications are discussed.

Introduction

Numerous tumors, both primary and metastatic, occur in the liver.[1] At the light microscopic level, the present case may be confused with cholangiocarcinoma,[1,2] and a group of metastatic APUDomas.[3,4]

The purpose of this article is to emphasize the advantage of electron microscopy when all other simpler methods fail to reach a precise diagnosis. We also wish to stress that the remaining formalin-fixed tissue can still play a vital role in electron microscopic study. The presence of dense-core granules pointed to one of the metastatic APUDomas, and the serum gastrin level proved the tumor to be a gastrinoma (non-beta islet cell tumor). This accurate diagnosis was particularly important in our current case since cholangiocarcinoma obviously carries a different therapeutic and prognostic outlook.[5,6] As also demonstrated by previous investigators, streptozotocin proved to be beneficial for our patient.[5,7–10]

Case report

This was the first admission for this 48-year-old white female who had been well until one year prior to admission when she started developing watery diarrhea up to seven times daily with only occasional formed stools. She also developed abdominal pain usually associated with bowel movements. In addition, a 25-pound weight loss was noted in the year prior to admission. A private physician, one week before admission, noted an enlarged liver and recommended admission.

Findings on physical examination showed that the patient had marked hepatomegaly with the liver palpated five finger-breaths below the right costal margin and extending to left anterior axillary line. A liver scan and celiac angiogram were clinically interpreted to be compatible with a hepatoma.

The patient underwent open liver biopsy. A diagnosis of hepatoma (bile duct type) was seriously entertained. Because of divided opinion, electron microscopy was carried out on the remaining formalin-fixed tissue.

It revealed typical dense-core granules in the cytoplasm of the tumor cells, indicating the possibility of a metastatic APUDoma. Findings on twenty-four hour urine for 5-HIAA, and alpha fetoprotein in the blood were negative. The serum calcitonin and parathormone were in the normal range. Findings on serum vasoactive inhibitory peptide were negative. The initial serum gastrin level was elevated at 6,844 Pg. per milliliter (normal range 0-300 Pg. per milliliter).

The patient, while awaiting the biopsy result, was given one course of chemotherapy including 5-FU and doxorubicin hydrochloride for possible primary hepatoma. Following the diagnosis of metastatic gastrinoma, streptozotocin 1.0 Gm. per square meter of body surface was substituted weekly for seven weeks. The liver size decreased moderately during therapy, which was administered between January 10, 1977, and March 22, 1977. The serum gastrin level decreased by February 8, 1977, to 1,132 Pg. per milliliter. Streptozotocin had to be discontinued due to uncontrollable vomiting and hematemesis. The renal function remained normal. The patient was then treated with 5-FU between April and June, 1977, and cyclophosphamide (Cytoxan) between August 2, 1977 and November 22, 1977. The patient failed to respond objectively to both drugs, showing gradual liver enlargement. After further treatment with doxorubicin hydrochloride a noticeable decrease in liver size was again associated with increased well-being and weight gain.

The patient was also treated with cimetidine (Tagamet) which had controlled the diarrhea. The chemotherapy was discontinued from May, 1978. The patient continued to feel generally well and functioned fully for three years after diagnosis and treatment. However, in April, 1980, the patient was readmitted for acute abdominal episode, presumably perforation of a peptic ulcer, and died. No autopsy was performed.

Result

Light microscopy. Multiple hematoxylin and eosin sections of the firm gray-white wedge biopsy of the liver tumor revealed that the tumor cells were uniform and arranged in cords with a tendency to form acinar structures in varying sizes. Other areas show trabecular pattern. There was some degree of dense stroma. One large glandular structure in the center showed secretory content and scalloping, mimicking hyperthyroidism-like glandular structure (Fig. 1).

Electron microscopy findings. The formalin-fixed tumor cells showed fairly linear cell border lines with sporadic small zones of simple attachments, and desmosomes were seen. A feature of importance in these cells were the 2,000-Å dense-core granules with clear halo (Fig. 2).

Comment

Numerous neoplasms of both primary and metastatic tumors occur in the liver.[1] Tumors that frequently may resemble or be diagnostically confused with the current case are the group of metastic APUDomas and cholangiocarcinoma at light microscopic level, especially when pertinent history is not elicited or available.

The patient in the present case had a pertinent history of diarrhea and hepatomegaly, but the possibility of metastic diarrheagenic pancreatic endocrine tumor did not enter into clinicians' minds, nor was communication adequate between them and the pathologists responsible at the time of the initial report. The clinical impression was that of a hepatoma. The pathologists' differential diagnoses included hepatoma (duct-cell type), and a possible metastatic carcinoid. The possibility of even a metastatic thyroid carcinoma was entertained by one pathologist.

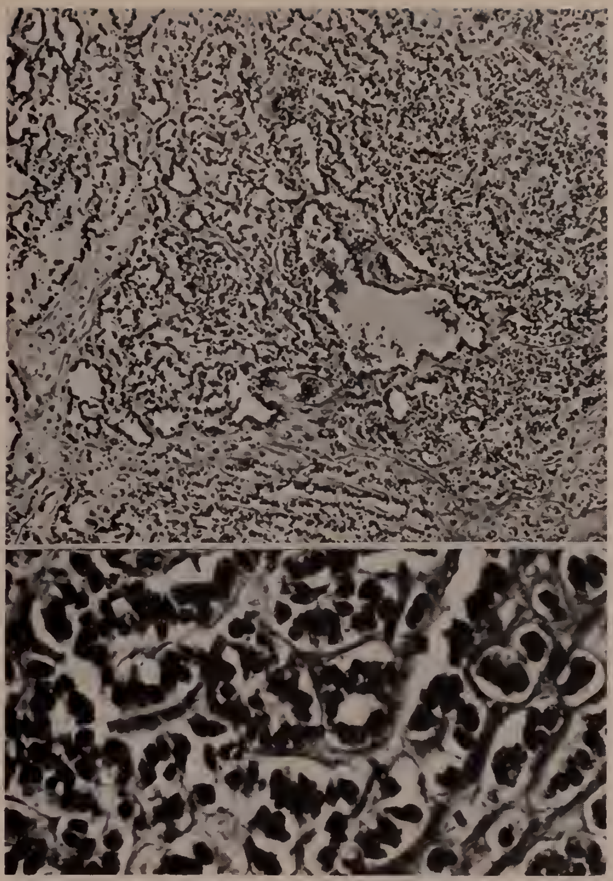

FIGURE 1. (Top) Survey micrograph exhibits uniform cells arranged in acinar and trabecular pattern within dense stroma (hematoxylin and eosin stain, original magnification ×112). (Bottom) Higher magnification of other area delineating definite acinar or ductular pattern (hematoxylin and eosin stain, original magnification ×450).

Fortunately, formalin-fixed tissue remained and could be studied by electron microscopy, which provided useful information, despite the lack of optimum preservation. Finding of dense-core granules in the tumor cells gave a definite clue that the lesion we were dealing with belonged to the APUDoma group of tumors and was not a cholangiocarcinoma.

Determination of 24-hour urine, 5-HIAA was negative; so were finding on serum serotonin VIP,[11] thyrocalcitonin, and parathyroid hormone tests. However, the gastrin level was 6,844 Pg. per milliliter (normal 0-300 Pg. per milliliter), thus supporting a diagnosis of gastrinoma.

Whether the tumor represented a pure gastrinoma could not be settled since certain pancreatic alpha-

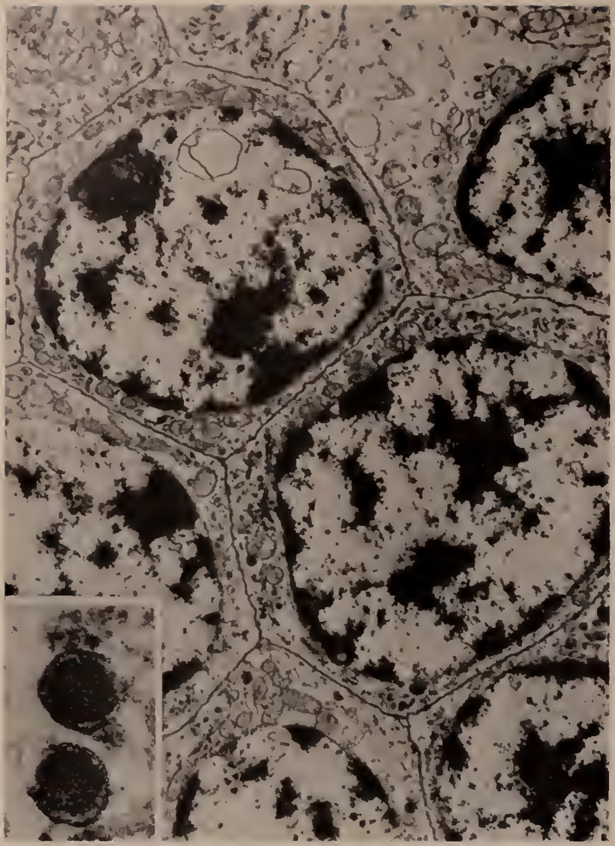

FIGURE 2. Electron micrograph of formalin fixed tumor tissue exhibiting small (2,000 Å) dense granules scattered throughout cytoplasm (×16,000). Insert shows dense granules with clear halo (×150,000).

cell tumors are known to produce hormones such as VIP,[11] and others.[12]

Therapy and prognosis, needless to say, depended heavily upon the correct diagnosis. This is particularly true in the present case since all of the differential diagnoses carry different therapy and prognosis.

Streptozotocin has been shown during recent years to be beneficial in treating pancreatic islet-cell tumors.[5,8–10] We believe that this is another case of gastrinoma in which streptozotocin has been much more effective as a chemotherapeutic agent than 5-FU (fluoroucil) and doxorubicin hydrochloride (Adriamycin) alone, or in combination. The efficacy of this agent was demonstrated by significant shrinkage of the tumor following the initiation of treatment; side effects have been minimal.

We recommend, therefore, that a small portion of biopsy materials (even if formalin-fixed) should be saved for electron microscopic study in the event that conventional light microscopic diagnosis presents a problem.

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Reversible Hepatitis With *Hemophilus Influenzae* Sepsis

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Reversible jaundice and hepatic injury without biliary obstruction may accompany systemic infection, especially in children and neonates.[1–4] In adults, pneumococcal pneumonia, streptococcal bacteremia, salmonella infections (especially typhoid fever), and *Escherischia coli* bacteremia may produce jaundice and reversible hepatitis.[1] We report a case of an adult with *Hemophilus influenzae* (type b) bacteremia secondary to epiglottitis who had transient jaundice and hepatitis, which resolved when the bacteremia was appropriately treated.

Case report

A 44-year-old Haitian man with a five-day history of sore throat, dry cough, malaise, fever, chills, and increasing shortness of breath was hospitalized because of respiratory distress. He denied sputum production, nausea, vomiting, and skin rash. He gave no history of tuberculosis, liver disease, allergies, or hematologic disorder, but had smoked 15 packs of cigarettes yearly for many years and consumed alcohol occasionally.

The patient was a young black man of moderate build in marked respiratory distress with inspiratory and expiratory stridor. The respiratory rate was 35/min, pulse 120 beats per minute and regular, blood pressure 140/85 mmHg, and temperature 103.2°F. Sclerae were icteric. Fundi, mouth, pharynx, and neck were normal. Prolonged inspiration and expiration with diffuse rhonchi, but no rales, and egobronchophony, or dullness were noted. Heart sounds were normal. Abdominal and neurologic examinations disclosed no abnormalities. Indirect laryngoscopy showed swelling and narrowing of the supraglottic, arytenoepiglottic folds, and epiglottic areas.

Laboratory studies disclosed the following values: leukocyte count 21,000/dL with 55% neutrophils, 39% immature forms, 3% metamyelocytes, 2% lymphocytes, and 1% monocytes. The hematocrit was 43.6%. Serum electrolytes were normal. Total serum bilirubin was 4.6 mg/dL (direct 2.3); serum glutamic-pyruvic transaminase 44 U/L, lactic dehydrogenase (LDH) 482 U/L, serum alkaline phosphatase 96 U/L, albumin 3.8 g/dL, and total protein 7.2 g/dL. Arterial blood gases (from room air) were pH 7.46, pCO_2 33.7 mm Hg. and pO_2 80.3 mm Hg. There was trace protein in the urine, but no bilirubin or bile salts. Neck radiographs showed diffuse swelling of the supraglottic folds, and a right lower lobe infiltrate was seen on a chest film. *H influenzae*, type b (biotype 1), sensitive to ampicillin, chloramphenicol, cephalothin sodium, gentamicin sulfate, and resistant to penicillin G, was grown from several blood cultures.

The patient underwent emergency endotracheal intubation and was given an intravenous bolus of 200 mg of hydrocortisone. Therapy with ampicillin, 2 g intravenously every six hours, was instituted with some improvement in the patient's breathing. Fever persisted, however, and on the third hospital day the patient became more dyspneic, and tachypneic, and developed bilateral dullness and rales. Chest x-ray films showed bilateral pleural effusions. Thoracocentesis on the right side yielded purulent fluid with a pH of 6.9 and glucose content of 5 mg/dL. The fluid contained multiple polymorphonuclear leukocytes and gram-negative coccobacilli. Bilateral chest tubes were inserted; they drained out 700 cc of pleural fluid from which was cultured *H influenzae* type B (biotype I), sensitive to chloramphenicol, cephalothin sodium, and gentamicin sulfate, but resistant to ampicillin, penicillin, tobramycin, and sulfamethoxazole. Ampicillin was discontinued and chloramphenicol, 1 g intravenously every six hours, was begun. The patient's temperature decreased to 100°F, and he felt markedly improved. The serum bilirubin level became normal on day nine of hospitalization (Fig 1). The serum LDH level decreased to normal on day 16. The following results were obtained: cytomegalovirus titers, 1:64; Epstein-Barr virus titers negative; hepatitis B surface antigen negative; hepatitis A immunoglobulin M test findings were negative as were those for toxoplasma titers. Cytomegalovirus culture of fresh urine was negative. Haptoglobin determination was 393 mg/dL (normal 27–139). Serum glucose-6-phosphate dehydrogenase (G-6-PD) was normal.

Following cessation of chloramphenicol three weeks later, the patient developed a left pleural effusion containing *Staphylococcus aureus* which drained via the old chest tube site. Treatment with cefamandole, 2 g intravenously every six hours, was started. At thoracotomy and decortication, a lower left lobe abscess was found and drained and the pa-

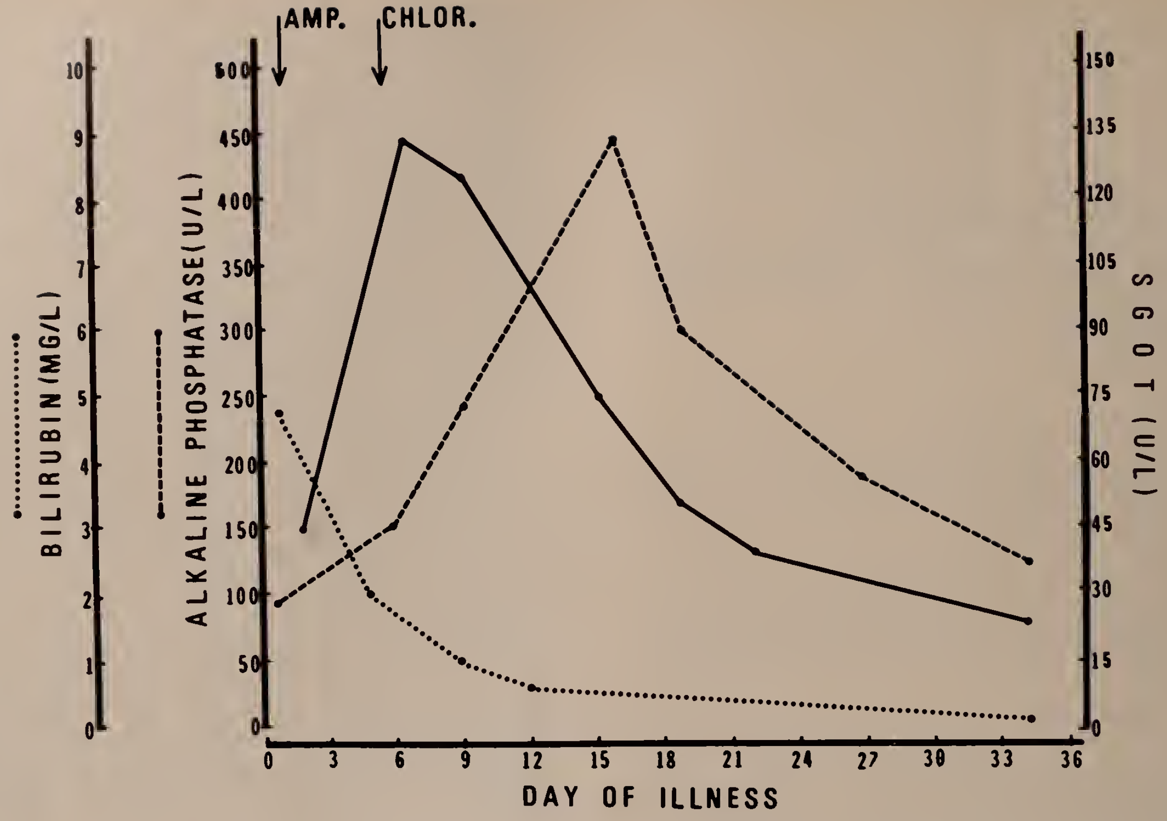

Fig. 1. Biochemical values of alkaline phosphatase, total bilirubin, serum glutamic-oxaloacetic transaminase during course of illness. Arrows denote initiation of antibiotic therapy.

tient made an uneventful recovery. No organism was grown from the left lobe abscess cultures.

Comment

Systemic infections may produce biochemical, cellular, and functional changes in the liver.[1] In neonates and children, jaundice and hepatitis may occur as complications of severe systemic bacterial infections.[2–4] Reported studies link reversible jaundice and hepatitis with pneumococcal pneumonia,[1,5–7] *Escherischia coli* septicemia, *Klebsiella* pneumonia, sepsis with *Pseudomonas aeruginosa*, *Proteus* and *Aerobacter* species, paracolon bacilli, and *Enterobacteriaceae*,[6] Legionnaire's disease,[8] typhoid fever,[9] brucellosis,[10] leptospirosis,[11] borreliosis,[12,13] and sepsis with streptococci,[14] staphylococci,[15] and clostridia.[16]

The mechanisms of hepatic injury vary with the infecting pathogen. Most investigators suggest that hepatocellular injury occurs from an unspecified toxin elaborated by the offending microorganism. One exception is that of gram-negative septicemia where intrahepatic cholestasis has been demonstrated.[6,17,18] Jaundice with lobar pneumococcal pneumonia, first described in 1836,[19,20] occurs mostly in Africans, often concomitant with glucose-6-phosphate dehydrogenase (G-6-PD) deficiency.[6,7,21] This association suggests that hemolysis contributes to the jaundice in these individuals. In clostridial sepsis, hemolysis may also account for the observed jaundice.[16] Other authors have implicated hyperpyrexia,[1,5,22,23] hypoxemia,[1,5] and malnutrition[1,5] as contributory factors leading to hepatic injury, especially in patients with a compromised liver, eg, alcoholics. Finally, one patient has been described with direct bacterial invasion of the liver with positive liver cultures with a nongroup D, nonmacroaerophilic alphahemolytic streptococcus.[24]

In our patient, hyperbilirubinemia was modest, nonspecific, and transient. Liver enzyme elevations suggested an early hepatocellular injury followed by a later cholestatic phase (Fig 1), which resolved over a span of four weeks. Absence of increased unconjugated bilirubin, normal reticulocyte count, normal serum haptoglobin, and normal erythrocyte G-6-PD levels ruled out hemolysis. The negative serologic test findings for hepatitis A and B, Epstein-Barr virus, and cytomegalovirus excluded these causes as well. Since the patient ingested no drug and was not exposed to any known hepatotoxic drug or chemical, we excluded induced toxic injury. We cannot exclude a possible genetic predisposition in our patient since some authors suggest this may be a contributory feature.[6,25]

Therefore, we conclude that reversible jaundice and hepatic injury may accompany *H. influenzae* (type B) sepsis in the adult.

Summary

Reversible hepatitis developed in an adult with *Hemophilus influenzae* sepsis and was resolved with therapy. The occurrence of hepatitis in conjunction with bacterial sepsis is reviewed. We conclude that *H influenzae* sepsis may produce reversible hepatitis in adults.

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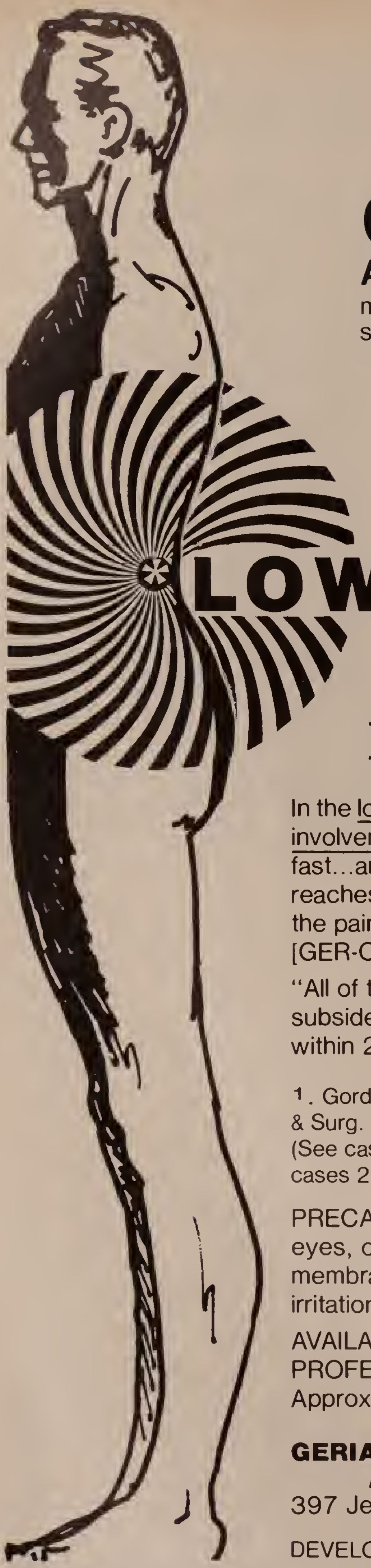

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[1]. Gordon, E.E. and Haas, A., Indust. Med. & Surg. 28:217, 1959. (See cases 2, 10, 15, 18, 35, 36 in Table I; cases 20 and 31 in Table II).

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Myocutaneous Flap for Traumatic Anal Incontinence and Reconstruction of Pararectal Defect

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Numerous descriptions regarding the use of the gracilis muscle for reconstruction of congenital,[1–6] posttraumatic,[7] or iatrogenic[8,9] anal incontinence have shown that the gracilis muscle can act as an acceptable substitute for the damaged anal sphincter. The GMCU (gracilis myocutaneous unit) has been successfully used for reconstruction of the penis,[10] the functional vagina,[11] and various posttraumatic defects involving the buttock and perineum.[12]

The gracilis muscle has been used for either the restoration of anal incontinence or in the reconstruction of soft-tissue deficits in the perineum. However, there is no previous description of the simultaneous use of the GMCU for both functions. We wish to describe the combined use of the GMCU for restoration of posttraumatic anal incontinence and reconstruction of a large pararectal soft-tissue defect in the same patient.

Anatomy

The gracilis muscle is an adductor of the thigh.[13] It is derived embryologically from the preaxial group of muscles, which are innervated by the obturator nerve (derived from the ventral rami of lumbar levels 2, 3, and 4).

The muscle originates as a thin tendon along the inferior pubic ramus and symphysis pubis. Its straplike belly lies superficial in the medial thigh and becomes tendinous again in its distal third. This tendon tapers distally and fits between the sartorius anteriorly and the semitendinosus posteriorly forming the pes anserinus. In addition to adducting the thigh, the gracilis helps to flex the leg at the knee.

The vascular supply to the gracilis is from muscular branches of the deep femoral artery. The major proximal pedicle is the medial circumflex femoral artery. This with the nerve forms a neurovascular pedicle in the proximal third of the gracilis muscle. The GMCU has a 360-degree arc of rotation around this pedicle (Fig. 1). The skin overlying the gracilis muscle is perfused with blood via muscular perforators. This enables the surgeon to transfer the skin and muscle as a unit (Fig. 2). When perforators are included between the skin island and the muscle, a larger skin island can be transferred with a significant random flap extension.

The development of a wide subcutaneous pedicle in the dissection of the gracilis bed recruits additional small blood vessels to nourish larger skin islands and enables the surgeon to transfer this random flap extension.

Case report

A 22-year-old male pedestrian was struck from behind by an automobile on June 2, 1979. This resulted in major perineal, left buttock, and left pararectal trauma. The area was crushed and grossly contaminated requiring multiple debridements and a diverting colostomy to prevent gross fecal contamination. Following trauma and debridement, assessment of the injury on June 19, 1979, revealed the anus facing left toward the pararectal cavity which admitted two large fists and extended to the sacral promontory (Fig. 3). The left half of the anal sphincter was destroyed. Scar formation drew the anus into its abnormal position. The left levator was unrecognizable and the pararectal fat above and below it was absent. A procedure was designed to fill the defect and restore the normal anorectal axis and sphincter mechanism.

On June 22, the patient was taken to surgery for further debridement, reconstruction of the soft-tissue defect, and restoration of the anal sphincter. The proximal gracilis muscle could be seen in the lateral portion of the cavity. Scar tissue holding the rectum was released.

Development of GMCU. An elliptical skin island was outlined measuring 11 cm. wide by 20 cm. long on the medial left thigh overlying the middle third of the gracilis muscle. The anterior margin of the longitudinal ellipse extended 2 to 3 cm. anterior to a line from the pubis to the insertion of the semitendinosus. The anterior margin of the flap was incised angling outward from the skin island. The incision was extended longitudinally from the distal apex of the ellipse to the tibial insertion of the gracilis. The distal gracilis was identified and isolated from the superficial oblique muscular sartorius and the more tendinous insertion of the semitendinosus.

The anterior dissection was then continued down to and beneath the fascia of the adductor magnus. All the fibro-fatty contents of the gracilis bed were

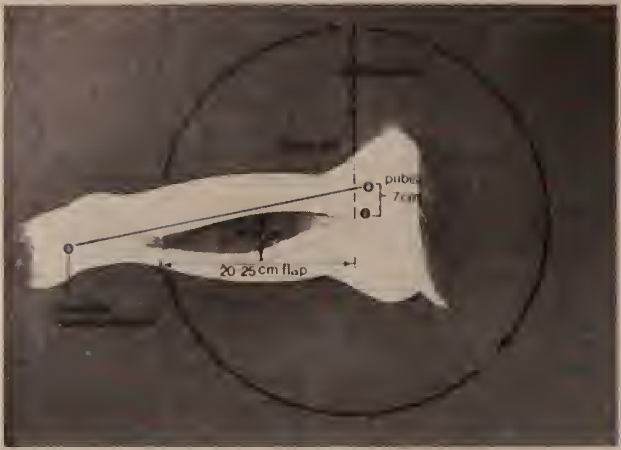

FIGURE 1. Gracilis originates from pubic ramus 7 cm. posterior to pubis. Primary vascular pedicle is medial circumflex femoral artery, a branch of profunda femoris. This is center of 360° arc of rotation and is located 7 cm. distal to origin.

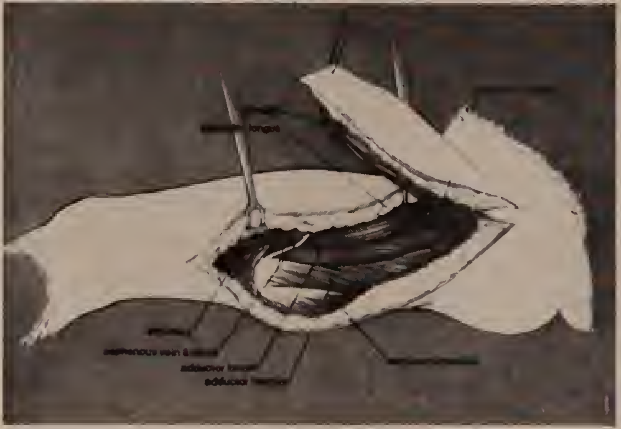

FIGURE 2. Primary proximal vascular pedicle (medial circumflex femoral artery) is accompanied by motor nerve to gracilis. Dissection is carried out in a plane beneath or on investing fascia of adjacent muscles, incorporating maximum number of myocutaneous perforators and collateral vessels to nourish skin island.

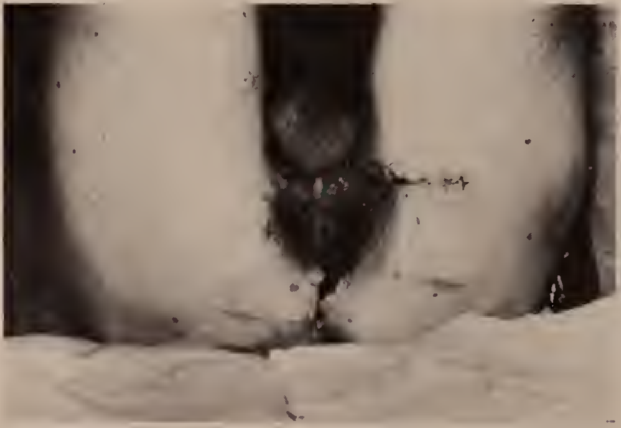

FIGURE 3. Intraoperative picture shows patient in lithotomy position with opening to large pararectal cavity in perineum. Pararectal cavity extends to sacral promontory.

thus included with the flap. By carrying the plane of dissection beneath or on the investing fascia of the adjacent muscles, a maximum number of perforators and collaterals to the skin island are preserved. This facilitates the use of a large random flap extension. With the location of the skin island over the gracilis confirmed, the posterior incision and dissection was carried out. Further mobilization was facilitated by releasing the gracilis insertion and retracting it. The secondary vascular pedicles (two) were identified and divided. If large secondary pedicles are identified, then the proximal dissection should proceed more cautiously. Once the muscle with its island is freed, the skin should be temporarily tacked to the muscle to avoid disrupting the vessels in the fatty pedicle.

After mobilization of the GMCU was completed, it was passed beneath the skin bridge separating the bed of the GMCU and the pararectal defect. The GMCU was then rotated posteriorly 90 degrees on its neurovascular axis (Fig. 4). The gracilis was wrapped clockwise around the distal rectum and sutured to itself and ipsilateral ischium. The cutaneous island was inset (Fig. 5). Fluorescein angiography confirmed our clinical impressions that the circulation was adequate.

The large pararectal cavity was partially filled. Purulent drainage persisted and a sinogram revealed a presacral cavity but no fistulous communication with the bowel.

One month after surgery the drainage cleared and the GMCU remained healthy. Serial sinograms documented an orderly reduction in the size of the residual presacral cavity over the next four months.

Eleven months after the injury the patient underwent colostomy closure. He had a normal bowel movement postoperatively and has remained continent. One month after colostomy closure a barium enema revealed normal sphincter function (Fig. 6). He resumed normal physical activities without fecal incontinence.

Comment

Posttraumatic perineal reconstruction with gracilis myocutaneous flaps is best reserved for situations in which there is a substantial defect. The transfer of the gracilis muscle as a replacement for the flaccid rectal sphincter is often used for the correction of anal incontinence of congenital or local traumatic origin. The restoration of rectal continence to patients with an absence of sphincter control requires the preservation of the motor nerve to the gracilis. However, voluntary control is not as effective as intact involuntary autonomic sphincter control. The patient may need to be trained postoperatively to control bowel habits and to benefit from sphincter reconstruction.

The location of the GMCU, its proximal pedicle, and the arc of rotation make it ideal for regional reconstruction involving the perineum, lower buttock, genitalia, and perirectal area. Transposition of the

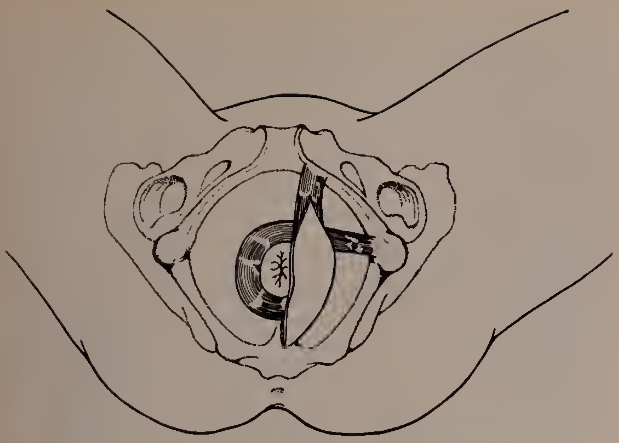

FIGURE 4. Diagram of reinsertion of gracilis muscle after it encircles rectum. Skin island is placed so that it fills the large perineal soft-tissue defect.

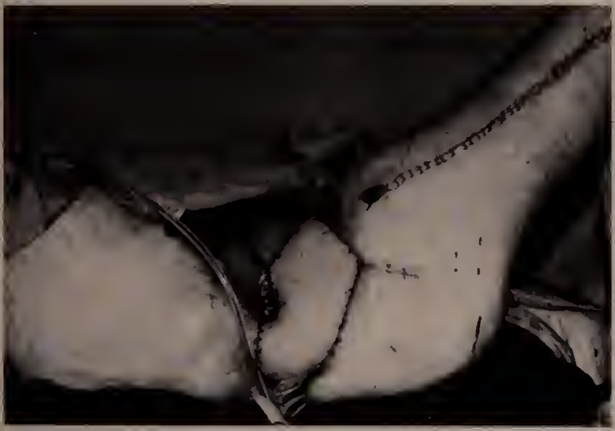

FIGURE 5. Completed perineal, pararectal sphincter reconstruction.

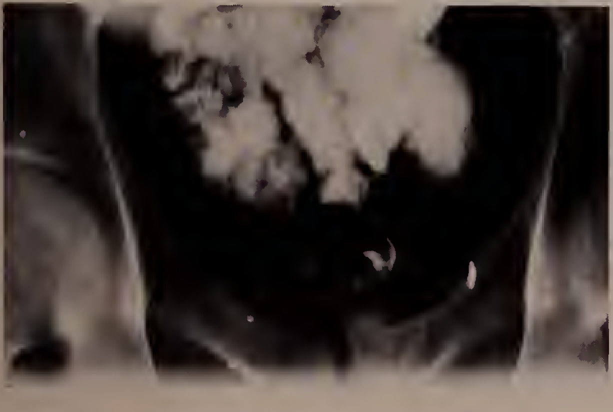

FIGURE 6. Air contrast view of continent sphincter and rectal ampula.

GMCU produces no functional change in gait or leg motion. When wide subfascial dissection is carried out, a large viable skin island can be transferred. The donor site on the medial thigh can be closed primarily and leaves an acceptable scar. The neurovascular pedicle is reliable in size, course, and level of entry into the muscle.

Complete diversion of the fecal stream is imperative and should be accomplished with an end colostomy and isolation of the distal colorectal segment. A loop colostomy invariably allows a significant amount of feces to pass distally and thereby contaminate the perineum.

After proper debridement has been conducted, the rich blood supply to the muscle and skin island appears to aid the use of the flap in the face of chronically infected tissues. These arterialized flaps appear to fare better than random flaps when used to cover large contaminated cavities or radiation defects with avascular beds.

Summary

A case involving the combined use of the gracilis myocutaneous unit for the restoration of posttraumatic anal incontinence and reconstruction of a large pararectal soft-tissue defect in the same patient is described. Because of its versatility, pedicled blood supply, wide arc of rotation, and ability to be transplanted without noticeable functional loss, the GMCU is a favored method for reconstruction of large posttraumatic perineal injuries.

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Virilizing Tumor of Adrenal Cortex in an Infant

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Virilizing tumors of the adrenal cortex are rare in both children[1,2] and adults.[3-9] By far the most common cause of masculinization in infancy and childhood is congenital adrenal hyperplasia due to a 21-hydroxylase deficiency.[10] Less commonly seen are ovarian tumors[11] and adrenal tumors that secrete excessive quantities of glucocorticoids and androgens resulting in the production of Cushing's syndrome.[4,12] The present report describes the occurrence of a testosterone-producing tumor in an 11-month-old female that expressed itself dramatically, was easily demonstrated with ultrasonography, and removed without incident.

Case report

The patient, an 11-month-old female, appeared with a three-week history of rapidly progressive masculinization.

The infant was the fourth and youngest child, born after an uneventful pregnancy and delivery. Her birth weight was 4 kg (8 lb·12 oz) and length 51.3 cm (20½ inches). Sex was unambiguously female. Until ten months of age, growth and development were normal. She was in the 65th percentile for weight and in the 75th percentile for height. Findings on a physical examination on Dec 12, 1977 were unremarkable, but on Jan 16, 1978 she returned unequivocally masculinized.

Findings on physical examination disclosed an alert female infant with a low-pitched voice, oily scalp, hair, and skin, facial acne, clitoromegaly, and large deeply pigmented labia majora and minora which were not fused in any area. The labia majora were covered with about 100 coarse, black curly hairs. There was no hypertension, facial, axillary or body hair, breast development, abdominal or pelvic masses. No striae were noted.

Ultrasonic study disclosed a 2-cm tumor overlying the superomedial aspect of the left adrenal gland (see ultrasonogram). Findings on radiologic examinations of the skull, chest, and abdomen, and intravenous pyelogram were negative. Bone age as determined by x-ray film on the left wrist were compatible with chronologic age.

Abnormal biochemical values were a strikingly-high serum testosterone (T) of 335 ng/dl (normal for a female infant 6.58-2.48 ng/dl),[13] and a 24-hr urinary 17-ketosteroid (17-KS) excretion of 4.5 mg (normal for age, less than 1 mg).[1,2] Serum 17-hydroxyprogesterone was slightly elevated for an infant (104 ng/ml; normal 30 to 90 ng/ml). Serum adrenocorticotropic hormone (ACTH) (33,40 pg/ml) and cortisol (10,18 mcg/dl) values were normal. Normal values were also obtained for 24-hr urinary excretion of pregnanetriol (0.3 mg), pregnanediol (0.1 mg) and free cortisol (16 mcg).

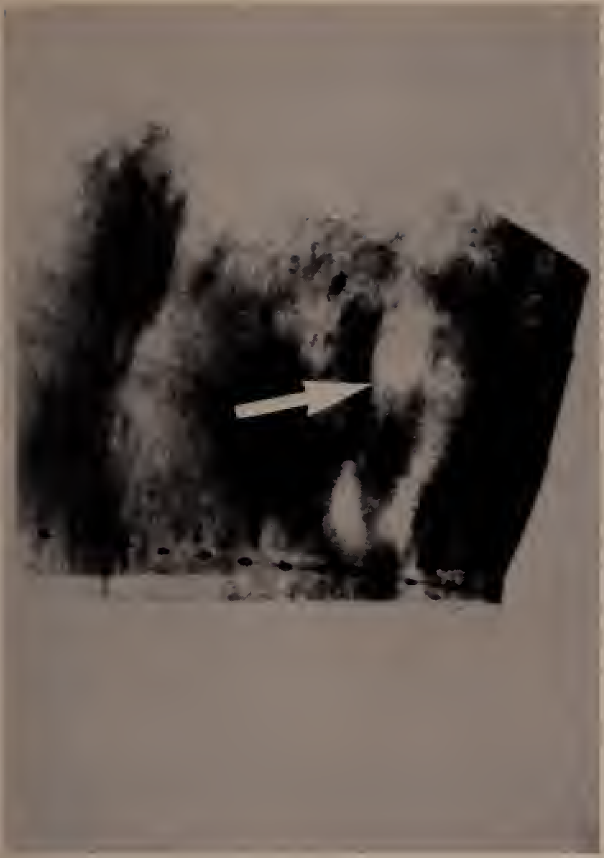
Attempts to suppress serum testosterone and 24-hr urinary excretion of 17-KS with large doses of dexamethasone were unsuccessful. Baseline values for serum T and 24-hr urinary excretion of 17-KS were 348 ng/dl and 3.5 mg, respectively. After dexamethasone 0.5 mg every 6 hours for 11 doses, the values for serum T and 24-hr urinary excretion of 17-KS were 525 ng/dl and 4.3 mg, respectively. Plasma cortisol was suppressed from 18 mcg/dl to 10 mcg/dl, less than the more complete suppression usually seen. After dexamethasone 2.0 mg every 6 hrs for 12 doses, the values for serum T and 24-hr urinary excretion of 17-KS were 350 ng/dl and 7.6 mg, respectively.

A 6.5-g tumor measuring 2.2 × 1.6 × 1.8 cm was removed with the left adrenal gland. The right adrenal gland and ovaries were normal. The postoperative course was uneventful. Four months after surgery abnormal changes of the skin, voice, clitoris, and labia had returned to normal. Pubic hair disappeared. Serum testosterone levels have been normal (less than 10 ng/dl) since surgery.

The pathology report on the left adrenal gland with cortical tumor showed marked pleomorphism, polypoidy, and occasional mitosis, most consistent with adrenocortical carcinoma. No capsular or vascular invasion was noted.

Comment

Clinical and laboratory information permitted a rapid and precise diagnosis. The strikingly elevated serum testosterone levels and 24-hr urinary excretion of ketosteroids for an infant, nonsuppressibility with



Ultrasonogram. Arrow points to 2-cm tumor overlying superomedial aspect of left kidney.

large doses of dexamethasone, identified the biochemical problem. Ultrasonography clearly demonstrated the lesion responsible in the region of the left adrenal gland. Rapid localization of the tumor obviated the need for invasive diagnostic studies such as angiography and venography with sampling of venous blood. Removal of the left adrenal gland with the adenoma was performed without difficulty. The patient received cortisol preoperatively, and for five days after surgery, but has not received cortisol since then. She had not had any problems handling the usual childhood illnesses without receiving exogenous cortisol, nor has there been any clinical evidence of Cushing's syndrome.

The differential diagnosis of masculinization in a female infant may include the more common congenital adrenal hyperplasia with a 21-hydroxylase deficiency, Cushing's syndrome caused by excess ACTH, adrenal adenoma or carcinoma, and ovarian tumors such as arrhenoblastomas, hilus cell tumors, and gynandroblastomas.

A completely negative family history, unambiguous female genitalia from birth, abrupt onset of masculinization with reversion to normal after removal of the tumor, normal values for urinary excretion of pregnanetriol and only minimally elevated 17-hydroxyprogesterone,[14,15] excluded the diagnosis of congenital adrenal hyperplasia. Since the usual clinical features of glucocorticoid excess were absent, Cushing's syndrome was unlikely. Furthermore, although masculinizing adrenal lesions produce substantial amounts of 17-KS, especially dehydroepiandrosterone, dehydroepiandrosterone sulfate, etiocholanolone, and 4-androstenedione,[16] virilizing Leydig cell tumors may also produce excessive amounts of the same steroids.[6] Testosterone is by far the most potent endogenous androgen and in the concentration present, is undoubtedly responsible for extremely rapid and dramatic virilization in this patient. Identification of specific 17-KS was not done, but total urinary 17-KS ranged from 3.5 to 7.6 mg excreted in 24 hrs. While these values are not high for an adult, they are significantly elevated for a 12-month-old infant. Burr et al[1] reported a testosterone-producing adenoma in a 20-month-old girl with minimally elevated 17-KS to 1.4 mg/24 hrs; values were suppressible with dexamethasone. Similarly, David et al[2] presented a case with values for 24-hr urinary excretion of 17-KS similar to ours (304-4.7 mg/24 hrs).

Since testosterone and other androgens can be synthesized in both adrenal and ovary, efforts have been made to locate the tumor on the basis of hormone content of venous effluent blood, either at rest or after stimulation or suppression, but these studies can be misleading.[7] Givens et al[7] and Werk et al[8] have reported testosterone-producing tumors of the adrenals that have been stimulated by human chorionic gonadotropin (HCG) and suppressed with estrogens. Larson et al[11] were able to suppress adrenal testosterone production with ethinyl estradiol. It is essential, therefore, to employ ultrasonography and/or computerized axial tomography, safe noninvasive techniques, for localization of tumors.

Although the pathologic report of the tumor sounds ominous, the prognosis is evidently quite good. In the series of Hayles et al,[12] one of the cases had metastases when first seen. None of the tumors in the other subjects behaved in a malignant fashion. The rapid disappearance of the signs of masculinization and the persistently normal values for serum testosterone 24 months after surgery suggest an excellent prognosis for this child.

Summary

A virilizing tumor of the adrenal cortex is reported in an 11-month-old female. The onset was dramatic with significant virilization occurring over a three-week period. Serum testosterone levels were very high (346 ng/dl) and nonsuppressible with large doses of dexamethasone. The adenoma was easily located by ultrasonography and removed without incident. Regression of masculinization occurred rapidly and follow-up 44 months after surgery disclosed a normal four-year-old female. Serum testosterone levels have remained normal.

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Clues found to why combination therapy works against cancer

Although researchers generally agree that cancer arises from a single abnormal cell, by the time the emerging tumor reaches detectable size it may contain different types of malignant cells.

Research on the diverse nature of cancer cells being done at a number of centers suggests that it is the differences among the cells in a cancer that make it more susceptible to combination therapy involving radiation and drugs or combinations of drugs rather than the single therapy approach.

But the differences among the cells — known as heterogeneity — also may account for why similar-appearing cancers don't always respond the same to therapy.

According to a report of a recent symposium in the Medical News section of this week's Journal of the American Medical Association, researchers have found single cancers comprised of cells differing in their secretory products, in their sensitivity to hormones, and in their genetic characteristics. The symposium, sponsored by Bristol-Meyers, was held at The Johns Hopkins Oncology Center in Baltimore, Md. early last month.

Says Albert H. Owens, Jr., MD, head of the center and the symposium director: "It is becoming apparent that tumor cells, which look alike when stained and viewed under a microscope, do not necessarily behave alike in the body."

Some of these cells, he said, may break away from the main portion of the cancer to seed other areas of the body with cancer, while other cells in the same tumor may not share this tendency to metastasize. Some may divide, others not. Some may be sensitive to drugs, others may be resistant.

It may be that such heterogeneity is the common denominator in cancer, as Paul Calabresi, MD, of Roger Williams General Hospital in Providence, RI, noted.

Five years ago, few, if any, researchers seriously considered that a single cancer could contain mixtures of cell types. Now the existence of such heterogeneity is being used as a basis for treatment and prognosis.

Stephen B. Baylin, MD, associate professor of oncology and medicine at Johns Hopkins, was able to correlate the prospects for survival among thyroid cancer patients with the level of a hormone (calcitonin) in their tumors. None of the patients having cancers in which the hormone level remained steady have died. But five of the six patients in whose cancers hormone level dropped did succumb to the disease.

John D. Minna, MD, chief of the National Cancer Institute Oncology Branch at the National Naval Medical Center in Bethesda, Md. found that small cell lung cancer patients with heterogenous tumors fare worse than those with homogeneous tumors.

Elective Mutism

Evaluation and behavioral treatment of three cases

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This report is to alert the pediatrician to the existence of a syndrome in which a child speaks only to selected individuals or in some settings while remaining completely silent in others. The syndrome was first described by Kussmaul in 1877[1] and termed "elective mutism" by Tramer in 1934.[2]

The child with elective mutism is usually first identified when he enters nursery school or kindergarten and is observed to be socially reticent and unable to progress beyond nonverbal forms of communication.[3,4] Frequently, the child's early school experiences are characterized by his unwillingness to enter the classroom without being led, and once there showing little or no interest in participating in classroom activities.[5] This behavior stands in marked contrast to that exhibited at home, where the child typically speaks freely with family members and some acquaintances, but may exhibit negativistic, emotionally immature, and aggressive behavior.[4] In addition to elective mutism these children may also exhibit various obsessive-compulsive behaviors.[6,7]

The course and prognosis of elective mutism are largely unknown. However, the condition is chronic and some children have reportedly not spoken in the classroom for more than seven years.[3,8] Follow-up data on patients treated with individual psychotherapy and occasional rewards for speaking indicate that prognosis is poorer when there are concomitant problems such as low intellectual functioning, organic factors, or thought disorder.[9]

The reported prevalence of elective mutism is relatively low, less than one half of 1 percent.[10,11] Although the published data suggest that as a clinical entity elective mutism is relatively rare, its true prevalence in the general population may be underestimated for several reasons. For example, electively mute children may be viewed by their teachers as overly shy; also, children who do not speak do not represent a source of disruption in the classroom and therefore may not be referred for treatment.

Although the etiology of elective mutism is also unknown, some authors have stressed the parent-child relationship as being particularly important in perpetuating the symptom. Parents of electively mute children, particularly the mothers, have been characterized as anxious, fearful, and overprotective.[4,5] The lack of speech has been viewed as a passive-aggressive expression of hostility by an overly dependent child.[3] Others have regarded nonspeaking as a learned behavior which is acquired as an attention-getting or a fear-reducing strategy.[10] The presence of a predisposing speech defect has also been suggested as a possible basis of the syndrome.[12,13] The reader is referred to Halpern, Hammond, and Cohen[14] and to Wergeland[4] for a review of the putative etiologic factors in elective mutism.

Although the condition is considered highly resistant to treatment,[10,15] successful modification of elective mutism has been accomplished by behavioral learning approaches using a technique called "stimulus fading."[16–18] This technique has been used with moderate success by one of the authors (Dr. Kupietz) and involves a four-phase treatment program. In phase I, the parent is brought into the school to engage the child in conversation in that setting. In phase II, the child's teacher observes the session unobtrusively, gradually increasing her proximity to the child in the ensuing sessions. In phase III, the teacher asks the child questions indirectly, by way of the parent. By the end of this phase, the parent has gradually discontinued relaying the teacher's questions, as the child begins to direct more of his responses to the teacher. In phase IV, the carry-over of speech into the child's classroom is programmed by having the child speak to his teacher in the presence of one or two children, gradually phasing in the remainder of the class.

Case reports

Case 1. A four-year-old Caucasian boy, the eldest of three children, was referred by his mother. The boy's nursery school teacher, viewing him initially as a very shy child, grew increasingly concerned when after several months he had not "warmed up." At school he had never spoken. At the time of referral, he spoke to virtually no one outside the home. His mother described him as having been very timid as a toddler. The father was described as a quiet man, not very involved with his children. The child adjusted poorly to new surroundings. Although he talked freely with his mother at home, he did not speak to her at school. He was described as impulsive, overactive, distractible, and disobedient in the home. By contrast, in class he was inhibited and his participation was extremely limited.

History. The boy was the product of a full-term pregnancy complicated by a bladder infection treated with methenamine mandelate. The mother was 26 years old at the time of his delivery, her first pregnancy. He was delivered without complication by elective cesarean in view of prior surgery. His birth weight was 7 pounds 6½ ounces. He had a history of recurrent asthmatic bronchitis. Early developmental milestones were achieved on time although his mother considered him awkward.

Examination. The patient had a pediatric neurodevelopmental assessment at five years eight months. The general physical examination revealed no abnormalities. His performance on the Denver Developmental Screening Test was within normal limits although motor development was suspect because he could not sustain hopping, had poor motor coordination when catching a ball, and an immature pencil grasp. Neurologic examination gave otherwise normal results. The child could write the letters of the alphabet although an occasional letter reversal was noted. His human figure drawing yielded a Goodenough "Draw-a-Man" mental age score of 7¾ years. He related to the examiner, smiling appropriately, although he never talked directly to the examiner, but rather through his mother as intermediary. (Behavior modification of his elective mutism was in progress at this time.) Both the quality and content of his speech were appropriate to his age.

Treatment. The behavioral treatment program was begun while the boy was attending nursery school. Sessions were held three times a week from December to June. Following the initial sessions, which were devoted to encouraging speech with his mother in the school setting, the teacher was introduced into the program. Speech in her presence was achieved by the second week in January. By March, the child responded directly to her. Two weeks later, the teacher reported that he continued to respond verbally to her even after his mother had left. Between March and June, the mother was phased out of the program. At the same time the child was reported to be increasingly more comfortable speaking in class and to have expanded the number of people he was able to speak with out of school. By the end of the school year he readily responded to his teacher, although in a whisper.

Case 2. A 14-year, 10-month Caucasian boy was referred by a school for emotionally handicapped children where he had been in attendance for three years. At the time of referral, the patient responded readily to his teacher through the use of gestures and other nonverbal communication. He was considered by the staff to be one of the highest functioning children at the school. His early behavior at the school was described as noncommunicative and withdrawn. He did not walk, eat, or use the bathroom on his own. Over the ensuing three years he slowly adjusted to the school routine and at the time of referral was participating in all activities, although nonverbally.

History. The patient was the eldest of four siblings. At home he reportedly spoke freely and interacted well with his siblings although his parents described his speech as "immature and high-pitched." Early developmental milestones were reported as normal. The mother stated that her son was shy and insecure as a young child, unable to "open up" to people. She was made aware of the seriousness of the problem when his kindergarten teacher reported he would not participate or speak in class.

The boy was a five-pound seven-ounce product of a full-term uncomplicated first pregnancy and delivery to a 21-year-old mother. Apgar score was 9 at one minute. He had a talipes equinovarus deformity of the right foot which was repaired at three years of age. There was a history of chronic otitis media bilaterally complicated by a perforation of the left tympanic membrane. He had undergone two surgical procedures, including an adenoidectomy and bilateral myringotomy in 1973 and myringoplasty of the left tympanic membrane in 1974. He has been under the care of an ear, nose, and throat physician who reported a "significant hearing loss" in one ear.

Examination. The patient was examined by one of the authors (Dr. Schwartz) in February, 1979. His height was 57 inches (fiftieth percentile for an 11-year-old). Weight and head circumference were normal. On physical examination both tympanic membranes were abnormal. He was able to hear a watch with his left ear but not with his right. A prominent upper lip was noted. A lower molar and upper canine were abnormal in gross morphologic features. He walked with a limp. The right leg was slightly shorter than the left, and the right foot was smaller than the left foot. On the right there was atrophy of the calf, a hallux valgus deformity, and a surgical scar over the Achilles tendon. The neurologic examination revealed a mild tremor, elicited when the patient constructed block designs, and a deviation of his arms from horizontal and midline when extending his hands palm down. During the examination it was noted that he could spell simple words and do simple mathematical problems on paper. On the Bender Motor Gestalt Test he made four errors giving him an age equivalent score between eight years and eight years, five months. On the Leiter International Performance Scale, he obtained a mental age of eight years, four months and an I.Q. score of 52, placing him in the moderate retardation range.

Treatment. As a first step in eliciting speech, arrangements were made for the boy's father to work with him daily at school on such tasks as reading simple words and naming colors. Later sessions involved short spontaneous conversation and reading sentences. After eight sessions, the boy spoke with his father in a normal conversational tone. In phase II, after some initial disruption of communication with his father due to the teacher's presence, the boy resumed speaking, although with barely audible volume. However, due to scheduling problems the behavior progam had not proceeded much beyond this phase by the end of the school year. At the time of this writing, plans for continuing the treatment program were initiated.

Case 3. A nine-year, five-month Caucasian boy, referred by his school psychologist, was first seen in December, 1977. He was performing below grade level and had been placed in a learning adjustment class. He had not yet learned to read, and could not count beyond 20. He did not participate in class activities and was a constant object of taunting by the children in his class. He responded aggressively by retaliatory acts against fellow students.

History. At home he reportedly related well to two brothers ages 7 and 11, and to a 12-year-old sister who was described as shy. The mother described the boy as sensitive, quiet, and afraid of failure. As an infant he did not babble as much as his siblings did. His early motor and language had been slow. He walked at 17½ months of age, and did not communicate verbally with family members until age four.

The patient was an 8-pound, 4-ounce product of a full-term uncomplicated pregnancy and delivery to a 32-year-old mother. This was her third pregnancy after two normal deliveries. His Apgar score was 10 at one and five minutes. He had a long history of eczema and many small pigmented spots on his body which had increased in number since infancy. His father and a brother were said to have similar spots.

Examination. At nine years, five months, his height and weight were normal but his head circumference was 57¼ cm., more than two standard deviations above the mean. At age 10 years, 11 months, it measured 57¾ cm. His mother reported he always had a large head, but records of prior head measurements were not available. There was no clinical evidence of increased intracranial pressure and head circumference was increasing at a normal rate. On physical examination, multiple pigmented spots resembling lentigos were noted. They were of slightly different shades and variable size, pinpoint to 5 mm. in diameter, located principally on the upper trunk, neck, and proximal extremities. The palate was high arched. There was a short, grade I/VI systolic murmur, innocent in quality, under the right clavicle and along the left sternal border with normal S_1 and S_2 (first and second heart sounds). Results of neurologic examination were normal except for mild hypotonia. The patient seemed to understand simple commands. He was negativistic, refused to participate in fine motor tasks, and did not speak in the examiner's presence.

Laboratory test results were as follows: Skull series was unremarkable. CCT (cranial computerized tomography) scanning revealed marked enlargement of the posterior portions of the lateral ventricles bilaterally but greater on the left. Chest x-ray films revealed some prominence of the cardiac silhouette with apparent mediastinal widening (the film was not of good quality). An EKG (electrocardiogram) gave normal results, as did a formal audiometric assessment. Four small pigmented spots were biopsied. Two were junctional nevi compatible with multiple lentigines syndrome. The diagnostic impression of the consulting pediatric neurologist was arrested hydrocephalus. The consulting pediatric cardiologist considered the heart murmur functional in nature.

Treatment. The stimulus-fading program was begun with the mother engaging the boy in his favorite card games in a vacant classroom. In the fifth session, a teacher with whom the boy was familiar was introduced into the program. Initially she sat in a corner of the room out of the boy's view pretending to be preoccupied with her own work. Gradually she moved her seat closer to the table where the boy and his mother conversed. By the tenth session she was seated alongside the table; the boy stopped talking and refused to play the game. By the fourteenth session, he seemed more relaxed and began to whisper to his mother in the teacher's presence. In subsequent sessions, he resumed normal conversation with his mother and had begun to respond to questions posed by the teacher and relayed by his mother. Direct verbal responses to the teacher were achieved by session 21. The mother was completely "faded out" of the program over the next 10 sessions. By this time, the boy responded readily to his teacher. In all, the stimulus-fading program required approximately 31 sessions distributed over a three-month period.

In July, 1979, the patient was reexamined. He talked to the examiner in a quiet, subdued voice and wrote his name on request. He made three errors on the Bender Motor Gestalt Test, yielding an age equivalent score of 8 years 6 months to 8 years 11 months, placing him in the twenty-fifth percentile for a chronologic age of 10 years, 11 months. On the Peabody Picture Vocabulary Test he received an I.Q. of 79, which corresponded to a percentile score of 9 and a mental age of eight years, four months.

Comment

Although therapy of the three cases presented has not yet been successfully concluded, the behavioral treatment intervention described in this report is currently regarded as a highly effective therapeutic modality.[18] Therefore, it is strongly recommended that children who are identified as being electively mute, or those for whom there is a high index of suspicion, be referred for psychologic evaluation and treatment.

Many case reports suggest the electively mute child is frequently of normal intelligence and intact neurologically.[3,19–21] The failing in many case reports is the absence of details regarding the neurologic or psychologic tests performed. Careful and detailed psychologic and neurologic examinations, as carried out in our patients, may uncover organic or cognitive deficits. Clearly, two of the three patients described in this report have associated organic factors which could have made them more susceptible to developing elective mutism.

The boy in Case 3 may have multiple lentigines syndrome with incomplete expression. This syndrome, first described by Gorlin, Anderson, and Blaw,[22] is inherited as an autosomal dominant with high penetrance and variable expressivity. In its complete form, it consists of multiple lentigines, EKG abnormalities, ocular hypertelorism, pulmonary stenosis, abnormalities of genitalia, retardation of growth, and deafness. Mental deficiency may also be an associated condition.[23,24] A family has been described in which several members with the multiple lentigines syndrome also had psychiatric disturbances.[25]

Traditionally, psychodynamic and/or learning factors have been considered important in the development of elective mutism. We are unable to draw any conclusion regarding the etiologic significance of the organic factors observed in two of our three cases. These may simply be associated findings, or it may be that some children are predisposed to the disorder by the additional stress created by the presence of organic factors. Like any child with a developmental disability, the electively mute child should have a complete evaluation that attempts to uncover all factors which may be contributory. Further research to gain a better understanding of the mechanisms, incidence, and long-term prognosis of elective mutism is also clearly indicated.

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Aneurysmal Cyst of the Rib

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Although aneurysmal bone cysts, in themselves, are rare, primary rib tumors are even more unusual.[1–4] The combination of an aneurysmal bone cyst appearing as a primary rib tumor is very rare. Only 27 previously documented cases are collected from the world literature (Table I).

Case report

A 43-year-old female secretary was admitted to St. Elizabeth's Hospital on June 25, 1978, for the excision of an asymptomatic tumor of the left sixth rib, discovered during a routine chest roentgenogram.

The patient, a nonsmoker, has always been in good health. Periodic chest x-ray film findings had been interpreted as normal, the last one taken on July 14, 1976. Aside from some allergic reactions to medications, the past history was unremarkable. The patient was a gravida 8, para 5, who had lost three children by early spontaneous abortions. One child incurred a hip infection in early infancy which had necessitated multiple operations. There has never been any question of an underlying congenital bone lesion.

A barium enema, gastrointestinal series, and a sigmoidoscopy performed prior to admission revealed nothing unusual. Physical examination disclosed no abnormalities. There was no tenderness over the left side of the posterior rib cage.

Routine laboratory work-up revealed nothing abnormal. The chest roentgenogram demonstrated an oval, expansile mass (8 × 5 cm) located along the axis of the left sixth rib, close to the posterior angle (Fig. 1). The cortex overlying this lesion was intact with a characteristic "eggshell" appearance. The cyst itself presented a "soap bubble" effect (Fig. 1).

A bone scan, performed by injecting 15 mCi Tc 99 diphosphonate intravenously, demonstrated a sharply demarcated area of uptake in the sixth left rib, at a site corresponding to the lesion seen on conventional roentgenograms.

Some observers, in retrospect, believed the roentgenogram taken on July 14, 1976, showed a slight irregularity of this rib at the site of the now evident cystic mass.

On June 27, 1978, the patient was explored through a standard left-side thoracotomy incision, where a cystic mass was found in the sixth rib, close to the posterior angle. Because the parietal pleura was abnormally adherent to the undersurface of the rib, a generous excisional biopsy specimen was taken of the margin of this adherent pleura. When frozen-section study failed to show tumor, an "en bloc" excision was undertaken; this included normal rib and periosteum at either end, the underlying adherent parietal pleura and endothoracic fascia, adjacent intercostal muscles and bundles, plus the overlying paravertebral muscles.

The patient had an uneventful postoperative course. A roentgenogram taken on the eighth postoperative day showed a normal postoperative status.

The gross specimen showed the tumor to be a soft, spongy, oval, expansile mass with an intact "eggshell" periosteum; it measured 8 × 5 cm (Fig. 2A). When sectioned, large and small pools of blood were found to be enclosed in fibro-osseous septae.

Microscopic examination revealed cystic spaces lined by flattened endothelial cells with large areas of fibrosis, pools of blood, and areas of loose myxoid tissue and reactive bone. In some foci, small multinucleated giant cells with small nuclei were noted (Fig. 2B). Focal microscopic erosion of the cortex was noted in one area. The parietal pleura did not show any invasion.

TABLE I. Reported Cases of Aneurysmal Cyst of Rib

Reference	No. of Cases
Lichtenstein,[5]	2
Bossart and Fitzpatrick,[6]	1
Bowles et al,[7]	2
Robinson et al,[8]	2
Slowick et al,[9]	1
Bridger,[10]	2
Tillman et al (includes work of Pascuzzi et al,[3]),[11]	3
Dabska and Buraczewski,[12]	1
Sandozi et al,[13]	1
Henley and Ricketts,[14]	1
Joseph and Fonkalsrud,[15]	1
Anjaria et al,[16]	1
Rutter et al,[17]	4
Ishinada et al,[18]	4
Hurvitz et al,[19]	1
TOTAL	27

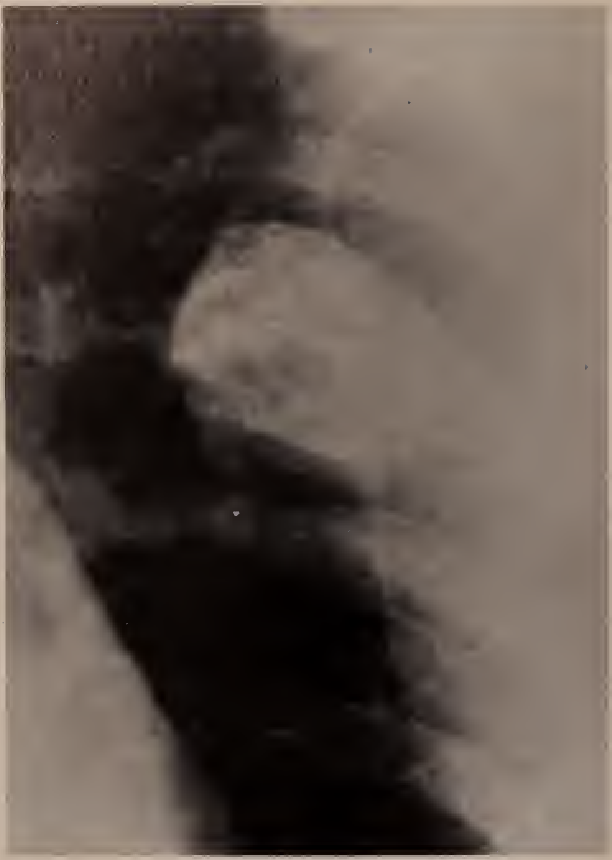

FIGURE 1. Preoperative roentgenogram demonstrating expansile cystic mass of the left sixth rib.

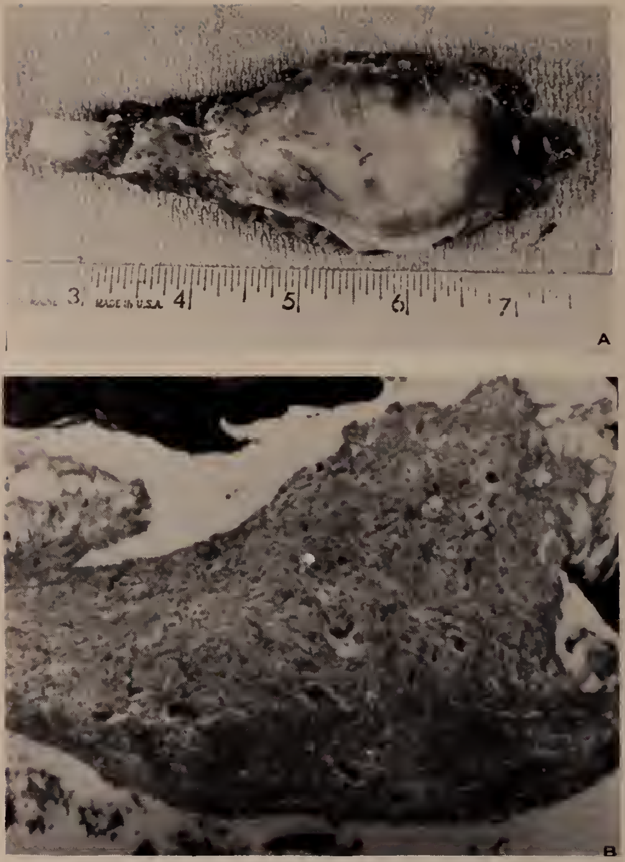

FIGURE 2. (A) Excised specimen showing parietal pleura adherent to undersurface of rib; marked vascularity of lesion is demonstrated. (B) Photomicrograph, demonstrating small giant cells among fibrous tissue (hematoxylin-eosin stain).

Comment

In 1897, Stephen Paget[20] collected 23 cases of primary rib tumors from the literature and added three of his own.

The rarity of primary rib tumors is further illustrated by the following representative series.

Hochberg[2] summarized all the primary rib tumors in the literature up to 1951. He collected 205 such cases, of which 106 (51.8%) were benign. Although a distinct entity termed aneurysmal bone cyst had been described by Jaffe and Lichtenstein[5] in 1942, no such lesion was mentioned in this series. However, eight benign vascular tumors were described, and it is quite possible that some of these tumors were really aneurysmal bone cysts.

Pascuzzi[3] reported 126 primary tumors of the ribs seen at the Mayo Clinic from 1904 to 1954; of these, 40 were benign and only one was an aneurysmal bone cyst.

Representative series of aneurysmal cysts of the bone showed that primary aneurysmal cysts of the rib constitute approximately 3.25% of all the aneurysmal bone cysts reported (Table II).

Table I summarizes the world literature on the 27 reported cases of aneurysmal cysts of the rib. The earliest lesion was in a patient who had been operated on at the age of five months.[12]

Although there is a general agreement that an aneurysmal bone cyst is not a true neoplasm, there is no unanimity of opinion regarding its etiology. Trauma and subsequent hemorrhage into a previously existing lesion and an abnormality in the local intraosseous hemodynamics have all been postulated as possible causes.

Although not a true neoplasm, local extension can cause paralysis,[21] and incomplete removal may result in persistence and growth of the lesion.[17]

The location of the tumor in this particular patient made it ideal for an "en bloc" excision. The vascularity of the tumor was easily controlled by ligating the intercostal blood supply from the aorta and the internal mammary artery prior to definitive excision.

In discussing the surgical treatment of a rib tumor, it is interesting to read what Stephen Paget wrote in 1897[20]:

> The dangers that beset operations for tumors of the rib and sternum are many and grave, but the results of the last few years are, on the whole, very encouraging.

TABLE II. Representative Series of Aneurysmal Bone Cysts

Reference	Total No. Aneurysmal Cysts	No. Aneurysmal Cysts in Rib
Lichtenstein (personal series) 1951,[5]	50	2
Bristol Tumor Registry,[21]	12	0
Albany Medical College 1949-1967,[9]	13	1
Mayo Clinic 1904-1967,[11]	95	3
Institute of Oncology, Warsaw 1954-1968,[12]	13	1
Memorial Hospital 1930-1970,[22]	66	1
Netherland Committee on Bone Tumors 1941-1974,[17]	105	4
Bone Tumor Registry of Japanese Orthopedic Association 1964-1975[18]	107	4
TOTAL	461	16((3.25%)

> It is the cases that have been "watched" for months or years that darken the results gained by surgery.

In discussing the operative technique, he says:

> We see first the need for a very free exposure of the growth, and this is best secured by a large flap, with convexity downward, of all the soft parts over it. Next, unless the growth be small, the surgeon may be sure he will open the thin, tense, adherent pleura, however careful he may be to avoid it; and he must have fixed in his mind before the operation, the exact method by which he will deal with this dangerous trouble. He must further avoid any risk of hemorrhage after the operation in the pleural cavity. He must be prepared to deal with an adherent or diseased portion of lung, the pericardium, or the diaphragm.

The principles of adequate exposure, control of hemorrhage, and the total removal of the tumor of the rib are as applicable today as they were in 1897.

Summary

This report describes an asymptomatic aneurysmal cyst of the rib in a 43-year-old woman treated by "en bloc" excision. The rib is the primary site for approximately 3.2% of all aneurysmal bone cysts; 27 other cases of primary aneurysmal cysts of the rib have been collected from the world literature.

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Low thiazide dosage means reduced risk of hypokalemia.

When thiazides are prescribed in doses greater than 50 mg/day, the potential for hypokalemia increases substantially. What's more, the greater the fall in serum K^+*, the greater the risk of hypokalemia-induced PVCs.*[3,4]

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BRIEF SUMMARY
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No 474—Each INDERIDE®-40/25 tablet contains	
Propranolol hydrochloride (INDERAL®)	40 mg
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WARNING: This fixed combination drug is not indicated for initial therapy of hypertension Hypertension requires therapy titrated to the individual patient If the fixed combination represents the dosage so determined, its use may be more convenient in patient management The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant

DESCRIPTION: INDERIDE combines two antihypertensive agents. INDERAL (propranolol hydrochloride), a beta-adrenergic blocking agent, and hydrochlorothiazide, a thiazide diuretic-antihypertensive

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in: 1) bronchial asthma, 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE. Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy. Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, e *g*., isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers Thiazides appear in breast milk If the use of the drug is deemed essential the patient should stop nursing

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH

Interference with adequate oral electrolyte intake will also contribute to hypokalemia Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (*e.g.*, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather, appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular*: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory bronchospasm.

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

Hydrochlorothiazide: *Gastrointestinal*: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia

Cardiovascular. orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: purpura, photosensitivity, rash, urticaria. necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions

Other hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn

DOSAGE AND ADMINISTRATION: The dosage must be determined by individual titration (see boxed warning).

Hydrochlorothiazide is usually given at a dose of 50 to 100 mg per day The initial dose of propranolol is 40 mg twice daily and it may be increased gradually until optimum blood pressure control is achieved. The usual effective dose is 160 to 480 mg per day

One to two INDERIDE tablets twice daily can be used to administer up to 320 mg of propranolol and 100 mg of hydrochlorothiazide. For doses of propranolol greater than 320 mg, the combination products are not appropriate because their use would lead to an excessive dose of the thiazide component.

When necessary, another antihypertensive agent may be added gradually beginning with 50 percent of the usual recommended starting dose to avoid an excessive fall in blood pressure

OVERDOSAGE OR EXAGGERATED RESPONSE: The propranolol hydrochloride (INDERAL) component may cause bradycardia, cardiac failure, hypotension, or bronchospasm.

The hydrochlorothiazide component can be expected to cause diuresis. Lethargy of varying degree may appear and may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function, and in the absence of significant serum electrolyte changes or dehydration. The mechanism of central nervous system depression with thiazide overdosage is unknown. Gastrointestinal irritation and hypermotility can occur, temporary elevation of BUN has been reported, and serum electrolyte changes could occur, especially in patients with impairment of renal function.

TREATMENT: The following measures should be employed GENERAL—If ingestion is, or may have been, recent, evacuate gastric contents taking care to prevent pulmonary aspiration. BRADYCARDIA—Administer atropine (0 25 to 1 0 mg) If there is no response to vagal blockade, administer isoproterenol cautiously. CARDIAC FAILURE—Digitalization and diuretics. HYPOTENSION—Vasopressors, e *g* , levarterenol or epinephrine. BRONCHOSPASM—Administer isoproterenol and aminophylline. STUPOR OR COMA—Administer supportive therapy as clinically warranted. GASTROINTESTINAL EFFECTS—Though usually of short duration, these may require symptomatic treatment. ABNORMALITIES IN BUN AND/OR SERUM ELECTROLYTES—Monitor serum electrolyte levels and renal function, institute supportive measures as required individually to maintain hydration, electrolyte balance, respiration, and cardiovascular-renal function

HOW SUPPLIED: *No. 474*—Each INDERIDE®-40/25 tablet contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000 Also in unit dose package of 100.

No. 476—Each INDERIDE®-80/25 tablet contains 80 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000. Also in unit dose package of 100

References: 1. Veterans Administration Cooperative Study Group on Antihypertensive Agents. J A M.A 237 2303 (May 23) 1977. 2 Bravo, E L , Tarazi, R.C , and Dustan, H.P N Engl J Med 292 66 (Jan 9) 1975 3 Hollifield, J W , and Slaton, P.E Acta Med Scand. [Suppl] 647 67, 1981 4 Holland, O B , Nixon, J V , and Kuhnert, L Am. J Med 70·762 (Apr) 1981.

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Pericardial Constriction Following Myocardial Revascularization

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Coronary bypass surgery has become a common operation.[1] Among the cardiovascular complications of this procedure, pericardial constriction has been reported in very few instances.[2–4] In this report, we present a case of pericardial constriction following myocardial revascularization in a patient in whom the illness was complicated by concomitant occurrence of pulmonary embolism.

Case report

The patient is a 52-year-old white male whose routine electrocardiogram in June, 1977, showed frequent premature ventricular contractions. The patient denied any history of cardiovascular symptoms. Positive cardiovascular risk factors included smoking two packs of cigarettes a day for many years, hypertension for one year, and a strong family history of coronary artery disease. The patient denied any history of diabetes or hyperlipidemia. Findings on his clinical examination were unremarkable. The patient underwent exercise testing which revealed 3 mm. of S-T segment displacement at a low level of exercise (stage 11 Bruce protocol). The patient was asymptomatic throughout the test. Because of concern about possible left main coronary stenosis, the patient subsequently was studied with coronary angiography which demonstrated 95 percent stenosis of the left main coronary artery with additional triple vessel coronary artery disease. The patient underwent myocardial revascularization on February 7, 1978, with aortocoronary venous bypass grafting to the left anterior descending branch, its first diagonal branch, marginal branch of the circumflex, and posterior descending branch of the right coronary artery. His postoperative course was complicated by slight fever and an asymptomatic friction rub which resolved within two weeks without treatment. The patient remained asymptomatic and did well for 17 months. At that time he complained of vague gastrointestinal distress unrelated to exertion or meals. An electrocardiogram obtained by his physician showed generalized T-wave abnormalities. The patient was begun on propranolol hydrochloride (Inderal) on August 6, 1979. Following the first dose (40 mg.), the patient felt dizzy and collapsed without loss of consciousness. When seen in the emergency department, he was noted to have a systolic blood pressure of 60 mm. Hg. He showed improvement when treated with volume expansion and dopamine. Subsequent evaluation did not show any evidence for myocardial infarction. The patient was discharged home on no medication on August 11, 1979. Six weeks later he was readmitted with a history of leg pain and progressive shortness of breath following a long airplane trip. The patient denied chest pain, palpitations, or any syncopal episodes.

Findings on physical examination were: pulse 120 beats per minute and regular; blood pressure 120/80 mm. Hg. A paradoxical pulse of 14 was noted at that time. Findings on his cardiovascular examination were significant for markedly elevated jugular venous pressure. His heart sounds were normal without any S-3 gallop, murmurs, pericardial or pleural rub. There were signs of bilateral pleural effusion. Findings on his abdominal examination did not reveal hepatosplenomegaly. He had bilateral calf tenderness and minimal ankle edema. The electrocardiogram showed normal sinus rhythm interrupted by a brief episode of atrial fibrillation and nonspecific ST-T wave abnormalities. Decreased voltage was noted on review of all tracings, in comparison with his electrocardiogram taken prior to surgery. Findings on chest x-ray film confirmed bilateral pleural effusions. A phlebogram showed positive findings with extensive deep-vein thrombosis in the calf extending into the deep femoral veins. Findings on a ventilation perfusion lung scan were highly compatible with multiple pulmonary emboli. Arterial sampling on room air revealed pH — 7.39; oxygen pressure was 63 and carbon dioxide pressure was 30. Results of other laboratory data were unremarkable. An echocardiogram did not show any evidence of pericardial effusion. The patient was treated with digitalis, diuretics, and anticoagulation therapy. A week later, findings on repeat chest x-ray films showed complete resolution of the pleural effusions, and two weeks later findings on repeat phlebograms were normal. In spite of this improvement, relative hypotension and persistent elevated jugular venous pressure were noted. There

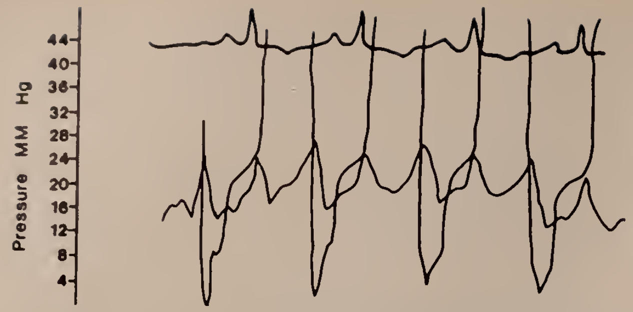

FIGURE 1. Left ventricle and pulmonary capillary wedge pressure tracings superimposed exhibiting equalization of left ventricle end diastolic and pulmonary capillary wedge pressures.

was a persistent paradoxical pulse of 12 to 14 mm. Hg. The possibility of constrictive pericarditis was first considered. The patient underwent repeat cardiac catheterization on November 6, 1979. Equalization of the diastolic pressure in pulmonary artery and pulmonary capillary wedge was found (Fig. 1). Simultaneous right and left ventricular pressures revealed a pattern compatible with constrictive pericarditis (Fig. 2). The patient had patent saphenous vein bypass grafts to the marginal branch of the circumflex, posterior descending branch of the right coronary artery, and to the left anterior descending branch of the left coronary artery. Opacification of the diagonal branch was not seen on injection of the graft to the left anterior descending branch. Pericardiectomy was subsequently carried out. At this time all chest x-ray films were reviewed, and there was no significant change in heart size on any x-ray films from the time of his original coronary angiogram, until the time of his repeat cardiac catheterization and diagnosis of constrictive pericarditis. Operative findings were significant for a very thickened pericardium, "cartilagenous" anteriorly. Following pericardiectomy, the ventricular contractions were vigorous. Bacteriologic and viral studies were not performed. The histologic study of the specimen revealed dense nodular deposits of mature collagen fibers, small sclerotic blood vessels surrounded by a scattering of histiocytes, some pigmented, and extravasated lysed red blood cells. On the surface of the pericardial tissue, aggregates of mature lymphocytes were noted. No granulomata, calcification, necrosis, or acute inflammation were noted. There was no evidence of neoplasia, or cholesterol deposit. The histopathologic diagnosis was chronically inflamed fibrovascular (pericardial) tissue. His postoperative course was entirely benign. A review of the electrocardiograms in retrospect revealed a slight decrease in voltage of the ventricular complex, approximately 10 percent, on August 6, 1979, and November 9, 1979, with an increase in ventricular complex voltage on February 12, 1980, all felt to be of questionable significance. The patient was discharged on anticoagulation and digoxin, with normal vital signs.

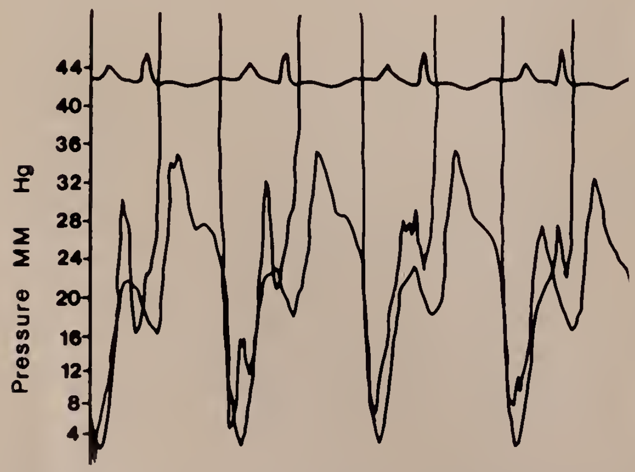

FIGURE 2. Right and left ventricle pressure tracings superimposed showing typical "square root" configuration of constrictive pericarditis.

Comment

Aortocoronary bypass grafting completed its first decade in 1977.[1] The annual number of coronary bypass operations is now approaching 100,000. It has been estimated that facilities exist for 150,000 of such operations annually in the United States. Follow-up of patients undergoing coronary revascularization will, therefore, form an increasing part of clinical practice. Although this procedure has been generally successful, a variety of cardiovascular complications have been reported during the follow-up of such patients. The incidence of these complications is quite variable. While pericarditis immediately or soon after coronary bypass surgery is frequent, specific treatment is usually not required. The incidence of postcardiotomy syndrome may be as high as 30 percent.[5,6] Although this condition is usually benign and self-limited, it may lead to pericardial tamponade. Pericardial tamponade is, fortunately, less common but, if undiagnosed, may be associated with fatal outcome in the immediate postoperative period. Douglas et al.[8] reported a 2.6 percent incidence of cardiac tamponade, 6 to 31 days following open heart surgery. The early recognition of this syndrome is, therefore, essential for appropriate management of these patients. Finally, pericardial constriction has been reported following coronary artery bypass surgery. The true incidence of this complication is unknown.

Pericardial constriction may originate as pericardial inflammation with exudation of fluid into the pericardial sac. After the effusion is reabsorbed, both visceral and parietal layers may fuse and thicken causing pericardial constriction. In most cases in recent years, no underlying etiology was evident, clinically or histologically.[7] The etiology of constrictive pericarditis following myocardial revascularization is also poorly understood. In some previously reported cases the possibility of exhaustion of the fibrinolytic mechanisms was entertained.[2] In another recently reported series, the pericardium had been irrigated with povidone-iodine (Betadine) at the time of surgery. It was felt that this could have been an underlying mechanism for constriction.[4] Although pericardial effusions associated with postcardiotomy syndrome mostly resolve without sequelae, it is probable that some will organize and cause thickening of the pericardium with latent constriction.

The most common symptom of pericardial constriction is dyspnea. The hallmark of constrictive pericarditis found on physical examination is a raised jugular venous pressure despite adequate diuresis.[9] Pericardial constriction in the setting of coronary artery bypass surgery is a diagnostic challenge. The signs of circulatory congestion may be secondary to heart failure on the right side,[10] right ventricular infarction,[11] pericardial tamponade,[12] constrictive pericarditis,[13] or pulmonary emboli. Hemodynamic measurements may fail to resolve some of the diagnostic possibilities mentioned above. The observation of equalization of pressure is not diagnostic of constrictive pericarditis as it can be seen in right ventricular infarction, pericardial tamponade, and severe heart failure on the right side.[11] In our patient, the diagnosis of constrictive pericarditis was made under confusing clinical circumstances. The patient had signs of pleural effusion, heart failure on the right side, and deep vein thrombosis. Findings on the phlebogram, chest x-ray film, and lung scan confirmed the clinical impression of pulmonary embolism. In spite of the dramatic response to anticoagulation, the patient continued to have a persistent elevation of jugular venous pressure. The absence of findings of pericardial effusion on echocardiogram, and the lack of evidence for right ventricular infarction, increased the possibility of pericardial constriction. The tracings in Figures 1 and 2 were compatible with pericardial constriction. The diagnosis was confirmed at the time of surgery and a successful pericardiectomy was accomplished. If the cardiopulmonary signs were assumed to be due to recurrent pulmonary emboli or refractory myocardial failure, appropriate therapy would have been delayed or neglected. It is also important to realize that localized pericardial constriction can occur without increased jugular venous pressure. Occult localized pericardial constriction may account for otherwise unexplained symptoms of fatigue, dyspnea, and chest pain in some patients, following cardiac surgery. Patients with a postcardiotomy syndrome may be particularly liable to develop constrictive pericarditis.[14] The diagnosis may be confirmed by rapid volume expansion in a carefully selected group of patients. However, diagnostic rapid volume expansion and surgical intervention in this group must be carefully considered and individualized.[14]

Conclusion

This case illustrates that when signs of circulatory congestion occur in patients who have had myocardial revascularization, it is essential that the physician have a high index of suspicion of pericardial constriction. Too much reliance should not be placed on seeking the classical signs of constriction. The heart does not have to be small, and more important, there can be significant constriction in the absence of paradoxical pulse or raised jugular venous pressure.

Summary

Pericardial constriction following myocardial revascularization is a rare occurrence. This condition may be indistinguishable from circulatory congestion on the basis of left or right ventricular infarction, or pericardial effusion. The diagnosis of pericardial constriction may be even more difficult when complicated by a concurrent pulmonary embolus. This case is presented to emphasizse consideration of this potentially fatal complication.

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The writing is on the wall — or off it, as the case may be

The patient was being treated for a painful right ear, and the physician prescribed Lidosporin, a combination antibiotic and local anesthetic.

It should have been a simple remedy, wrote associate editor Jean Shaw in the January 1 issue of *American Medical News*. But in writing the prescription, the physician left out the period after the "R" — the abbreviation for right — and the person administering the medication read the directions as "rear."

As it happened, the patient received three drops of the medication in his rectum three times before the error was discovered.

"Obviously it made no sense" — why should someone be given rectal medicine for an earache? But you'll find that in case after case, patients, nurses, pharmacists, and other physicians do not question prescriptions or double-check them with the physician," says Michael Cohen, as assistant clinical professor at Temple University School of Pharmacy in Philadelphia.

Cohen and his colleague Neil Davis, who is a professor of pharmacy at Temple, are well acquainted with one of the unheralded hazards of medicine — medication errors.

In one bizarre case they learned about, doing research for a book they co-authored called "Medication Errors: Causes and Prevention," a nurse was relieving the regular medication nurse on a ward for tuberculosis patients. All went fine until she asked a patient, "Are you Mr. Thomas?" "Wright," he answered, and Mr. Wright received Mr. Thomas' medication.

In another incident, a prescription for a hormone medication called Florinef was deciphered as Fiorinal, a headache medication. The patient became ill due to the mix-up and had to be hospitalized.

In an interview with *American Medical News*, Davis pointed out that the Health Care Financing Administration did a study showing that the average medication error rate in hospitals runs at approximately 12 percent.

That translates to mean as many as 131,400 medication errors per year in a hospital with a daily census of 300 patients, he said.

"Even if you take a conservative estimate of an error rate of one percent, that would mean 10,950 medication errors each year, or 30 errors each day," Davis said.

"At best, you'll end up with a physician who can't figure out why the treatment isn't working," Cohen said.

Many medication errors are caught in time, and no serious damage is done. But some aren't — and the consequences can be fatal.

Health professionals and administrators are reluctant to admit that the medication error problem is as serious as it is, according to the two pharmacy professors. "It's one of the great hidden problems in medicine today — and none of us can afford to hide it any longer," Cohen said.

At the top of the list as the most frequent cause of medication error is a familiar culprit — physician's handwriting.

"It seems so trivial — witness the familiar jokes about illegible handwriting — and yet it's anything but a joke," Cohen said.

For example, 60 units of insulin were given to a patient when the "U" (for units) in the medication order for "6U regular insulin" looked like a zero. The patient needed immediate treatment to prevent possible brain damage from the overdose.

One of the best moves a hospital can make to combat this, Cohen said, is by instituting a unit dose system which builds safeguards into the entire medication process.

In this system the pharmacist double checks the drug and dosage prescribed by a physician against a patient profile, and the medication nurse double checks what the pharmacist prepares against the copy of the original order.

"It works much better than the outmoded system," Cohen said, "where a nurse goes to the stock floor and dispenses the medication to the patient, and the double-checking goes on *after* a mistake has occurred."

Davis and Cohen also say that it is in everyone's best interest if the patient knows the names and the strengths of the drugs he or she is taking.

"There have been cases where the patient is the one who caught the mistake," Cohen said.

Presumably, that is, before the mistake caught the patient.

Sickle Cell Trait with Splenic Infarcts

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Splenic infarcts occur frequently in patients with sickle cell anemia in association with vaso-occlusive crises. There are rare reports of individuals with sickle cell trait who, when exposed to high altitudes, developed splenic infarcts.[1–3] We present the case of a 32-year-old black woman with documented sickle cell trait who, without exposure to a low atmospheric pressure environment, developed symptomatic splenic infarcts.

Case report

A 32-year-old black woman known to have sickle cell trait was hospitalized because of sudden onset of epigastric, left flank, and left-sided pleuritic pain of three days duration. The pain began in the epigastrium, radiated to the back and left upper quadrant, and was initially relieved by food and antacids. The pain was of a knife-like nature; it lasted several hours and suddenly ceased. A similar episode had occurred one month earlier. The patient had not recently traveled abroad and was not taking any medicines, such as oral contraceptives. The patient denied cough, fever, hemoptysis, hematemesis, recent trauma, or drug abuse. One year earlier, an ovarian cyst had been removed from the patient.

The patient was well-developed and well-nourished with obvious abdominal discomfort. The recumbent blood pressure and pulse were 130/60 mm. Hg and 92 beats per minute, and in a supine position 120/50 mm. Hg and 92 beats per minute. The temperature was 100°F., and respiratory rate 24 per minute. The conjunctivae were pale and there was no scleral icterus. There were decreased breath sounds at the left lung base, and, on percussion, the left hemidiaphragm was noted to be elevated to the seventh intercostal space. A 2/6 systolic ejection murmur was heard at the apex of the heart. The abdomen was soft with some left upper quadrant guarding. There was no obvious splenomegaly. No abdominal masses were palpated and there was no rebound tenderness. Bowel sounds were present but decreased. Results of rectal examination and stool guaiac test were normal.

The white blood-cell count was 7,000 per deciliter with 84 percent neutrophils, 14 percent lymphocytes, and 2 percent monocytes. Hemoglobin was 5.5 Gm. per deciliter, and hematocrit 19.5. Serum potassium, sodium, chloride, glucose, carbon dioxide, amylase, glutamic oxalacetic transaminase, uric acid, alkaline phosphatase, calcium, inorganic phosphorus, creatinine, cholesterol, bilirubin, total protein, albumin, lactic dehydrogenase, and haptoglobin levels were all within normal limits. Serum iron and iron-binding capacity were 25 and 600 micrograms per deciliter, respectively. The chest roentgenogram indicated that the heart was of normal size and there was no pulmonary abnormality, but the left hemidiaphragm was elevated. Abdominal prone and upright films showed normal anatomy. An abdominal ultrasound study revealed an enlarged spleen with a central 2- to 3-cm. sonolucent area. Liver and spleen scan did not indicate any abnormality. The patient had 64.6 percent hemoglobin A, 32 percent hemoglobin S (confirmed by solubility testing), 1.5 percent fetal hemoglobin, and 1.9 percent hemoglobin A_2.

The patient was given two units of packed red blood cells. The left upper quadrant and left-sided pleuritic chest pain subsided for two days and then abruptly returned with great intensity, associated with orthostatic hypotension. A ruptured splenic hematoma was considered a likely diagnosis. At exploratory laparotomy, approximately 150 cc. of blood was found in the abdomen. In addition, yellow nodules were noted on the spleen and a splenectomy was performed. The patient made an uneventful recovery. The murmur disappeared and the hematocrit stabilized at 44. The patient was subsequently given pneumococcal vaccine and is currently receiving penicillin prophylaxis.

The spleen weighed 300 Gm. with dimensions of 14 by 11 by 14 cm. The external surface showed patchy areas of hemorrhage with two yellowish nodular areas 0.8 cm. in greatest diameter. There were multiple areas of well-defined infarctions 2 to 3 cm. in diameter on the surface and on cut section. Histologically, there were areas of infarction surrounded by normal congested spleen. Sludged sickle cells were noted in some blood vessels. A hematoidin crystal was also seen.

Comment

Splenic infarction is a common occurrence in sickle cell disease but extremely rare in sickle cell trait. In 1954 Conn[1] stated that patients with sickle trait can develop splenic infarcts when exposed to high altitudes. Since then, two cases have been reported of individuals with sickle cell trait who were not exposed to high altitude yet developed spontaneous splenic infarcts.[2,4] Our patient with 32 percent sickle hemoglobin also developed spontaneous splenic infarcts.

Considering the fact that there are approximately two million individuals in the United States with sickle cell trait,[5] the rarity of spontaneous splenic infarction deserves comment. It is possible that splenic infarction in sickle cell trait occurs purely by chance. Alternatively, splenic infarction in sickle cell trait may be more common than previously thought and perhaps underreported. Is there a level of sickle hemoglobin above which complications such as spontaneous infarction of the spleen occur? It seems unlikely that hemoglobin S levels make a difference since in uncomplicated sickle cell trait they closely cluster around 40 percent.

What associated conditions, if any, might predispose an individual with sickle cell trait to splenic infarction? Our patient also had iron deficiency. Iron-deficient erythrocytes are less filterable than normal red blood cells. Could this cellular rigidity combined with hemoglobin S predispose to vessel occlusion in the spleen? The relationship, if any, between the unusual association of sickle cell trait and spontaneous splenic infarcts requires further study.

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Food for thought, literally, comes to medical school

"Nutrition is too often kind of an orphan in medical schools," says Joseph Barboriak, MD, director of the Interdisciplinary Nutrition Group at the Medical College of Wisconsin.

A 1978 American Medical Association survey supports his claim: Of 124 medical schools surveyed, 75% did not have a required nutrition course in their curriculums.

To help combat this lack of emphasis on nutrition topics, a team of 25 physicians and scientists — all nutrition experts — is readying for an educational mission to nearly two dozen medical schools this year, according to the January 1 issue of *American Medical News*.

A typical visit by the team, which is sponsored by the National Dairy Council, lasts two days and includes lectures, seminars, and clinical rounds.

Pseudo-tumor of Penis

Buschke-Löwenstein tumor

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Most patients with penile growth postpone consulting the physician until the disease reaches an advanced stage. Since, in some instances, malignant lesions resemble benign conditions, and vice versa, complete evaluation—history and physical examination, and laboratory studies with serology—should be included. Biopsies are imperative to introduce the treatment of choice. Besides common dermatologic conditions of the penis, less common but more serious are the malignant lesions: verrucous basal- and squamous-cell (most frequent) carcinomas, Bowen's disease, erythroplasia of Queyrat, Buschke-Löwenstein (pseudo) tumor, and metastatic carcinomas.

Case report

Figure 1 shows the lesion in a 58-year-old American-born, single male who had had a growing penile mass for more than seven years, causing discomfort and (lately) difficulty in urinating. The past medical history and physical examination disclosed nothing remarkable except that at the uncircumcised penis a huge fungating mass occupied almost the whole glans, partially covering the external meatal orifice. Rectal examination findings were negative; no regional lymphadenopathy was noted. The patient's evaluation was within normal range; VDRL was nonreactive. The biopsy showed condyloma acuminata.

Findings

On March 26, 1981, a dorsal slit of prepuce with electroexcision and fulguration was done under local anesthesia. The pathology report disclosed the following:

Gross pathology. The specimen consists of somewhat papillomatous, grayish white mucosal tissue masses measuring an aggregate of 5.5 by 5 by 3 cm. on section; the external surface shows papillomatous projection and there is, in some areas, induration, congestion, and edema of the tissue.

Microscopic pathology. The section showed stratified squamous epithelia exhibiting considerable acanthosis and parakeratosis (Fig. 2). It overlays a fibrocollagenous vascular stroma infiltrated with chronic inflammatory cells.

Diagnosis. Condyloma acuminata, glans penis and prepuce.

The patient returned in July, 1981, with balanitis and some recurrent condyloma (mostly at the coronal area). On July 14, circumcision, electroexcision, and fulguration were performed. This time the pathology report was essentially the same.

Comment

I believe that we are dealing with a Buschke-Löwenstein type (pseudo) tumor. In 1925 Buschke and Löwenstein described tumor-like condyloma acuminata which deeply penetrate the surrounding tissues, aggressively growing, and destructive in nature. These lesions are nonresponsive to podophyllum resin application and are nonradio-sensitive. They were distinguishable from cancer by the absence of any metastases.

For this large fungating mass the predilected sites are the glans penis and the inner surface of the prepuce; when these become phimotic, the lesion may be obscured. After conservative surgery the patient must be followed closely and, if necessary, further intervention, by means of partial penectomy, may be required. Still controversial is the extent and the timing of the surgery. Fortunately these lesions are rare and there is always the possibility that new

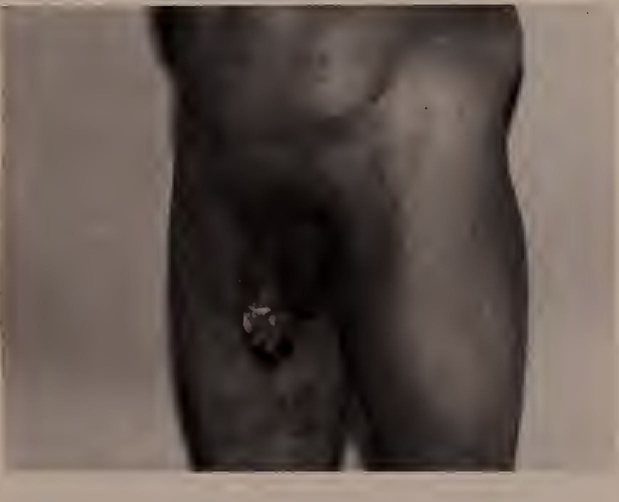

FIGURE 1. At uncircumcised penis, huge fungating mass occupies almost whole glans, partially covering external meatal orifice.

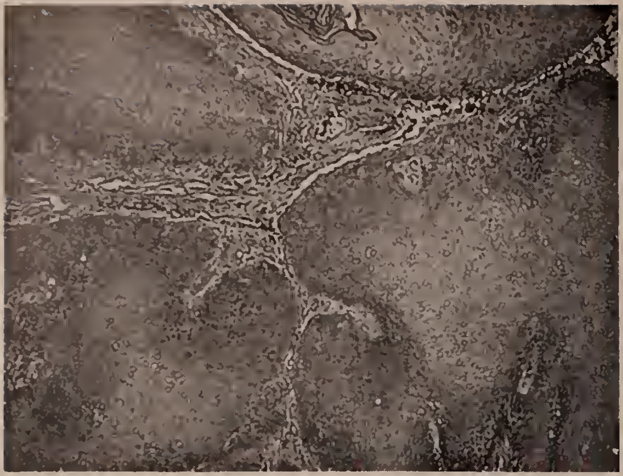

FIGURE 2. Section shows stratified squamous epithelia exhibiting considerable acanthosis and parakeratosis (hematoxylin-eosin stain, original magnification X 405).

discoveries in therapy will be available in the future.

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Acknowledgment. The author wishes to acknowledge the pathology studies of Frank Zizza, M.D., Director, Pathology, Medical Arts Center Hospital, New York City.

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Former "pill" users found to experience delay in conception

Women who stop taking the "pill" and who plan to become pregnant soon thereafter should be aware that their ability to conceive may be delayed, according to an article in this week's *Journal of the American Medical Association.*

Kenneth J. Ryan, MD, chairman of the department of obstetrics and gynecology at Harvard Medical School in Boston, and his colleagues found in their analysis of interview data from 3,214 married women that former "pill" users had a lower percentage of conceptions for more than a year after discontinuing the "pill" than did women who discontinued other forms of birth control.

The interval between discontinuing a birth control method and the occurrence of conception was 13 months or longer for nearly 25 percent of the former "pill" users. Only 10.6% of former users of other birth control methods experienced a similar delay.

The monthly percentage of conceptions for the first three months after cessation of contraception was found to be considerably lower for former "pill" users than for users of any other contraceptive method.

From four to ten months, according to the authors, this difference persisted, but it was less dramatic.

It has been accepted generally, the authors said, that couples could be considered for an infertility evaluation if they had tried unsuccessfully to conceive for at least 12 months after stopping all birth control methods. In view of the findings of this study, they suggest that an acceptable interval for former "pill" users might be at least 15 months.

Bronchial Atresia with Mucus Impaction

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Bronchial atresia is a rare congenital anomaly in which a lobar or segmental bronchus lacks a proximal communication. We are reporting a case of segmental bronchial atresia with mucus impaction in an asymptomatic male adult.

Case report

A 43-year-old male was admitted to the Buffalo General Hospital for rhinoplasty. He had experienced difficulty in breathing following a fractured nose five years earlier. He had no pulmonary symptoms. He had stopped smoking for the last five years, but prior to that had smoked three to four packs a day for 20 years. He had no past history of chest disease. Findings on his physical examination were normal. There were no abnormal chest signs. Findings on a chest radiograph showed an irregular branched, homogeneous density in the left base with its long axis pointing towards the hilum (Fig. 1). This was confirmed by linear tomography (Fig. 2). A chest radiograph done about 10 years earlier in California was not available for comparison and findings were apparently normal. Pulmonary arteriography ruled out the possibility of arteriovenous malformation and pulmonary varix., and thoracic aortography ruled out pulmonary sequestration. Findings on bronchoscopy were entirely normal. Computerized tomography scan of the thorax (Delta 2010 2 sec. scanner) showed a lobulated mass in the posterior basal segment of the left lower lobe pointing toward the hilum and surrounded by emphysematous lung (Fig. 3). The mass demonstrated no enhancement following iodinated contrast injection. Although inspiratory and expiratory chest radiographs did not show any evidence of air trapping in the left base, a ventilation scan with 133 xenon gas showed decreased ventilation in this region with marked retention during the washout phase. A ^{99m}Tc perfusion scan showed diminished perfusion in the posterior basal segment. Patchy, decreased perfusion was also noted at the right base. Bronchography showed a normal left lower lobe bronchus. The bronchus to the posterior basal segment was not visualized (Fig. 4). The rest of the basal-segment bronchi appeared normal and were not displaced.

The patient underwent left lower lobectomy. The resected lobe was markedly emphysematous except the superior segment which was slightly atelectatic. An irregular globular cystic mass was palpated in the posterior basal segment. On sectioning the lung, the posterior basal segment was devoid of anthracotic pigment (Fig. 5). In the middle of the posterior basal segment, a large dense cyst filled with thick tenacious white mucus with finger-like blunt projections at the periphery measuring 7.0 × 4.0 × 4.5 cm. was identified (Fig. 6). Histologic examination revealed a cyst wall lined by a single layer of ciliated cuboidal and flattened epithelium with scant number of goblet cells. Careful examination failed to reveal any communication between the mucus-filled cyst and the bronchus.

Comment

Bronchial atresia is a rare anomaly with only 49 cases reported in the English literature. Meng et al,[1] in a review in 1978, found 34 cases and added 2 of their own. There are other reports by Griscom et al,[2] Lemire, Trepanier and Hebert,[3] Oh et al,[4] Schuster et al,[5] and Ohsaki et al.[6] Recently, Cohen, Solomon and Alfidi,[7] added two more cases describing the value of computerized tomography. Of these 50 cases (including the present report) 31 have been male and 19 female. The age distribution has varied from newborn to the present patient who is the oldest at 43 years. The most affected segment is the left upper lobe with 30 reported cases. There have been nine cases involving right upper lobe, four each in the right and left lower lobes, and three in the right middle lobe.

The cause of bronchial atresia is unknown but is widely accepted as congenital. It is possibly due to vascular insult occurring after the 15th week of intrauterine life when bronchial ramification is completed. The vascular insult apparently causes obliteration of the segmental or lobar bronchus with normal lung developing distally.

The bronchi distal to the atresia have normal mucosal lining so that they continue to secrete mucus

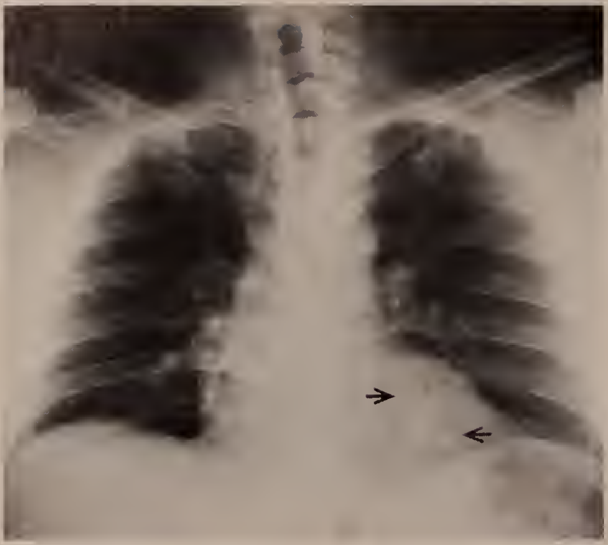

FIGURE 1. Posteroanterior view shows irregular branched density behind heart (arrows).

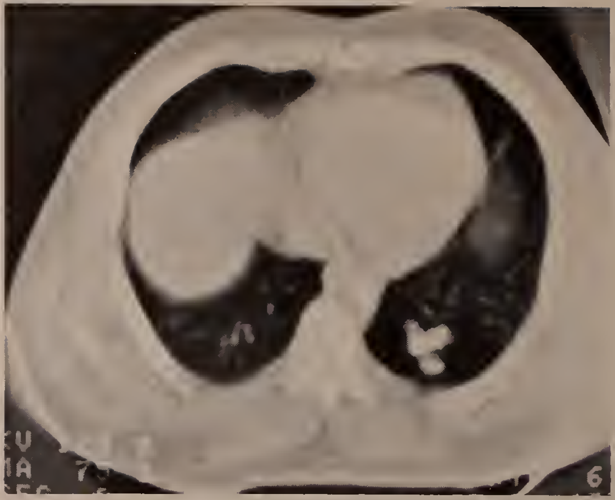

FIGURE 3. Computerized tomography scan shows V-shaped lobulated mass pointed towards hilum surrounded by lung with low density.

from goblet cells and submucosal glands. This mucus, which is normally removed by ciliary action, collects and progressively dilates the distal bronchus. The degree of cystic dilatation depends upon the rate of mucus secretion and the amount and organization of cartilage. However, the mucus collection has been demonstrated as early as the sixth day of life in one case.[4] It is this mucus impaction or mucocele that gives rise to the mass effect on the chest radiograph.

The clinical presentation of bronchial atresia is variable In Meng et al[1] review, 71 percent of patients were asymptomatic, and the rest had respiratory infection, cough, or shortness of breath. Findings on physical examination showed that 60 percent of patients had decreased breath sounds. In this series the median age was 18 years. Schuster et al[5] reported progressive increase in symptoms secondary to pulmonary infection and compression of pulmonary tissue by hyperaerated lung. In newborns respiratory distress may be evident.

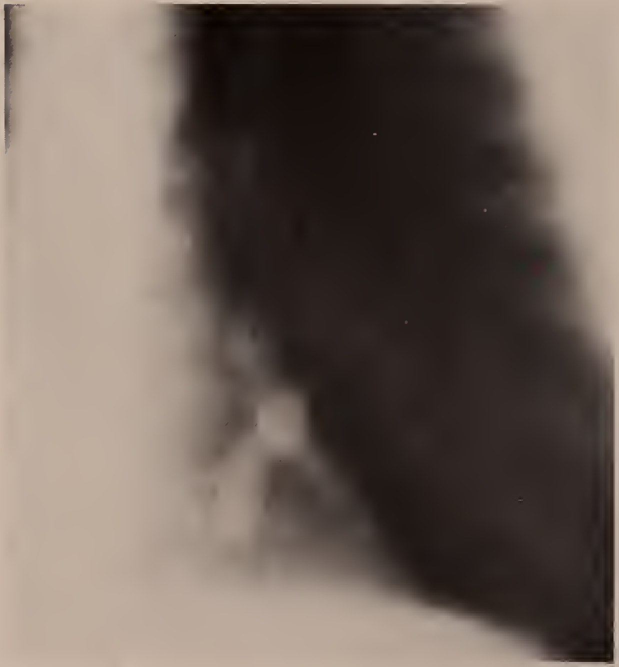

FIGURE 2. Anteroposterior tomogram shows finger-like projections of mucoid impaction.

The radiologic features are due mainly to mucoid impaction and hyperinflation.[1,2] The mucoid impaction is seen on chest radiographs as an extrahilar mass with round, ovoid, or tree-like branched appearance. The branched appearance is well delineated by tomography. It may rarely contain an air-fluid level. The hyperinflation is due to air trapping and is better seen on expiratory study. Although our patient did not demonstrate air trapping on chest radiographs, ventilation scan showed marked retention of 133 xenon gas. The hyperinflation has been ascribed to the collateral ventilation through Kohn's pores and the channels of Lambert. These pathways allow air exchange between segments of a lobe or even between adjacent lobes, where the interlobar fissures are incomplete. Although hyperinflation is a common feature in older children and adults, in newborns the retention of fetal lung fluid in the affected lobe gives rise to dense opacification of the entire lobe. Bronchography demonstrates either a non-filling or a short proximal stump of the bronchus. The adjacent bronchi may be crowded and displaced by the hyperinflated segment. Our patient showed nonfilling of the posterior basal bronchus with the rest of the bronchi appearing normal. Pulmonary arteriography may show decreased and attenuated vasculature and displacement of the adjacent vessels. Thoracic aortography is helpful in ruling out pulmonary sequestration. Recently, Cohen, Solomon and Alfidi[7] reported two

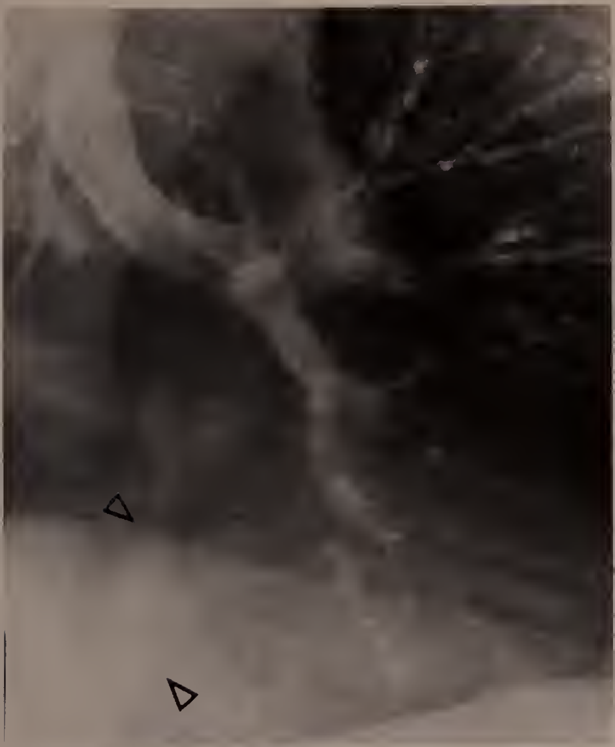

FIGURE 4. Bronchogram shows nonfilling of posterior basal bronchus; mucoid impaction in posterior basal segment (arrows).

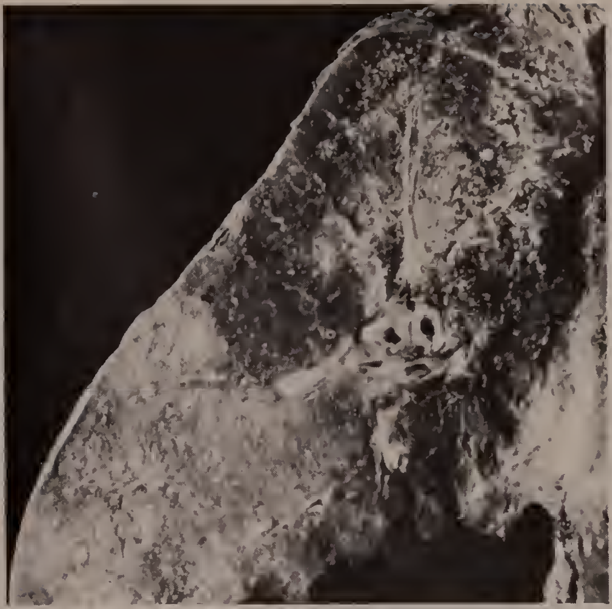

FIGURE 5. Sectioned lung shows posterior basal segment devoid of anthracotic pigment.

cases where computerized tomography demonstrated the V-shaped mucoid impaction surounded by emphysematous lung.

In the differential diagnosis several entities should be considered as discussed by Felson.[8] Mucoid impaction could be either obstructive or nonobstructive. Obstructive causes include bronchial neoplasm (primary and metastatic), tuberculosis, broncholithiasis, bronchial atresia, intralobar sequestration, intrapulmonary bronchogenic cyst, and foreign body. Nonobstructive causes include allergic bronchopulmonary aspergillosis and bronchial asthma. In newborns when the lobe is completely opacified conditions such as cystic adenomatoid malformation, lobar emphysema, and anomalous origin of the left pulmonary artery have to be considered. In an asymptomatic adult we believe that the branched appearance of mucoid impaction together with bronchographic evidence of nonfilling of the bronchus and absence of obstruction by bronchoscopy is sufficient to make a confident diagnosis.

The resected specimens usually show hyperaerated lung with occasional subpleural blebs. The bronchus should be cut along its long axis to identify the hypoplastic or atretic segment. Distal to the atresia there is cystic dilatation of the bronchus containing plugs of mucus and desquamated tissue. The bronchial lining shows flattened epithelium and, sometimes, the cartilage is absent. In our case the cartilage was intact. The affected segment is usually less anthracotic. Findings on microscopic examination show dilatation of the alveoli. There is reduction in the number of alveoli per unit area suggesting overall parenchymal hypoplasia. This is probably a result of reduced ventilation and consequent reduced stimulus to growth.

In the past, the treatment consisted of surgical excision, usually lobectomy. Often this was to secure a diagnosis. With the present diagnostic imaging modalities, a correct diagnosis can be made without surgery. We believe that as this entity becomes better recognized, the asymptomatic patients should be followed up. Surgery can be considered for complications such as encroachment of normal tissue or mucocele infection.

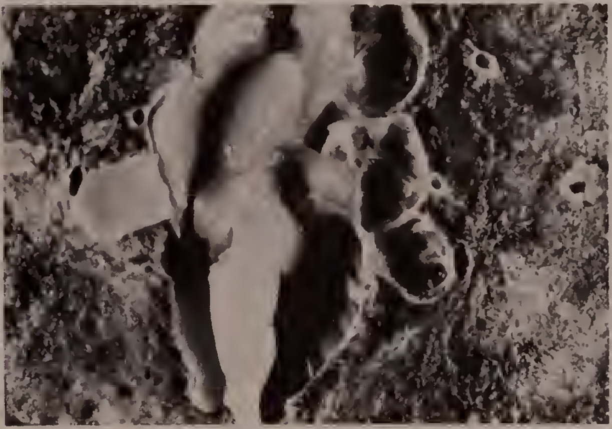

FIGURE 6. Longitudinal section of mucocele shows dilated bronchi containing impacted mucus.

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Acknowledgment: We thank Jerald Kuhn, M.D. for reviewing the manuscript and permitting us to use the computerized tomography scan, Ms. Bobbie Davies and Mrs. Sharon White for secretarial assistance, and Mr. Douglas Hanes for illustrations.

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Toxic chemical believed to contaminate 97% of Michigan residents

Five years after what has been called the most costly and disastrous accidental contamination ever to occur in United States agriculture, measurable amounts of the toxic chemical known as PBB were detected in hundreds of tissue samples taken from adults across Michigan, according to a 1978 study brought to light in this week's *Journal of the American Medical Association*.

Findings from the study done by Mary S. Wolff, PhD, and her colleagues at the Environmental Sciences Laboratory of New York's Mount Sinai School of Medicine reveal that contamination with PBB (for polybrominated biphenyl) spared no section of Michigan, reaching into residents of urban areas and those living in the remote upper peninsula, as well as into farmers in the most heavily contaminated rural counties.

Calculations by the *JAMA* authors, based on a representative cross section of the population of Michigan, indicated that approximately 97 percent of the state's residents had measurable amounts of PBB in their bodies.

Past studies have shown that once PBB gets into the human body its level does not significantly decline for at least six or seven years and probably much longer. The danger, if any, from persistent PBB levels in fat where it is stored and possibly in other tissues is not known.

But as Dean W. Roberts, MD, of Hahnemann Medical College in Philadelphia indicated in an accompanying editorial, the potential delayed effects from the storage of PBB in the human body are a matter of concern, particularly in light of recent findings showing that the PBBs are capable of inducing liver tumors in laboratory rats.

Said Roberts: "In view of the carcinogenesis lag time of up to two or three decades, it will be important to monitor a sample of the exposed population over a prolonged period."

The environmental contamination occurred in the summer of 1973 when an estimated 1,000 pounds of PBB in the form of a flame retardent chemical, which was supposed to be used for fireproofing a variety of plastics, were inadvertently substituted for a chemical additive to be used in livestock feed.

The contaminated feed found its way to hundreds of farms and subsequently into millions of animals and finally into humans. One indication that something was wrong came from dairy farmers who noticed a marked decrease in milk production from their cows, the development of abnormal growths on hooves and an increase in the number of aborted calves.

Unfortunately," said Roberts, "it took seven months to find out what was happening, and during that period contaminated meat and dairy products had been marketed, mostly in Michigan."

When the source of the problem finally was traced to PBB-contaminated feed, efforts were made to contain the spread of toxic chemical, which can accumulate in animal fat, by the state-supervised destruction of more than 30,000 cattle, 1,470 sheep, 5,900 swine and 1.5 million chickens.

But the problem did not simply go away. Reports of nervous system aberrations, alterations in the functioning of the liver and impaired immune defenses among farm residents who had been widely exposed to PBB in contaminated milk, meat, butter, eggs and cheese from their own farms began surfacing in the scientific literature in the late 1970s.

At around the same time, PBB was reported to have been discovered in serum specimens and in breast milk of urban Michigan residents. These individuals showed no evidence of overt clinical abnormalities, presumably, Wolff said, because they had not been exposed to as high levels of PBB as were those on farms.

Nevertheless, the finding of PBB in the body fluids of people far from areas where many farm products had been most heavily contaminated suggested that exposure to the chemical contaminant had occurred throughout the state and prompted the study of Wolff and her colleagues, Henry A. Anderson, M.D., and Irving J. Selikoff, M.D.

They found that 97 percent of the fat tissue samples taken from 844 Michigan residents contained measurable amounts of PBB, with the highest levels occurring in people living in the farming counties in the western part of the state. The lowest levels of PBB concentrations were found in fat samples taken from people living in the upper peninsula.

Roberts characterized the finding as dramatic and a reminder of "our vulnerability to the increasing number and volume of potentially toxic chemicals used in manufacturing, agriculture, pest control and food processing."

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VA Study[1]

- 450 patients studied
- Mild to moderate hypertensives
- Comparison of propranolol and reserpine for Step-2 antihypertensive therapy
- **Conclusion:** when added to a thiazide diuretic, reserpine was effective in a larger percentage of patients (88%) than was propranolol (81%)!

HDFP Study[2]

- More than 10,000 patients studied
- Conducted at 14 centers over 5 years
- Proved that compliance with Step Care lowers death rate from all cardiovascular causes
- **Conclusion:** reserpine-thiazide regimens were *preferred* for Step-2 therapy, and were deemed effective, without significant adverse effects!

MRFIT Study[3]

- 6-year, 12,000-patient study, to be completed in 1982
- Assesses factors that may increase risk of cardiovascular disease
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- **Full year's data:** reserpine is causing less depression than methyldopa, diuretics, or placebo!

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WARNING

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CONTRAINDICATIONS

Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS

Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy—Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS

Hydroflumethiazide—Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation.
Reserpine—Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE

The usual adult dose of Salutensin is one tablet once or twice daily. If a smaller amount of thiazide diuretic is desired, Salutensin-Demi, one tablet once or twice daily can be given.

SUPPLIED

Bottles of 10 and 1000 scored tablets.

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Books Reviewed

Clinical Neurosurgery. Volume 28. Edited by Peter W. Carmel, M.D. Baltimore, Md. Williams and Wilkins, 1981. Illustrated, 607 pages. Hardcover, $48.

Each year a volume is published containing the presentations at the annual meeting of the Congress of Neurological Surgeons. Each year there is an honored guest; in 1980, Eben Alexander, M.D., was the guest and principal speaker. He is director of neurosurgery at Bowman Gray School of Medicine, Winston-Salem, North Carolina. In the text there are chapters devoted to cervical spine fusions and fractures and to shunts for hydrocephalus. The overall format of the volume covers a wide range of timely topics of particular interest to all neurosurgeons. The following are individual sections: (1) practical neuropharmacology for the neurosurgeon, (2) preparation of scientific communications, and (3) current adjuncts in neurosurgery. The presentations are excellent and provide a welcome update on all areas of anesthesia, radiology, and chemotherapy for the neurosurgeon, as well as special neurosurgical subjects such as cerebrovascular disease and pituitary lesions. Each year this volume is welcomed by all neurosurgeons and over the years has provided a ready source of reference for subjects of interest to neurological surgeons. **Albert W. Cook, M.D.**

Myocardial Revascularization: Medical and Surgical Advances in Coronary Disease. Edited by Dean T. Mason, M.D., and John J. Collins, Jr., M.D. New York, Yorke Medical Books, 1981. Illustrated, 532 pages. Hardcover, $55.

This book is the outcome of an international symposium on myocardial revascularization in the Bahamas in October, 1980. It presents useful and up-to-date information on medical and surgical treatment for coronary artery disease in 41 chapters in nine sections:

1. Stable Angina Pectoris and Asymptomatic Coronary Disease
2. Variant Angina Pectoris
3. Unstable Angina Pectoris
4. Acute Myocardial Infarction
5. Myocardial Preservation
6. Pharmacologic and Delayed Approaches to Coronary Dilatation
7. Percutaneous Transluminal Coronary Angioplasty
8. Intra-coronary Thrombolysis in Evolving Myocardial Infarction
9. Long-term Achievements of Myocardial Revascularization by Medical and Surgical Therapy.

(continued on page 1131)

Left Ventricular Diverticula With Mitral Valve Prolapse and Pectus Excavatum

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Congenital left ventricular diverticula are rare cardiac malformations; fewer than 30 cases have been reported.[1–4] We present a patient with two diverticula of the left ventricular posterior wall who also has mitral valve prolapse and pectus excavatum. Association of these three findings has not been previously reported.

Case report

A 54-year-old man presented himself for evaluation of exertional chest pain. He is a tall (196 cm) white man with a pectus excavatum deformity and a midsystolic click. Chest x-ray film demonstrated a moderate pectus excavatum (Fig. 1). Systolic prolapse of the mitral valve was shown on M-mode echocardiogram (Fig. 2). Real-time, two-dimensional echocardiography showed normal left ventricular wall motion and contour. Cardiac catheterization and angiography revealed no hemodynamic abnormalities or obstructive coronary artery lesions. On ventriculography two slender outpouchings of the left ventricular posterior wall filled with contrast in diastole with partial dye extrusion in systole (Fig. 3).

Comment

Congenital diverticula of the left ventricle are classified histologically as either muscular or fibrous.[1–3] The walls of muscular diverticula contain endocardium, myocardium, and occasionally pericardium.[1,3] They are located at the left ventricular apex, varying in length from a few centimeters to large pulsatile stalks protruding through the diaphragm into the abdomen.[4] Usually they are associated with other cardiac defects (ventricular or atrial septal defects, pulmonary stenosis, tricuspid atresia, or truncus arteriosus).[4] They also commonly are associated with midline defects of the abdominal wall (diastolic recti, umbilical hernias, or omphaloceles) or chest wall (bifid or unilateral xiphoid, deficient sternal segments, or flaring anterior rib cage).[4]

Fibrous diverticula also contain all layers of the ventricular wall but with the myocardial layer replaced to a varying degree by fibrous tissue.[3] They usually lie in the posterior wall of the left ventricle near the mitral annulus[2] and are not known to have associated intra- or extracardiac defects.[4]

Both fibrous and muscular diverticula have narrow connections (ostia) with the left ventricle as opposed to ventricular aneurysms whose ostia are wide. Furthermore, they differ from pseudoaneurysms, which, although having small ostia, contain no ventricular wall layers, being covered only by pericardium.[5]

Various complications of ventricular diverticula have been described. Fibrous diverticula are less able than muscular diverticula to withstand high pressure, possibly due to deficient myocardium, and are, therefore, more prone to expansion.[3] Expansion

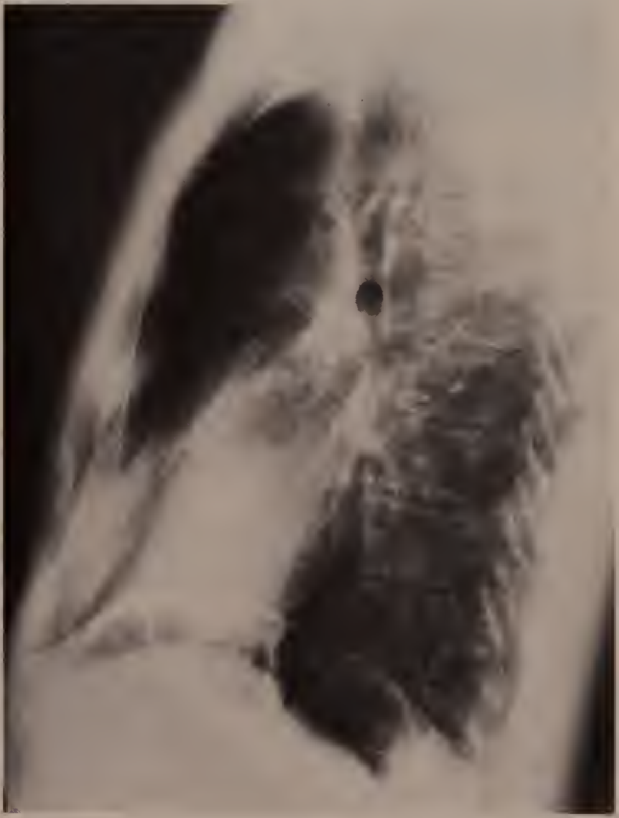

FIGURE 1. Chest x-ray in lateral projection demonstrating pectus excavatum.

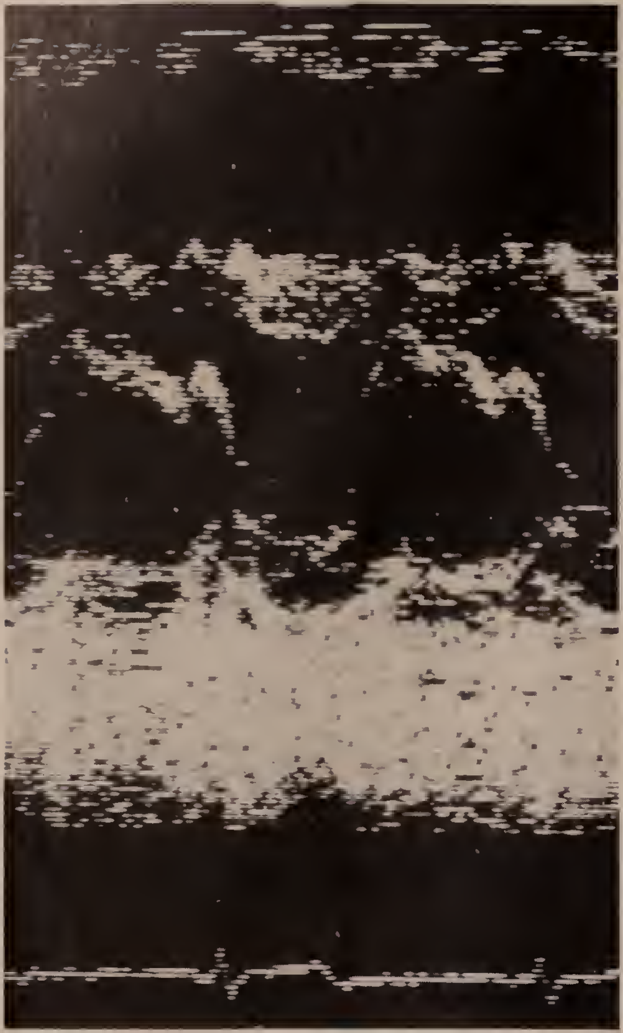

FIGURE 2. M-mode echocardiogram showing systolic prolapse of the mitral valve.

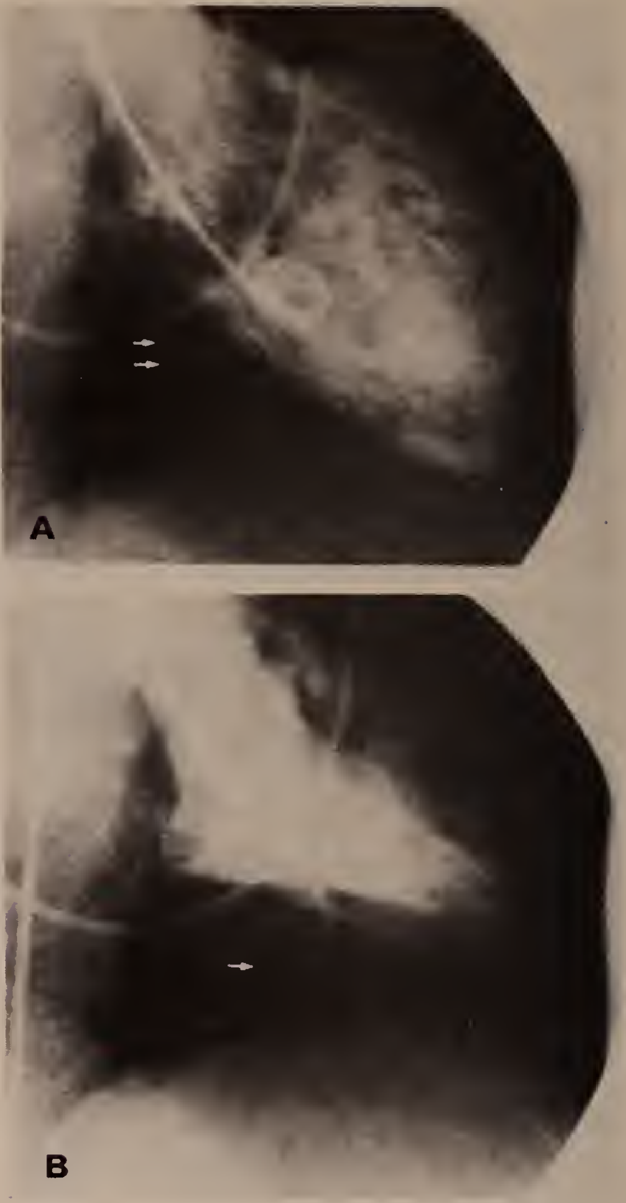

FIGURE 3. Left ventriculogram. (A) Diastole in right anterior oblique projection demonstrates two narrow diverticula (arrows). (B) Systole demonstrates small amount of contrast retained in one diverticulum (arrow).

can lead to congestive heart failure, myocardial ischemia (from circumflex artery compression), mitral or aortic regurgitation (from annular distortion), or even diverticular rupture.[2,6] The presence of contractile tissue in our patient's diverticula (Fig. 3) may have prevented expansion. Less common complications that have been reported are endocarditis[6] and thromboembolism.[3]

Complications of apical muscular diverticula usually pertain to the associated intra- or extracardiac defects rather than the diverticula themselves.

Although midline chest wall defects (previously named) have been found in association with apical muscular diverticula, the entity of pectus excavatum has not been described in patients with either fibrous or muscular diverticula. On the other hand, mitral valve prolapse is known to be commonly associated with pectus excavatum. Therefore, the presence of mitral valve prolapse in this case may merely be coincidental to the pectus excavatum. However, to our knowledge left ventricular diverticula have not been previously reported in association with either pectus excavatum or mitral valve prolapse.

Summary

Two left ventricular diverticula were demonstrated angiographically in a 54-year-old man during evaluation of angina pectoris. In addition, the patient had pectus excavatum chest wall deformity and mitral valve prolapse, neither of which had been previously reported associated with ventricular diverticula. We briefly review the classification of left

ventricular diverticula in their association with other intra- or extracardiac malformations and their potential complications.

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Gross anatomy

It was a most bizarre encounter that took place earlier this year in the gross anatomy laboratory of a large, southern university.

The first day of dissection had been completed and the students had been exposed to all nine cadavers when the director of the anatomy course was informed of the distinct possibility that one of the cadavers was one of the student's relatives.

At a meeting later the same day, wrote E. George Salter, Jr., PhD, and Clarence E. McDanal, Jr., MD, in a letter in this week's *Journal of the American Medical Association*, it was ascertained that the cadaver was indeed the student's great aunt.

The coincidence was further compounded, they said, because the cadaver had been shipped to the state anatomical board by the corresponding board of another state.

Salter and McDanal, who are at the University of Alabama School of Medicine in Birmingham, said that the student and her great aunt at one time discussed the "relative merits of body donation to medical science," no pun intended.

Fortunately, the cadaver assigned to the student in question that first day of dissection was not her great aunt. "Further trauma to the student was obviated," Salter and McDanal said, "by the immediate substitution of another cadaver by the state anatomical board."

Esophageal Leiomyosarcoma

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Leiomyosarcoma of the esophagus is a rare malignant condition, only 36 cases[1–24] having been reported as of 1965, when Rainer and Brus[23] published their landmark review of the literature. Since that time, scattered reports have added 20 additional cases to the world literature.[24–42] In adding a recent case of our own, we take this opportunity to summarize the newer insights regarding presentation, diagnosis, management, and clinical course of this unusual tumor.

Case report

A 45-year-old white man, previously in good health, appeared with a two-month history of dysphagia, regurgitation of undigested food, and a 25-pound weight loss. In addition, the patient had a history of heavy alcohol use and of smoking two packs of cigarettes daily for many years. Physical examination revealed a thin, ill-appearing man in no distress. The remainder of the physical examination, including of the abdomen, was unremarkable.

On admission to the hospital, the WBC count was 10,100 with a normal differential, hemoglobin 14.8 g/dL with normal red cell indices, platelet count 304,000, ESR 65 mm/h, and results of SMA-6 and -12 (sequential multiple analysis) normal. An upper gastrointestinal series revealed a large intraluminal defect in the middle third of the esophagus suggestive of a food impaction (Fig 1). The patient underwent esophagoscopy which revealed a polypoid, friable, necrotic mass with the appearance of a retained food bolus. The endoscope could be passed around the mass and into the stomach in three of four quadrants, suggesting preservation of mural distensibility and an isolated point of attachment. Biopsy of the mass resulted in bleeding and confirmed that the mass was a tumor with histology consistent with a leiomyosarcoma. The patient underwent a partial esophagectomy and esophagogastric anastomosis.

The resected specimen consisted of a segment of esophagus 10 cm long and a segment of stomach measuring 12 cm in length. A large polypoid, pedunculated, solid, fleshy tumor was attached on the proximal portion of the esophagus, 7 cm above the esophagogastric junction. The tumor measured 10 by 4.5 by 3 cm with some superficial ulcerations and hemorrhagic areas (Fig 2). The histology disclosed spindle cells with varying degrees of pleomorphism and frequent mitotic figures averaging one to two per high-power field (Fig 3). Electron microscopy disclosed extensive autolytic changes; however, in a few relatively preserved areas, there were intracytoplasmic myofilaments with electron dense bodies consistent with those seen in smooth

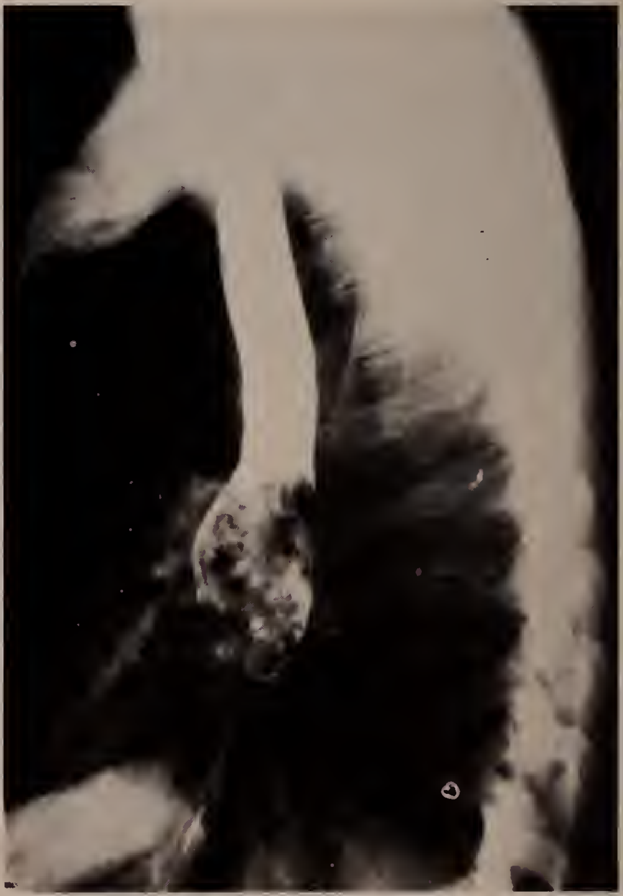

FIGURE 1. Barium esophagram demonstrates large intraluminal polypoid filling defect in middle third of esophagus, suggesting food bolus.

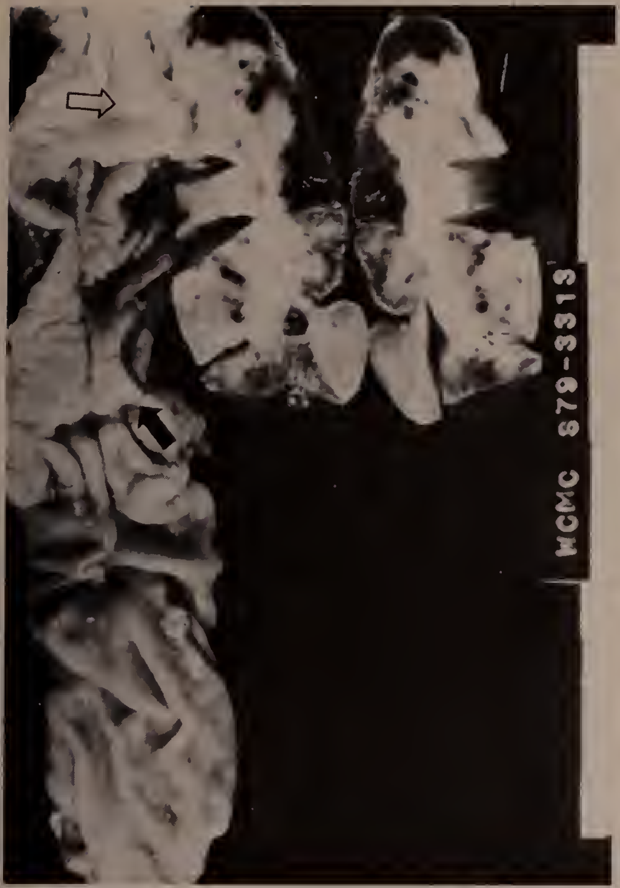

FIGURE 2. Gross specimen shows bisected large polypoid tumor with stretched pedicle. Cut surface of tumor appears solid with peripheral areas of hemorrhagic necrosis. Open arrow points to pedicle while solid arrow shows esophagogastric junction.

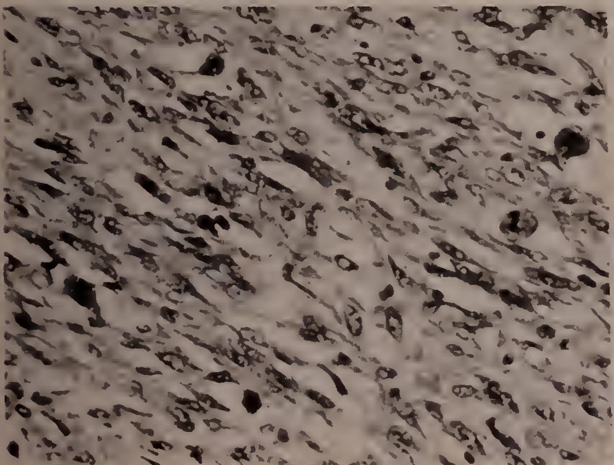

FIGURE 3. Light microscopy of tumor showing pleomorphic spindle cells and conspicuous mitotic figures (original magnification ×375).

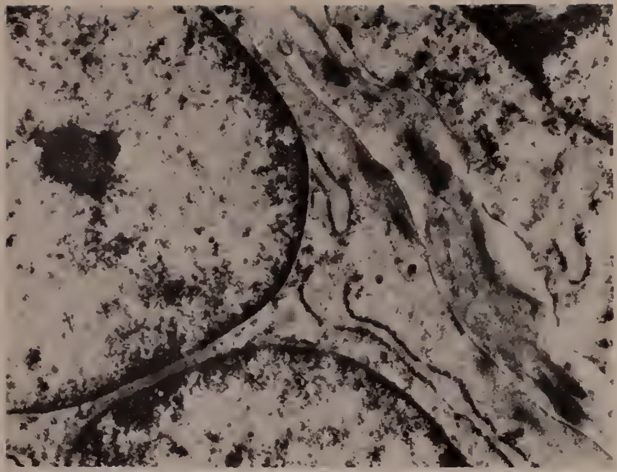

FIGURE 4. Electron microscopy of tumor showing myofilaments and irregular dense bodies (×32,500).

muscle cell tumor (Fig 4). One gastric lymph node was positive for metastatic disease. The patient recovered uneventfully from surgery and received 5,200 rads total dose radiation therapy to the anterior and posterior lower esophagus. He is without known recurrence one year following surgery.

Comment

Of the 57 cases of esophageal leiomyosarcoma now available for discussion, 32 patients were male and 25 were female for a male:female ratio of 1.28:1. The age range was 27 to 78 years with a mean age of 59. The major presenting symptoms are shown in the table. Although dysphagia is the symptom most commonly noted (84%), it is not universally present, perhaps because of the tendency of this tumor (70% of cases) to grow as an intraluminal polypoid lesion with some preservation of esophageal wall compliance, allowing food to pass around the lesion. Substernal pain ranging from a vague burning sensation to sharp cramping has been reported in 24% of cases and regurgitation in 11%. Respiratory distress secondary to tumor compression on the tracheobronchial tree has been reported in 5% of cases, and in cases with proximal esophageal involvement, vocal cord paralysis, sore throat, and cough have been noted. Major gastrointestinal hemorrhage has been noted in only one case.[23]

On chest x-ray examination, several authors have noted unusual manifestations ranging from simple mediastinal widening[36,38,41] to a densely calcified mass.[40] Itai and Shimazu's case[40] is of particular interest in that a calcified mediastinal mass was present two years prior to the development of a small paraesophageal polypoid defect and dysphagia. Although the polypoid defect increased in size and the dysphagia became worse, the mediastinal calcification remained unchanged. At surgery, the calcified mass and polypoid defect were found to be parts of the same lesion, the histology being leiomyosarcoma.

Barium esophagram has uniformly demonstrated

Presenting Symptoms of Esophageal Leiomyosarcoma in 57 Reported Cases

Symptom	%
Dysphagia	84
Substernal pain	24
Regurgitation	11
Respiratory obstruction	5
Vocal cord paralysis	4
GI bleed	2
Cough	2
Sore throat	2

a large intraluminal polypoid filling defect which frequently leads to dilatation of the esophagus around the mass and which may be seen to move up and down slightly with peristalsis during fluoroscopy. Moreover, barium may seem to coat all sides of the mass, mimicking the appearance of an impacted food bolus. These observations are consistent with the finding at endoscopy or at surgery of a large intraluminal polypoid mass attached to the esophageal wall by a short stalk of variable thickness as described in approximately 75% of the reported cases.

Fiberoptic endoscopic biopsy has been variably useful in establishing a histologic diagnosis. This is because the tumor may remain submucosal and thus too deep for routine forceps biopsy, or because the lesion may be thickly covered with necrotic debris. Successful biopsy therefore requires sufficient depth to induce bleeding, a development that also distinguishes the mass from a food impaction. On one occasion, rigid endoscopic excisional biopsy through the tumor stalk was successful,[27] but caution must be exercised in removing such generally large tumors through the pharynx to prevent asphyxiation. Moreover, because of the risk of perforation, incomplete resection, and excessive bleeding, endoscopic removal cannot be generally recommended. Surgical resection remains the treatment of choice in most cases.

In terms of gross behavior, esophageal leiomyosarcoma takes two forms. In the majority of reported cases (39 of 57, or 69%) the tumor was polypoid and noninvasive, whereas in 18 of 57 cases (31%), the tumor appeared to be infiltrating and invasive. When the tumor is polypoid and noninvasive, the esophageal wall remains pliable and distends around the tumor mass. Food may pass around the tumor, and disabling dysphagia develops only after the tumor has reached a relatively large size. This is in contrast with the rapid progression of dysphagia that occurs when leiomyosarcoma or, more typically, squamous carcinoma invades the esophageal wall and results in obstruction with decreased compliance.

Metastatic disease is relatively uncommon, even in cases where the primary tumor is large. Only 9 instances of metastasis, including our case, have been reported in 57 patients (16%).[20,22–24,34,41] Liver, mediastinum and mediastinal lymph nodes, and pericardium are most frequently cited for metastatic involvement, but the numbers are too small for any meaningful pattern to be derived. Although the simultaneous occurrence of esophageal leiomyosarcoma and squamous carcinoma has been noted to be rare,[41] this association appears in 6 of the 57 cases in the literature.[7,20,23,26,29,41] Given the rarity of esophageal leiomyosarcoma as a primary tumor, a 10% association with squamous carcinoma of the esophagus should not escape future scrutiny. As yet no predisposing factors such as alcohol or tobacco use for squamous carcinoma of the esophagus have been implicated in esophageal leiomyosarcoma, but as case material continues to grow, data supporting such an association may become available. In our patient, a history of both heavy ethanol and tobacco use was evident.

Histologically, the majority of esophageal leiomyosarcomas appear as interlacing fascicles and whorls of elongated fusiform cells; however, there may be considerable difficulty in distinguishing leiomyosarcoma from leiomyoma or other malignant tumors with mesenchymal features such as pseudosarcoma or carcinosarcoma. Mitotic activity, long considered an important criterion for malignant conditions, has recently been questioned in terms of reproducibility and prognostic value.[43] As recognized by several authors,[41,44] aggressive clinical behavior of benign-appearing tumors may be the only indication of malignant conditions. Electron microscopy revealing enlarged abnormal nucleoli, dilated rough endoplasmic reticulum containing dense irregular aggregates, and the absence of ultrastructural features typical of mature smooth muscle cells may also suggest a malignant condition.[41]

Because esophageal leiomyosarcoma tends to be well localized, surgical excision has been and remains the treatment of choice. In the early reported series, patient survival was limited largely by the reluctance or difficulty with which esophageal resection and esophagogastrostomy were undertaken. Between 1902 and 1949, six cases were treated by conservative therapy such as gastrostomy, and none had a known survival beyond six months.[1–6] Since 1949, however, most noninfiltrating polypoid lesions have been treated with resection and esophagogastrostomy. Long-term survival data following resection for cure have been difficult to derive because of the emphasis on histologic documentation and short-term follow-up of the case reports. Nevertheless, at least 10 of the 38 patients who underwent resection for cure survived five or more years,[8,9,13,19,20,22,32,35] and many others were alive and well at a follow-up of two years. These data imply a significantly better prognosis for esophageal leiomyosarcoma than squamous carcinoma and support an aggressive surgical approach for this lesion when the patient's underlying condition permits. When such is not possible or recurrence is a problem, radiation therapy has proved to be of palliative value. Of the nine cases in the world literature treated with radiation therapy,[4,6,21,22,27,31,39] all but the two earliest cases[4,6] had at least a limited response either symptomatically or as assessed by objective tumor regression. Although her long-term survival is not known, the patient reported by Athansoulis and Aral[31] received radiation therapy as her only treatment and experienced an excellent reduction in tumor size for at least six months thereafter.

Summary

In summary, a total of 57 well-documented cases of esophageal leiomyosarcoma now appear in the world literature. Analysis of these cases reveals that this rare tumor; although associated with squamous carcinoma in 10% of cases, behaves quite differently than squamous carcinoma in that it tends to be polypoid, rarely invasive, rarely metastatic, and may carry a far better prognosis when treated with surgical resection. More emphasis in the future, however, must be placed on determining whether or not similar risk factors exist as for squamous carcinoma and on studying longer-term survival patterns to learn more about the behavior of this interesting tumor.

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Retrieving Endotracheal Tube from Esophagus

A simple method

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This report concerns the misplacement of an endotracheal (ET) tube into the esophagus and its subsequent retrieval by a simple, unique, and nonsurgical procedure.

Case report

A 2,940-g term infant was delivered vaginally from a 23-year-old primigravida. Prenatal course was complicated by maternal preeclampsia, and fetal bradycardia was noted during labor. At delivery, copious amounts of bloodstained amniotic fluid were removed from the mouth and pharynx by a bulb syringe. The infant was in moderate respiratory distress with subcostal and intercostal retractions and grunting respiration. Heart rate was 140 beats per minute. Suctioning with the bulb syringe proved to be inadequate so an ET tube, Portex 3.0 mm inside diameter (ID), without a stylet, was inserted to complete the suctioning procedure. The orotracheal route was used with an adaptor to facilitate direct suctioning because attempts at using a suction catheter in the ET tube were also unsuccessful. While withdrawing the tube, it disconnected from the adaptor and the proximal end of the ET tube could not be visualized either in the oropharynx, larynx, or esophagus by direct laryngoscopy. At this point the infant was active and not in acute distress and was transferred to the special care nursery.

The tip of the ET tube could be palpated in the left hypochondrium. A chest and abdominal x-ray film revealed the upper end of the ET tube to be located in the esophagus at the level of T-1 (Fig 1). The following procedure was undertaken. An 8F suction catheter that just fit inside an ET tube of 3.0 mm ID was gently passed into the esophagus to a distance of approximately 15 cm with the hope that it would enter the lumen of the dislodged ET tube. The suction catheter was then gently withdrawn, while continuous suction was applied. On the second try, the ET tube was suctioned out. The infant did well thereafter.

Comment

There have been few reports in the literature of ET tubes accidentally disconnected and lodged in the esophagus or stomach.[1–4] The dislodged ET tubes were removed by esophagoscopy[1–3] and gastrotomy.[2] Lababidi et al[4] inserted a Swan-Ganz balloon catheter into a misplaced ET tube, inflated the balloon, and then gently pulled the catheter out retrieving the ET tube.

The procedure described in this case report was nontraumatic and simple. The size of the ET tube and the available length in the esophagus are considerations in the success of this method. The choice of the suction catheter was determined by checking the largest suction catheter that would fit inside the

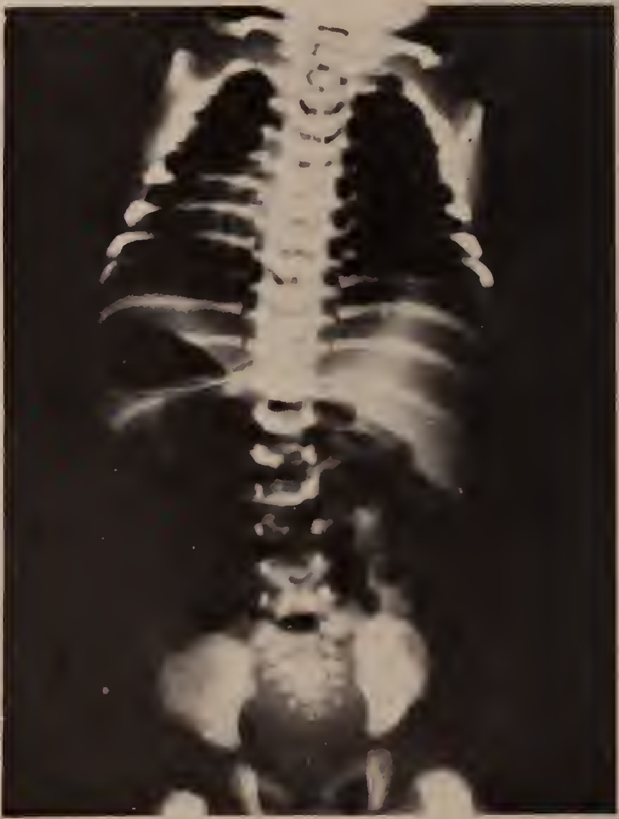

FIGURE 1. X-ray film of chest and abdomen shows upper end of ET tube located in esophagus at level of T-1.

ET tube, which is the same size as the misplaced ET tube. This procedure not only avoids surgery, but can also be performed easily and rapidly in all newborn nurseries since suction catheters are always available.

The loss of an ET tube into the esophagus is a preventable accident. Checking the connection of the adaptor to the ET tube is mandatory before any intubation is attempted. When an adaptor has to be reconnected to the ET tube for whatever reason, one should make absolutely sure that the connection is secure prior to intubation.

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Safety caps effectively prevent child poisoning

Almost 200,000 children escaped accidental poisoning during a six-year period because a federal law requires that a variety of consumer products and medicines have "child-proof" closures, a newly published study reports.

Results of the study appear in the March issue of *Pediatrics*, the journal of the American Academy of Pediatrics (AAP).

The study is the first research designed to estimate how effectively the Poison Prevention Packaging Act of 1970 has decreased the rate of poisoning of children under five, and was prepared by William W. Walton, Ph.D., of the Consumer Product Safety Commission, Washington, D.C. The AAP was one of the leading organizations concerned with children's health that sought passage of the Act.

Unrelated to the study, President Reagan has designated March 21 to 27 as Poison Prevention Week.

Walton's research analyzed poisoning trends in the period 1973 to 1978, when most of the Act's regulations governing packaging of 15 substances went into effect. Data were reported by statistically selected hospitals with emergency rooms.

To determine the number of poisonings prevented by the Act, Walton computed the rate at which children under five were poisoned by products and drugs requiring the special closures. This figure was compared to the rate at which children were poisoned by substances not covered by the Act. Walton made adjustments to control for such factors as the declining number of children under five during the six-year period.

Had the Act not been passed, Walton's comparisons indicate that over 190,000 additional children would have been poisoned during the six-year period, and the poisoning rate in 1978 would have been about 6.2 for every 1,000 children.

Instead, the study found that a dramatic decline took place in both the total number and the rate of poisonings by substances covered under the Act. The number of poisonings decreased from 95,000 in 1973 to 52,000 in 1978, a decline of about 45%. The rate per 1,000 children decreased from 5.7 to 3.4.

Walton also notes there was a decline in the death rate due to accidental poisoning of children during the six-year period, from about 1.1 per 1,000 children in 1973 to 0.5 in 1978. While the decline in deaths began before the Act went into effect and the use of child restraint containers "are but one factor that could be responsible for this significant decline, they have undoubtedly been an important one," according to Walton.

To further reduce the number of children accidentally poisoned, Walton suggests that parents be educated on the dangers of drugs and other products commonly found in the home. Instituting further regulations probably would be of little value, he says, since the substances that cause most of the accidental poisonings already are covered by the Act.

The American Academy of Pediatrics is an organization of more than 23,000 pediatricians dedicated to the health, safety, and well-being of infants, children, and young adults in North and South America. Recommendations or opinions expressed in *Pediatrics* articles do not necessarily reflect official Academy policy.

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Peter Blood and the Brethren of the Coast

Fictional physicians afield

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England in the last quarter of the seventeenth century was in political disarray; three kings would hold the sceptered orb between 1680 and 1688. Civil war and a bloodless coup would focus English interests toward national concerns instead of toward international affairs. Where Sir Francis Drake had led a united country to repel the Spanish Armada 100 years before, and where Horatio Hornblower would be in the vanguard of naval heroes fighting the French 100 years later, no man captured the public imagination of the English in 1680. Into this void, by circumstance and governmental interference in his medical practice, was thrust Peter Blood.

Blood was born of an Irish physician father; his mother was from Somersetshire and a descendent of Martin Frobisher, the famous navigator and explorer for the Northwest Passage. At the age of 20, Blood graduated from Trinity College, Dublin, with the degree of bachelor in medicine, after general studies concentrating in the classics, Horace (Quintus Horatius Flaccus) in particular.

Professional hiatus

An appetite for adventure quickly led him abroad, and his next 12 years were spent first with the Dutch, who were then at war with France. He served under Michel Adriaanszoon de Ruyter in the Mediterranean and was present when that great admiral lost his life in 1676. Thereafter, he was captured and spent two years in a Spanish prison, the same gaol where Robert Lovelace—"Stone walls do not a prison make nor iron bars a cage"—had been imprisoned some 20 years before; it was there that Blood took the opportunity to learn fluent Castilian.

Professional period

He then served with the armies of France, who were then at war with the Spanish occupational forces in the Netherlands, but by the age of 32 (in 1685), he had had his fill of adventure and because of indifferent health occasioned by a neglected wound, he settled in Bridgewater Bay, Somersetshire, to take up his profession and hang out his shingle as a practitioner of medicine.

Blood was then a wordly man for his time, widely travelled. He spoke several languages and was somewhat of a dandy in his dress, with a black periwig and black suit as befit his calling of physician. He smoked a pipe (Dutch tobacco) and grew geraniums in the garden of his west-country home. An Irish brogue would creep into his speech when he became angry or passionate. His wartime experiences as a physician and soldier had given him a misanthropic view: "Man was the vilest work of God," he once remarked self-deprecatingly, "and only a fool would set himself up as a healer of a species that was best exterminated."

Recorded background

What we know of his life is set down in Sabatini's[1] book. Sabatini admits to taking all his material from the original logs of the pirate ship *Arabella*, written by Jeremy Pitt, originally a Somerset shipmaster and Blood's friend and companion. Some 20-odd volumes in assorted sizes were preserved in the library of James Speke in Comerton. Alas, these were destroyed when a stray German bomber divested itself of its payload when fleeing from pursuing British Hurricane fighter planes in 1940 during the Battle of Britain. Fortunately, the Spekes escaped without injury as their house and library were gutted by the flames.[2]

Ill-fated exile

Blood's life was changed abruptly from the bucolic by the Battle of Sedgemoor. In July, 1685, on the death of Charles II, Prince James, Duke of Monmouth, rebelled against the accession of the Catholic James Stuart, Duke of York, to the throne of England as James II. Opposing forces met at Sedgemoor with a crushing defeat for the rebels of Monmouth. When Blood was called hurriedly by Jeremy Pitt to attend one of the fallen rebels, his succoring was interrupted by the King's dragoons and he was promptly arrested and thrown into prison for abetting the rebellion. More than two months were to elapse before his trial and subsequent conviction of treason, despite his innocence, at Taunton. He was saved from the gibbet only by royal order sending 1,100 rebels to the southern (West Indian) plantations as slaves, and was shipped out aboard the *Jamaica Merchant* for Barbados. Pitt, who had also been captured and convicted, accompanied him, and noted that Blood "the doctor went to work zealously and zestfully, and wrought so ably that, by his ministrations and by improving the condition of his fellow captives, he checked the spread of disease" aboard ship.

In December, 1685, Blood's disembarkation was at Bridgetown, Barbados, where he was sold for 10 English pounds to Colonel (of the militia) Bishop, a wealthy planter.

Blood quickly made himself useful as a physician and was so adept that he was called to treat the governor and his lady, who suffered from the gout (for which bloodletting was effective) and the megrims, respectively. The megrims, Blood was heard to remark, were "peevishness, the result of natural petulance aggravated by the dullness of life in Barbados to a lady of her social aspirations." Nonetheless, he prescribed for her and "she had conceived herself better for the prescription."

Although Colonel Bishop's niece and ward, Arabella, took a liking to Blood and he to her, their respective positions precluded more than an occasional chaste and distant conversation. He was, after all, a slave.

His opportunity to recover his freedom came unexpectedly. The West Indies were in an unsettled state. The Spanish, French, English, Dutch, and the motley pirates were all vying for naval facilities, sugar, and for the riches of gold and silver. Early in 1686, Don Diego de Espinosa y Valdez, brother to the senior Spanish admiral in the Caribbean, led a raid on Bridgetown where the English garrison was taken unaware and quickly overpowered. During this brief raid, Blood was able to rescue a maiden imperiled by a cutlassed, crazed crewman: "Mr. Blood ran him through the body. He did the thing skillfully, with the combined skill of swordsman and surgeon."

Freedom

While Spanish seamen and soldiers were sacking the city, Don Diego left a skeleton crew aboard his red-hulled frigate. Blood, Pitt, and their fellow slaves quickly banded together and under the cover of Spanish revelry rowed out to the ship, overpowered its defenders, and turned its guns broadside on the returning crew. Bridgetown was restored to its English government and Blood and his newly free, if outlawed, friends hoisted sail. Sabatini suggests, in a penetrating analysis, that Blood's career choice was now fatefully determined:

> Considering the adventurous spirit that once already had sent him aroving for the sheer love of it, considering that this spirit was heightened by a recklessness begotten by his outlawry, that his training and skill in militant seamanship clamorously supported the temptations that were put before him, can you wonder [that] Blood ended by yielding to external and internal pressures, abandoned himself to the stream of Destiny. "*Fata viam invenerunt*" is his own expression of it.

FIGURE 1. Tall and spare, of slightly swarthy complexion, with black eyebrows and hair, high-bridged intrepid nose with evenly set blue eyes, and firm lips. Errol Flynn and his corsair colleagues from central casting in *Captain Blood*, a Warner Brothers film, 1935.[3]

Brethren of the Coast

He joined the Brethren of the Coast (as the pirates called themselves) and became a buccaneer. At Tortuga, a safe harbor, he renamed his ship *Arabella* and signed on a crew. Almost immediately, in December, 1686, he began his brief but legendary exploits against the Spanish; he sank a galleon in the Windward Passage, purloined pearls from the Spanish fleet at Rio de la Hacha in a daring piracy using piraguas, and devastated the gold fields of Santa Maria on the Main.

Thereafter, he helped sack the city of Maracaibo in a joint action with fellow buccaneers, defeating the Spanish admiral Don Miguel de Espinosa y Valdez and capturing two 20-gun frigates as well as 250,000 pieces of eight and other plunder. This adventure, reminiscent of Morgan's assault on the same city 20 years before, involved the classic military maneuver of feint and misdirection against a heavily fortified defense in the narrow inlet to Lake Maracaibo.

Caribbean exploits

One particular feat of seamanship and tactics deserves fuller accounting. In September, 1688, the *Arabella* was beating upwind for the Windward Passage in the Lesser Antilles. Sailing downwind after rounding Cape Tiburon bore the Spanish galleon, the *Milagrosa*, skippered by Don Miguel (Blood's implacable enemy), with her consort the *Hidalga*. The three vessels headed toward each other as preparations for battle began, bow guns ranging. Blood set the *Arabella's* course to carry her straight between the two Spanish ships. At last, Pitt describes, the *Arabella* was right between the Spanish ships, prow to poop and poop to prow. Too late, Don Miguel realized that the superior weight of his guns was of no avail. If the *Milagrosa* and her consort fired on the Englishman, they would be firing into each other. As the Spanish admiral hesitated to give the order to fire, the *Arabella* seemed to explode; 18 guns from each flank emptied themselves at point blank range into the hulls of the two enemy vessels. As the smoke of the devastating broadsides dissipated, the *Arabella* came hurtling alongside the *Milagrosa* with grapnels flying. The *Milagrosa* was boarded and captured as the *Hidalga* settled into the ocean depths. The Spaniards had been outmaneuvered and outfought.

When news of these exploits in the Caribbean reached the King's ministers, Blood was offered a commission in the Royal Navy.

> D'ye think I could take a commission of King James's? Are there not even notions of honour left in England? Because I had performed an act of mercy; because compassionately and without thought for creed or politics I had sought to relieve the sufferings of a fellow-creature; because I had dressed the wounds of a man who was convicted of treason—for that I was sold into slavery: because of the law of England, as administered by James Stuart in violation of the laws of God .... D'ye dream, man, what it is to be a slave?"

In March, 1689, France, now at war with Spain, sent an envoy to offer Blood a commission in the French naval service. Blood accepted and with M. le Baron de Rivarol sailed to divest Cartagena of her accumulated riches. The attack and siege were successful despite French incompetence, but in a bitter act of treachery M. le Baron decamped with all the plunder.

It was during this time and activity that the "Glorious Revolution" occurred: William of Orange took the throne of England as William III to rule with his Queen Mary, and James Stuart fled to France to live under the protection of Louis XIV. William had then declared war against France. M. le Baron promptly attacked the English fleet and sank Admiral van der Kuylen's flagship with Lord Willoughby (governor general of the West Indies) aboard; fortuitously, these illustrious gentlemen were picked up by the *Arabella*. Again Blood was to be the savior of English interests. M. le Baron, in the *Victorieuse*, attacked Port Royal, Jamaica; only Blood's intervention saved the English colony from total destruction. He sacrificed his ship in a daring frontal assault: the *Arabella*, guns blazing, grappled to the French ship-of-the-line and in a bloody boarding and hand-to-hand combat, the buccaneers vanquished the French. Willoughby then offered Blood a pardon and the post of governor of Jamaica. "He was a trifle dazzled by the honour proposed to him .... 'I had counted upon being home, so I had. I am hungry for the green lanes of England. There will be apple blossoms in the orchards of Somerset." But Willoughby would not take his refusal. "If you want your past forgotten and your future assured, this is your chance. And you are not to treat it lightly on account of apple-blossoms or any other damned sentimental nonsense. Your duty lies here for as long as the war lasts. When the war's over, you may get back to Somerset and cider or your native Ireland and its potheen; but until then you'll make the best of Jamaica and rum."

Final haven

Blood took his chance and more. He proposed to Arabella Bishop, was married, and settled into the more peaceful life of political appointee and physician. His days were spent quietly and happily, never more in the swash-and-buckle of freebooting in the waters of the Caribbean with the Brethren of the Coast.

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Autopsy of Admiral John Paul Jones 113 Years Postmortem

Historic and forensic aspects

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Tradition and its talismans are the *via magna* of civilization. The tradition of all dead generations weighs like an incubus on the brain of the living.

Galen and his colleagues of the second century A.D. never had dissected a human body. Instead, they studied the lower vertebrates, such as cats, dogs, and apes. Therefore, many of Galen's anatomic discoveries were grossly inaccurate when applied to human beings, but this was not to be discovered for over 1,000 years.

In the sixteenth century, a Belgian anatomist, Andreas Vesalius, did some discovering of his own. The result of Vesalius' efforts was the publication of his book in 1543, *De Humani Corporis Fabrica*—the first real anatomy textbook—which ushered medical science into an advanced period. Since that time, the postmortem study of the human body has allowed scientists to discover and solve many questions that have perplexed mankind and clouded the truth.

On his death in 1750, Johann Sebastian Bach was buried in an oak coffin, one of 12 "coffined" in that wood.* In searching for the genius' remains, three oak coffins were exposed on October 22, 1794, 44 years after interment, one of which contained the "almost perfect skeleton of an elderly male, well-proportioned, not large of stature, with massive skull, receding forehead, shallow eye sockets and heavy jaws." The skull was compared with paintings, pencil sketches, and a copperplate of Bach. Having this anthropometric basis, a sculpture was commissioned.[1] No bust had been made during the composer's life.

Jean Rudolphe Agassiz (1807 to 1873) stated "The time has come when scientific truth must cease to be the property of the few—when it must be woven into the common life of the world."

By 1864 the very crude and unscientific works of detection by Lombroso (*The Criminal Type*) and M. Alphonso Bertillon (*The Criminal Anthropometric Type*) are the only well-recorded efforts of the detection of suspected criminals.

Forensic medicine

The only great textbook on criminology, Hans Gross' *Criminal Investigation*, which forms the basis of every present-day police system, was not published until 1891. Some of Sir Arthur Conan Doyle's "Holmes" stories had appeared before that date; it is a little startling to see Holmes, on several occasions, anticipating Gross. To take one example: No reader of the second novel will have forgotten the reference to "my monograph upon the tracing of footsteps, with some remarks upon the use of plaster of Paris as a preserver of impresses." Gross, after listing and discarding six currently popular ways of preserving footprints, states he has discovered only one good method: plaster of Paris. Dr. Edmond Locard, head of the police laboratory at Lyons, has been very emphatic: "I hold that a police expert, or an examining magistrate, would not find it a waste of his time to read Doyle's novels . . . . If, in the police laboratory at Lyons, we are interested in any unusual way in this problem of dust, it is because of having absorbed ideas found in Gross and Conan Doyle." [2]

Arthur Conan Doyle had seen a chance to develop an exact science. He deduced that by the study of minutiae, footprints, mud, dust, chemistry, anatomy, and geology he could construct the scene of a murder as though he had been there.[3]

Aaronson[4] demonstrates ample evidence that Arthur Conan Doyle was the father of forensic medicine. Dr. Doyle's description of a reagent which is precipitated only by human hemoglobin appears in *A Study In Scarlet*. Beating cadavers with a stick in an attempt to relate the age of wounds to the time of death is also described in this same Sherlock Holmes story.[4]

An important but overlooked historical fact is that in a *Study of Scarlet*, written in 1886, Doyle described in his character Jefferson Hope what is now known as Marfan's syndrome, which was first described in the medical literature in 1896. Cooperman wrote in "The Canadian Medical Journal" in 1975 that Doyle "described Marfan's Syndrome before Marfan." [5]

A pioneering effort in forensic medicine took place on the body of Admiral John Paul Jones, the founder and first admiral of the United States Navy, 113 years after his death.

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* The Register of the Johannis-hospital for 1750 has the entry: "4, thlr. zahlte der Todtengraber Mûller wegan Hernn Johann Sebastian Bach's eichenem Sarg" (His, p. 4).

FIGURE 1. John Paul Jones, 1747 to 1792 (permission, J. Surg. Obst. Gynecol.).[6]

Early life

Admiral John Paul Jones started life on July 6, 1747, in a small cottage in Galloway, western Scotland. At age 19 he was chief mate on a slaveship, a Jamaica-Guinea brigantine. In this nefarious trade, epidemics were frequent and sailors died almost as fast as their human cargo. Young Jones wrote home about his "several severe fevers." Finally, he resigned from this position and sailed for Great Britain. Both the captain and the first mate died of malarial fever early on that voyage; thus, John Paul Jones took command and, on arrival in port, was made master at the age of 21 (Fig. 1).

In 1775, at the bidding of the U.S. Congressional Marine Committee, Jones was requested to consider "how to build a navy." He was the first to hoist the Stars and Stripes as the ensign of the Republic and was named by Congress to serve as first lieutenant on the frigate *Alfred.* General Burgoyne's surrender to General Gates at Saratoga, New York, was the turning point of the American Revolution, and Jones was chosen to carry the news to France on a ship called the *Ranger.* There he found a new friend in the canny and assiduous Benjamin Franklin, then minister to France. The United States also found a new friend, for France now left the harbor of neutrality for the seas of intervention. Jones's association with French admirals, statesmen, nobles, and plain citizens added to his own reputation and to that of America's.

In April, 1778, the *Ranger* captured the *Drake*, bringing the new U.S. Navy its first victory over a British ship of war. This reward was delayed by French and American red tape and by the bungling officials of both nations; eventually, Jones received a sword of gold, a medal of merit from Louis XVI, and a purse of $50,000.

Given command of an old tub, *Le Duras*, he changed its name to *Le Bonhomme Richard* as a compliment to Benjamin Franklin, and set out with three other vessels on the famous adventure that ended with the moonlight victory over the English *Serapis* and immortalized the phrase, "I have not yet begun to fight."

Age and illness

Paris celebrated the conquest with wild delight; the king made Jones a chevalier. But there was intrigue against him in America. He returned home at war's end, sick with thwarted hopes and suffering from marsh fever.

Admiral John Paul Jones, being nonessential in America for the time, was open to offers from foreign countries. Succumbing to the flattery and adulation of the Russians, he made the 1,000-mile journey from St. Petersburg across the bleak Russian steppes to the pretentious but disease-ridden military post of St. Elizabeth. Although tired, half-sick, and caught again in a net of intrigue, Jones, as a doughty Russian near admiral, won an astonishing but unappreciated victory over the Turks on the Black Sea.

John Paul Jones asked for and was granted a two-year leave of absence. In June, 1790, he arrived in Paris. Yellow and emaciated, lonely and sad, the admiral confined himself to the seasoned joys of a few groups of old admirers. Repeated exposure to cold and stormy weather had affected his respiratory system, and intermittent fevers had injured his kidneys.

When Madame Arbegne, his housekeeper, entered his room on the evening of July 18, 1792, she found that the death of John Paul Jones had preceded her. Governor Morris, then American ambassador to France, had witnessed his will just hours before. The attending physician had been the great anatomist Vicq d'Azyr, Marie Antoinette's physician and the permanent secretary of the Paris Academy of Medicine.[6]

The French Assembly passed a unanimous resolution honoring the memory of John Paul Jones, "Admiral of the U.S.A.," and decreed that 12 of its members should assist at the funeral. Admiral Jones's body was laid in the St. Louis Cemetery for protestant foreigns in Paris, having been put in a leaden coffin "that in case the United States should claim his remains, they might be more easily removed."

Interim period

For 113 years, the body of America's first naval hero lay forgotten in the little cemetery of St. Louis, which became successively a garden, a dumping ground, and the site of a laundry and of several other squalid buildings. Two unsuccessful attempts to locate the grave were made, but it was not until 1905 that Ambassador Horace Porter, by a long and painstaking examination of cemetery records, city maps, and documents, was able to trace the burial place.

Five shafts were sunk with galleries in all directions; the intervening spaces were probed by long iron rods. Five leaden coffins were found, of which the

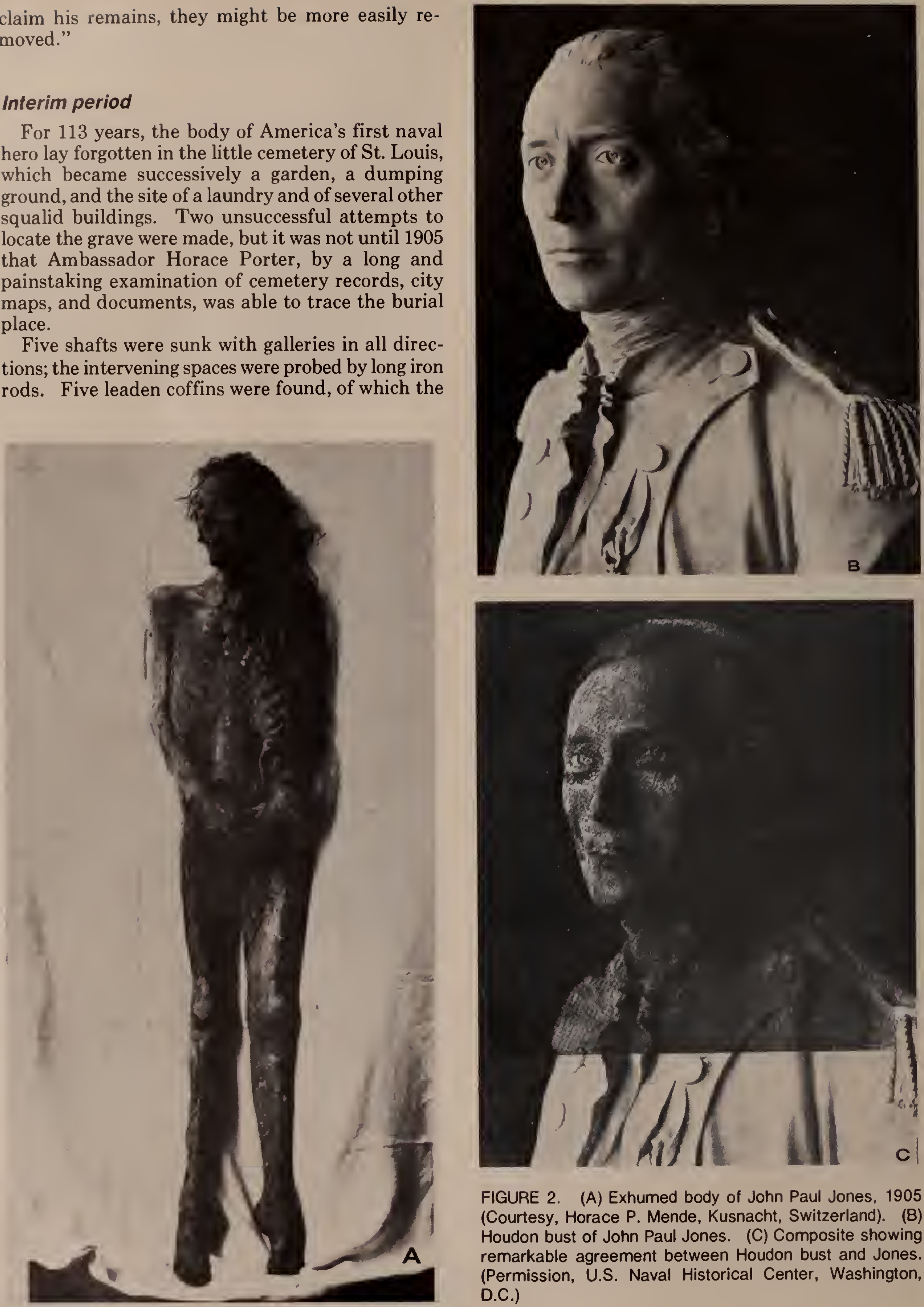

FIGURE 2. (A) Exhumed body of John Paul Jones, 1905 (Courtesy, Horace P. Mende, Kusnacht, Switzerland). (B) Houdon bust of John Paul Jones. (C) Composite showing remarkable agreement between Houdon bust and Jones. (Permission, U.S. Naval Historical Center, Washington, D.C.)

third was superior in solidity and workmanship. It contained a well-preserved male body packed in hay, straw, and what had probably been alcohol. Clothed in a winding sheet and linen shirt, the body had its long hair gathered into a monogrammed cap. The flesh was still intact.[7]

The postmortem studies were conducted by a group of French scientists in Paris. They included J. Capitan, Ph.D., professor in the school of anthropology, member of the municipal commission of Old Paris; G. Papillault, Ph.D., assistant director of the laboratory of anthropology of the École des Hautes Études, and professor at the school of anthropology, 3 Quai Malaquais; and Prof. V. Cornil, professor of pathologic anatomy on the faculty of medicine of Paris.

*Autopsy**

The opening of the coffin took place on April 9, 1905. The corpse had been partially covered with tinfoil.

Clothed in a shirt and wrapped in a winding sheet, the corpse had been placed in a solid leaden coffin, then the empty spaces had been carefully stuffed with hay and straw; the lid had been soldered shut. A small orifice of about 2 cm. in diameter had been made at the top of the lid, over the head. It might have served to introduce alcohol, or at least to complete the supply introduced, and to permit the escape of gas or air at the time of closing the coffin which had been soldered shut at burial. The contracted integuments of a brownish gray had retained their flexibility.

A photograph was made of the body (Fig. 2A). Then a photograph of the head and upper torso was superimposed on a photograph of the Houdon bust (Fig. 2B and C).† On comparison, the bust and cadaver measurements were close (Table I).

TABLE I. Comparison of bust and cadaver measurements

Data (length)	Bust (cm.)	Body (cm.)
Face from root of hair to chin	19.5	19.5
From root of hair to subnasal point	12.7	12.9
From subnasal point to chin	7.5	7.4
Upper lip	2.4	2.5
Lower lip and chin	4.6	4.6
Minimum width of forehead	10.4	10.2

Clinical findings. The viscera were contracted, but were well preserved. The lungs presented some adhesions to the pleural walls, especially in the upper lobes, and the parenchyma was brownish. On the surface and in the interior of the edge of the pulmonary tissue, especially at the level of the diaphragmatic edge of the lower lobe, there were small, white, hard masses varying in volume from a grain of canary seed to a diameter of from 3 to 4 mm., and having the appearance of calcified tubercles.

The heart, small, contracted, and the color of dead leaves, had absolutely normal and still perfectly flexible valves; the walls of the two ventricles measured 5 to 6 mm. in thickness. There was no hypertrophy of the left ventricle. On the surface of the right auricle there were flat concretions "souendocardiques" (under the endocardium).

The contracted liver was yellowish-brown, the tissue dense and compact. The gallbladder was healthy and contained a pale yellowish-brown bile, of a pasty consistency.

The stomach was very small and contracted. The spleen appeared comparatively more voluminous than it ought to have been, considering the marked contraction of all the viscera; it measured from 6 to 7 cm. on its greater axis, and the tissue appeared rather firm.

The kidneys were hard, contracted, and small; the intestines were completely contracted and empty. The brain was not examined.

Small biopsy fragments were removed for tissue study and then the organs were replaced within the body cavities.

Microscopic anatomy revealed the following:

> Left lung: On the surface of the lung were whitish and opaque granules, ranging from the size of a millet seed to a hemp seed; they were located in the pleura and in the lung itself (Fig. 3). The fibrous structure of the pleura and the alveoli were perfectly preserved. There is a small grayish spot in the center, surrounded by a thick fibrous envelope. On section, the central part presented pulmonary alveoli distended by small round cells and an agglomeration of tyrosine crystals.
>
> There were no bacilli of tuberculosis (stained by Ziehl's solution). It appeared to be a former pneumonia or bronchopneumonia, healed and surrounded by fibrous tissue.
>
> The heart and aorta showed "muscular fibers, streaked lengthwise and crosswise."
>
> Sections of the liver were normal (Fig. 4).
>
> There was far-advanced interstitial glomerulitis (or possibly amyloidosis). Some of the glomeruli were transformed into fibrous nodules. The Bowman's capsules were variously much thickened. The arteries also were very thick and surrounded by or filled with crystals of fat. These lesions in the kidney were accompanied by interstitial nephritis (Fig. 4B).

From the July 19, 1905, edition of the *Paris Le Temps* comes the following:

> We know that the celebrated sailor had manifested some very grave pulmonary symptoms toward the close of his life, and that they were localized in the left lung. Further, that sometime before his death, he had had dropsy of the lower extremities, descending to the feet and ascending to the abdomen, indicating also a renal affection. The histo-

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* Edited by author.

† Of the French Masonic Lodge, Le neuf Soeur (The Lodge of the Nine Muses).

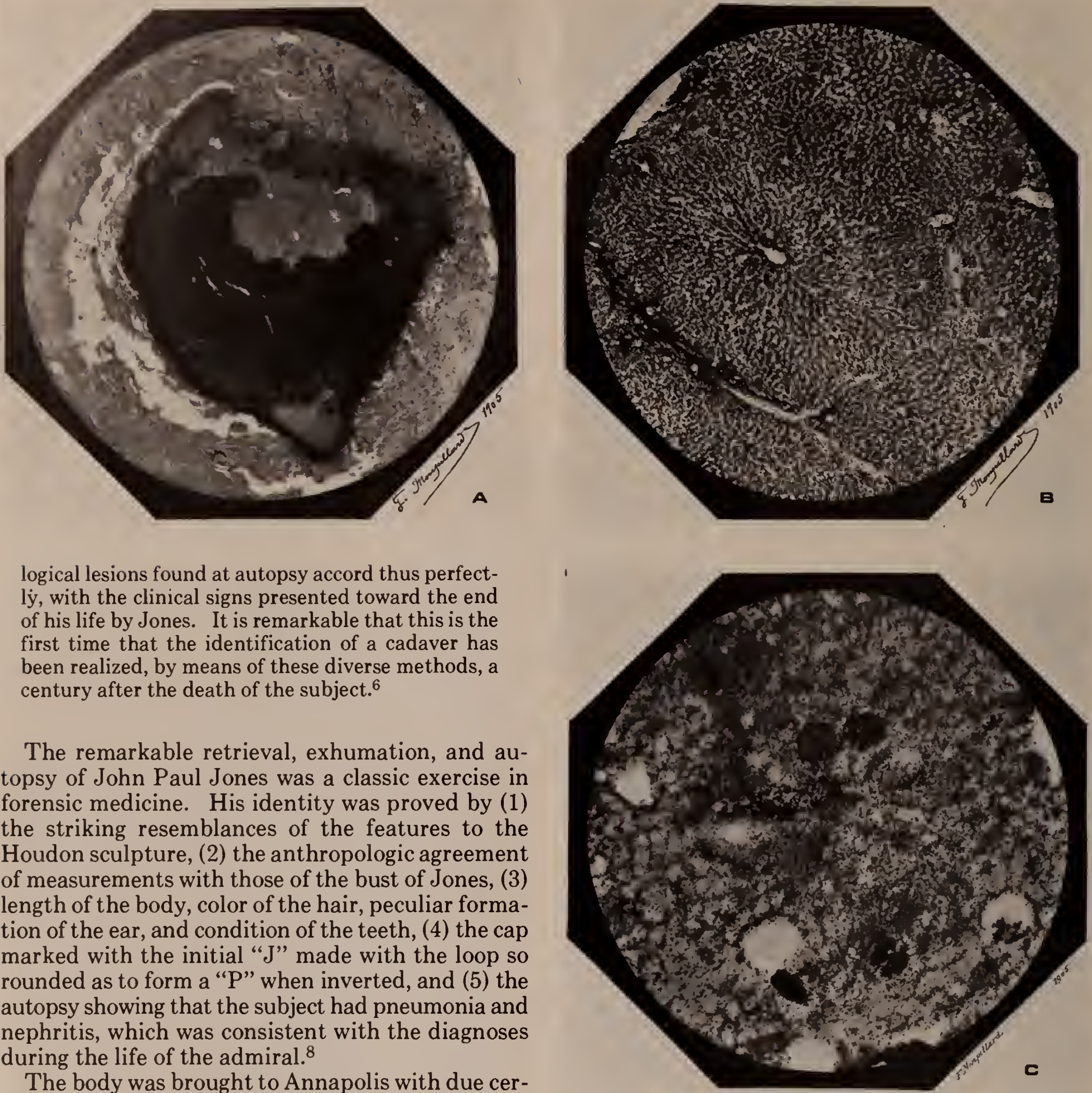

FIGURE 3. (A) Section of left lung showing foci of chronic bronchopneumonia. (B) Section of liver (original magnification ×150). (C) Section of kidney demonstrating fibrosis of glomeruli and interstitial nephritis (original magnification ×100). (Hematoxylin-eosin and van Gieson's stains). (Permission, U.S. Naval Historical Center, Washington, D.C.)

> logical lesions found at autopsy accord thus perfectly, with the clinical signs presented toward the end of his life by Jones. It is remarkable that this is the first time that the identification of a cadaver has been realized, by means of these diverse methods, a century after the death of the subject.[6]

The remarkable retrieval, exhumation, and autopsy of John Paul Jones was a classic exercise in forensic medicine. His identity was proved by (1) the striking resemblances of the features to the Houdon sculpture, (2) the anthropologic agreement of measurements with those of the bust of Jones, (3) length of the body, color of the hair, peculiar formation of the ear, and condition of the teeth, (4) the cap marked with the initial "J" made with the loop so rounded as to form a "P" when inverted, and (5) the autopsy showing that the subject had pneumonia and nephritis, which was consistent with the diagnoses during the life of the admiral.[8]

The body was brought to Annapolis with due ceremony, and commemorative exercises were held in the Naval Academy's Bancroft Hall on April 24, 1906. On January 26, 1913, 121 years after his death, the admiral's body was finally placed in the crypt of the Naval Chapel. Cut into the marble of the mausoleum are the names of seven of his ships, including the *Ranger* and the *Bonhomme Richard.*

The sea had served the admiral in many wondrous ways, even better, at times, than the society that the admiral so vigorously defended. Pike[9] states: "The causes of both good and ill are referred to a mysterious centre to which each assigns such attributes as correspond with his own intellect and advance in civilization." The admiral possibly sought this mysterious center in the vast unknowns of the oceans.

Thus, at long last, burial in the land he loved came for Admiral John Paul Jones, founding father of the United States Navy and "hero extraordinaire." The search for truth, through the science of forensic medicine, restored at least the mortal remains of this great and brave man not only to the ages but to his rightful and earned resting place.[10]

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The curse of the ancient tomb

Curses that befall those who defile ancient tombs most certainly belong to the realm of fiction. Or do they?

Take the case of the poisoned art conservator, reported in this week's *Journal of the American Medical Association.* She was restoring a tapestry found in Peru during the excavation of an ancient tomb when she fell ill.

While the story is not as chilling as those attributed to more famous tombs in Egypt, it shares certain common elements: seemingly unknown forces reaching through time, a mysterious ailment, and a suspicious powder.

At another time all these elements conceivably could have given rise to another haunting legend. But this time, thanks to some sharp medical sleuthing, not only was the woman saved, but the investigators also discovered a plausible explanation.

As the events, which took place in 1979, have been reconstructed by Alf Fischbein, MD, the principal author of the *JAMA* article, the scenario places the woman in a poorly ventilated room in an area of New York City that has a large concentration of artists, artisans, art studios and shops. There she spent time cleaning the tapestry and applying a powdered red pigment that had been found in the same tomb.

She also mended the tapestry with needle and thread and, in doing so, frequently put the thread in her mouth to wet it, says Fischbein, who is at Mount Sinai Medical Center in New York City.

At some point in the process, which began in January and took approximately six weeks, she became irritable and felt unable to cope with her adolescent children. In March, she complained to her physician of fatigue, dizziness, muscular pains and an intermittent burning sensation in the upper left side of her abdomen. Eight days later, her cramps worsened and a blood test showed abnormal levels of lead.

That and other tests lead to a presumptive diagnosis of lead poisoning, and she was instructed to discontinue her restoration work pending complete evaluation of her work environment.

Samples of the red powder from the tomb were found to contain mainly cinnabar – a mercury compound – that the authors speculate had originally been sprinkled over the objects in the tomb as a preservative (such compounds can bar the growth of fungus). But that was not all.

Traces of red lead – enough to have caused the poisoning – were also found in the powder.

The woman was unaware, the authors say, that the powder contained lead, and she made no effort to avoid inhaling it or ingesting it after the dust settled on her sewing thread.

Obituaries

Edward J. Amorosi, M.D., Brooklyn
Died December 12,1981; age 87.
St. Louis University School of Medicine, 1930. Membership: Medical Society of the County of Kings and Academy of Medicine of Brooklyn, Medical Society of the County of Queens, Medical Society of the State of New York.

Ludmilla F. Brown, M.D., F.A.C.G., New York City
Died September 1, 1981; age 84.
Medical Institute of Kharkoff (Russia), 1918. Membership: Medical Society of the County of New York, Medical Society of the State of New York.

Julius Buchwald, M.D., Brooklyn
Died March 9, 1982; age 57.
Chicago Medical School, 1953. Membership: Medical Society of the County of Kings, Medical Society of the State of New York

Julius Burstein, M.D., F.A.C.C., New Rochelle
Died December 10, 1981; age 81.
Western Reserve Medical School, 1924. Membership: Bronx County Medical Society, Medical Society of the State of New York.

Victor Carabba, M.D., F.A.C.S., New York City
Died January 15, 1982; age 84.
University & Bellevue Hospital Medical College, 1926. Membership: Medical Society of the County of New York, Medical Society of the State of New York.

Wolfgang A. Casper, M.D., Staten Island
Died March 22, 1982; age 81.
University of Berlin (Germany), 1926. Membership: Richmond County Medical Society, American Academy of Dermatology, International Society of Tropical Dermatology, American Association for the Advancement of Science, Medical Society of the County of New York, Medical Society of the State of New York.

Ralph M. Colton, M.D., Buffalo
Died March 11, 1982; age 87.
University of Buffalo Medical School, 1924. Membership: Medical Society of the County of Erie, Medical Society of the State of New York.

Gordon J. Culver, M.D., F.A.C.R., Buffalo
Died February 17, 1982; age 68.
University of Buffalo Medical School, 1937. Membership: Medical Society of the County of Erie, Medical Society of the State of New York.

Vincent A. Del Vecchio, M.D., Ossining
Died January 24, 1981; age 76.
University & Bellevue Hospital Medical College, 1931. Membership: Medical Society of the County of Westchester, Medical Society of The State of New York.

Milton J. Eisen, M.D., F.C.A.P., Yonkers
Died August 6, 1981; age 75.
University & Bellevue Hospital Medical College, 1929. Membership: Medical Society of the County of New York, Medical Society of the State of New York.

Frederick A. Groff, Jr., M.D., Albany
Died July 23, 1981; age 68.
Long Island College of Medicine, 1939. Membership: Medical Society of the County of Schenectady, Medical Society of the State of New York.

Paul J. Halberstadt, M.D., New York City
Died November 25, 1981; age 70.
University of Nancy (France), 1937. Membership: Medical Society of the County of New York, Medical Society of the State of New York.

Myron Herman, M.D., The Bronx
Died February 11,1982; age 70.
New York University College of Medicine, 1936.
Membership: American Psychoanalytic Association Westchester Psychoanalytic Society, Westchester County Medical Society, Diplomate American Board of Psychiatry and Neurology, Fellow American College of Chest Physicians, Medical Society of the County of New York, Medical Society of the State of New York.

Arthur Hershman, M.D., Tupper Lake
Died December 19, 1981; age 70.
University of Zurich, Switzerland, 1936.
Membership: Medical Society of the County of Franklin, Medical Society of the County of Brooklyn and Academy of Medicine of Brooklyn, Medical Society of the State of New York.

Edward A. Horowitz, M.D., F.A.C.S., New York City
Died January 11, 1982; age 83.
Columbia University College of Physicians & Surgeons, 1922.
Membership: Medical Society of the County of New York, Medical Society of the State of New York.

Murray Horowitz, M.D., Valley Stream
Died September 10, 1981; age 56.
Hahnemann Medical College, 1950.
Membership: Medical Society of the County of Kings and Academy of Medicine Brooklyn, Medical Society of the State of New York.

Henry Dunham Hunt, M.D., Saratoga Springs
Died February 18, 1982; age 82.
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SOCIOECONOMIC ASPECTS OF OBESITY

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Introduction

Among the factors known to affect fatness and the level of obesity, none have been so extensively detailed as socioeconomic status (SES). Income, per capita income, income relative to needs, occupation, housing, education and composite indices all relate to the level of fatness and to the proportion of individuals deemed obese. In the United States and Canada, in the United Kingdom, on the European continent and in Asia, there is considerable evidence that higher SES adults and children differ from their lower SES counterparts in fatness level and in the frequency of obesity.[1,2,3]

Such major relationships between socioeconomic status and fatness are difficult to reconcile with theories of obesity and postulated mechanisms of fatness control. If the level of fatness is genetically determined, whether by hormonal action, enzymatic level or direct effect on the adipocytes, there are problems in explaining why gene frequencies should differ by social classes or by poverty index levels. The same problem holds for other explanations for fatness and obesity, including the set-point hypothesis, the taste hypothesis, the early experience hypothesis, the thermogenesis hypothesis and others. While the poor may differ from the rich in child-feeding practices that affect eating frequency, eating speed or the amount of food consumed, the notion of endogenous factors differentially distributed across the socioeconomic spectrum provides a conceptual problem, especially since the socioeconomic correlates of obesity transcend nations.

Economics and Obesity

For most countries studied, affluent children tend to be fatter than poorer children, at least from later infancy up to adolescence. This trend is abundantly clear in the data of the Ten State Nutrition Survey of the United States,[4] the Pre-School Nutrition Survey, the Health and Nutrition Examination Survey I (HANES) and earlier data from the National Center for Health Statistics, in the Tecumseh (Michigan) Community Health Study, and in many other studies and surveys. As in the Central American Nutrition Survey that covered six meso-American nations, it can be shown that people who have more money have fatter children and that the children of the poor are more often lean. Asian and African fatness comparisons by social class do not differ in this respect.

Taking adult males into consideration, these same generalizations hold. In the Ten State Nutrition Survey, poverty-level black and white males are leanest of all. Males of middle-income level more often tend to be fatter and are more often obese. Analyses of male fatness data from the HANES I and Tecumseh, Michigan, studies are consistent with this trend. As with fatness data on children, the relationship between income and fatness in men is at least reasonable, fitting nicely with the older economic concept of Conspicuous Consumption.

But when attention is given to the adult American woman instead of the man, the obvious economic relationship between fatness and money becomes reversed. In the Ten State Nutrition Survey, in Tecumseh, and in HANES I and in Take Off Pounds Sensibly (TOPS) clubs, it is the more affluent woman who weighs less and is least often obese. It is the woman at the lowest educational level, having the least rewarding occupation and lowest per-capita income, who is more often obese. At the bottom of the socioeconomic ladder, obese women are especially prevalent. Obesity may characterize up to 60% of such poor women, and they often exceed their husband's body weight. The extent to which there is agreement among studies conducted in the United States and elsewhere is impressive. So is the general finding that the relationship between income and fatness in the adult female is the opposite from that in children and adult males.

Some Reversals of the General Trend

To some extent, socioeconomic associations with fatness level are unidirectional. In boys and girls and in adult males, the level of fatness increases through middle-income level and so does the probability of being obese. But in adolescent girls and in adult women, fatness level and the probability of obesity actually decreases with increasing income and the socioeconomic status of the family. This reversal is described as "the socioeconomic reversal of fatness in the female." It appears in numerous studies and complicates the search for explanations. Serial, longitudinal studies of fatness in Tecumseh, Michigan, also show that poor girls generally gain more fat than do richer girls over a 5-year, 10-year and 20-year period.[5,6]

Nor is the income-related increase of fatness in the male neatly linear. The high-income male or the male of high socioeconomic status is much more likely to be lean, much like the high-income and high-SES female. From the data available, it does appear that the "beautiful people" are more often lean. Unfortunately, few have studied the rich and truly affluent, the people who make society pages.

With these exceptions, which merit further attention and explanation, the general trend is for fatness to rise with socioeconomic status in children and adult males and for the probability of obesity to increase in parallel fashion. Taking obesity as a risk factor in atherosclerosis, hypertension, diabetes and other diseases, it is the middle-income child and adult male and the low-income adult woman who is most at risk.

"Explaining" the Socioeconomics of Obesity

Though the associations between socioeconomic status and the level of fatness are well documented and replicated in dozens of studies and surveys, the reasons for the associations are not all clear. The investigations which have related measures of fatness to income, occupation, education and housing in samples of a few hundred to tens of thousands have rarely given attention to the purely symbolic aspects of food, eating and appearance, or to the impact of the printed and electronic media on the "body image."

The fact that impoverished girls and boys in the United States are generally leaner than their more affluent peers is in accordance with worldwide trends. It suggests that poor children either have less to eat or less encouragement to eat. Both food-intake data and serum and biochemical measures in the Ten State Survey of 1968-1970 and other nutritional surveys are in accordance with this proposition.[4]

The fact that the level of fatness also rises with socioeconomic status in adult males is in accordance with economic theory, noting that low-income males are more often unemployed or, when part of the labor force, more likely to be involved in tasks demanding considerable energy expenditure. (Note that the level of fatness and the probability of obesity in males increases up to the professional level, but apparently decreases thereafter.)[8]

In the female, from adolescence on, the inverse relationship between socioeconomic status and the level of fatness has no easy explanation. Foods of low-caloric density are expensive, less accessible to the poor, and less often part of their food world. Poor women are more often employed in food preparation and therefore may have continuing access to calories. Poor women are apparently less likely to purchase and read the magazines that feature low-calorie diets. Interviews suggest that they do not identify with the slim creatures seen on television.

Reconciling Different Explanations for Obesity

It is still difficult to reconcile what we now know about socioeconomic associations of fatness level and of obesity with particular genetic, metabolic and sensory explanations for obesity. Any "genetic" explanation, whatever the controlling mechanism, would have to assume different gene frequencies in the poor and in the rich, repeated in many different human populations. A sensory explanation, involving a preference for sweet or sugary foods, would have to assume different frequencies in poor women and rich women. To some workers in obesity research, the "socioeconomic reversal of fatness in the female" after adolescence challenges the assumption that fatness is necessarily endogenous, inherent or "constitutional" in nature.

The notion that adolescent and adult fatness both result from early programing or reprograming of fat-cell size or number is also challenged by the massive socioeconomic data, including the "socioeconomic reversal of fatness in the female." It is difficult to comprehend how fat-cell programing in infancy could make poor girls leaner earlier, but fatter later. Yet the early induction of fatness may well be a very real phenomenon, just as there may be genetic and metabolic determinants of fatness that are overridden or obscured in the mass by socioeconomic factors that also determine fatness level and allow some to become obese. Obese human beings may include the socially obese and the genetically obese (a situation analagous to that proposed for alcoholics).

Eating Behavior and Social Class

While studies of the eating behavior of obese individuals are still relatively rare, and confined for the most part to obese adults, a number of interesting observations have been made.[9] The obese apparently find more situations that call for eating (or in which eating is appropriate behavior). The obese are reported to be more time-bound in their eating, as can be shown by manipulating the clock.[10] The appearance of food and its palatability have somewhat different meanings to the obese and the lean.[11] The obese are apparently more bound to the social aspects of eating, whether in the observance of religious holidays or in dormitory situations.[12,11,10,13]

It remains to be seen whether these discrete eating behaviors are differently distributed along socioeconomic and social-class lines. As with eating speed, bite size and number of swallows, the obese may differ from the lean because they differ in SES. It will be interesting to learn whether there is an obese way of eating that is learned in social context and whether class differences in eating behavior account for the associations.

Further Needs for Research

As mentioned earlier, socioeconomic data yet do not explain why fatness level and the incidence of obesity differs systematically from one social class to another or between the poor and the rich. The obvious economic explanation may apply to childhood obesity in the United States, but not to obesity in the adult female. There is no apparent economic reason why the incidence of obesity should be least in the truly rich of both sexes.

Data from national nutritional surveys do suggest that middle-income boys and girls eat more food and food of higher nutrient densities.[4] But it is not known whether the greater incidence of obesity reported in teenage, middle-income boys is a product of encouraged eating or diminished energy expenditure.

During adolescence, lower-income girls gain in fatness disproportionately compared with those of higher income or income-to-needs, but it is not known why.[2,14] It may be that, in the culture of poverty, poor girls are as actively encouraged to gain fat as the richer girls are encouraged to lose fat at adolescence. This suggestion may be extended to adult women and to the factors that limit energy intake and encourage energy expenditure.

Clearly, the printed and electronic media must have some influence on eating habits and it is a reasonable inference that more affluent adults are more influenced and to a greater extent. But it is not clear whether the movies, television, magazines and newspapers are more effective than peer-group pressure and the appearance of peer-group members. It is not clear whether the media affect food selection, bite size, masticatory activity, eating speed and the number of swallows. Though the food industry has spent millions of dollars advertising low-calorie foods and restricted-calorie menus, it is a moot question whether such advertising has had as much effect on fatness as it has had on sales.

Yet, not all low-income women are either fat or obese and it remains to be determined how these exceptions have escaped fatness. In contrast, some high-income women are rich, but not lean. Attention to these problems and these exceptions may elucidate the fatness problem just as attention to the socioeconomic concomitants of fatness and obesity provides valuable insight into the genesis of obesity and its maintenance.

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—Patients throughout their entire diabetic life may never have any warning of impending insulin hypoglycemia.

—In addition, hypoglycemia can occur without symptoms.

—It is suspected that repeated insulin hypoglycemia itself causes the failure to recognize symptoms.

—Hypoglycemia without warning increases with the duration of diabetes.

—When insulin reactions without warning become a problem, it is best to advise frequent, small feedings, multiple doses of regular insulin, and to sacrifice some quality control of the diabetic state to prevent disastrous problems.

—Insulin-induced edema may develop in elderly patients within days after the initiation of therapy. The antinatriuretic effect of insulin is not clearly understood; it may be related to the direct effect of the hormone on renal tubular mechanisms for sodium resorption or to a heightened aldosterone activity. This is a temporary phenomenon and, when severe, may necessitate the short-term use of diuretic agents.

—The average rate of secretion of insulin by the pancreas in a normal individual, determined by studies of insulin secretion in patients who have undergone pancreatectomy, is 20 to 60 units per day. Theoretically, then, any diabetic patient requiring more than 60 units per day has insulin resistance. However, for actual working purposes, insulin resistance has been defined as the need for more than 200 units of insulin daily.

—Insulin resistance develops in about one tenth of one percent of the diabetic population.

—About 75 percent of diabetics who develop insulin resistance are over the age of 40, and many are only mildly diabetic.

—Insulin resistance affects both sexes equally. It will almost always appear within the first five years of therapy and will develop in two thirds of afflicted patients within one year of treatment.

—About one-half the diabetic individuals with insulin resistance need at least 1,000 units of insulin daily, and occasionally more than 25,000 units are required.

—Insulin is commercially available in concentrations of 500 units per cubic centimeter to avoid the administration of inordinately large volumes to patients with insulin resistance.

—In most patients, insulin resistance resolves spontaneously within six months of its development. Less than 25 percent of all cases extend beyond one year.

—Causes of insulin resistance may be acute or chronic. Acute insulin resistance is caused by severe ketoacidosis. This condition is transitory and when the ketoacidosis clears, insulin resistance resolves. Several factors known to be responsible for chronic insulin resistance include: chronic infections, such as tuberculosis, liver disease (particularly hemochromatosis), hyperthyroidism, and hyperfunction of the adrenal cortex or the anterior pituitary. Administration of corticosteroids may also interfere with the use of insulin.

—However, true chronic insulin resistance is caused by the development of antibodies against insulin.

—Corticosteroids may be used to treat insulin resistance. Different types of insulin may be tried; pork insulin is generally recommended because, of all the animal insulins, it is chemically closest to human insulin, differing by only one alanine component.

—A very pure form of insulin, known as monocomponent insulin, is now available on special request. If a change in the type of insulin used produces no response, the patient can be desensitized.

—Allergy can play a role in insulin resistance. The crossover between insulin allergy and insulin resistance is about 25 percent.

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Month in Washington

The American Medical Association has urged Congress to legislate the Federal Trade Commission out of the business of regulating the profession of medicine.

The "ultimate loser" as a result of the FTCs present activities is "the patient — the men and women of American who will be victimized by the practices that responsible professionals are trying to prevent through reasonable self-regulation," said Newton Minow, lawyer for the AMA in its seven-year legal battle against the FTC on the issue of physician advertising.

Minow, Joseph Boyle, M.D., Chairman of the AMA Board of Trustees, and James Sammons, M.D., AMA Executive Vice President, appeared before a House Commerce Subcommittee considering legislative proposals for reauthorizing the FTC.

Noting that the Supreme Court recently by a four-to-four vote failed to resolve the question of the FTCs jurisdiction over the professions, Minow said the issue now should be settled by Congress.

"We urge that this subcommittee act favorably on legislation that would clarify that Congress never empowered the FTC to regulate professional associations or to strike down duly enacted state laws governing the professions," said the lawyer. In the interim the AMA urged enactment of legislation (H.R. 3722) that would place a moratorium on FTC activities involving professional associations.

Dr. Boyle stressed that the moratorium would have no financial impact on the profession as a whole, that there is no self-interest involved. The problem with present FTC jurisdiction, Dr. Boyle said, is "the aberrant, unscrupulous physician who could make the patient suffer. The unscrupulous physician is freer than he was before; the FTC does not help the public."

Dr. Sammons told the subcommittee, headed by Rep. James Florio (D-NJ), that the FTC "accomplished absolutely nothing" except to jeopardize the status of medical ethics in its long legal battle with the AMA. There is "total adequacy" among the states and with the Justice Department to handle antitrust problems involving the professions, Dr. Sammons said. "We are not attempting to duck the antitrust laws by any means."

The lack of expertise is "a mockery," he told the lawmakers. The agency focuses on cost without considering the question of quality, Dr. Sammons said.

Minow said the standards that the FTC applies to commercial firms "are not appropriate in dealing with the professions."

Congress, he said, "should not entrust regulation of medical or other professional organizations to an agency created to provide expertise in regulating industrial and commercial entities." The FTC "brings zero knowledge to the health field — zip." The agency, Minow told the lawmakers, "has demonstrated a commitment to impose its own values in place of responsible positions taken by the professions and in place of valid laws duly enacted by the sovereign states."

Any medical organization that resists the FTC "is subjected at a minimum to a very expensive preliminary process during which it must explain the important public interests served by such programs as certification of physician competence."

Dr. Boyle pointed out that the California Medical Association (CMA) was forced to sign a consent decree with the FTC on a relative value study after advice from lawyers that although the courts probably would uphold CMA, the cost of defending the association's position would be $1.5 million.

Asked at a news conference following the congressional testimony why the FTC was pursuing its course against the professions, Minow said many people at the agency see no difference between the professions and trade or business; they believe the marketplace is the best governor. In addition, Minow said, "there is the tendency of any government agency to expand its efforts."

"We think there is an enormous difference in values between the professions and trade or business, especially in medicine where professional values make a very big difference to patients," said Minow.

Dr. Sammons said the FTC "seems incapable of understanding what professionalism is all about. Their mind-set simply doesn't comprehend the nature of professionalism."

This attitude appears to be a "straight path toward total control and domination of the professions by the FTC," said Dr. Sammons.

Rep. Norman Lent (R-NY), a co-sponsor of the Luken-Lee FTC moratorium bill, said that as he understood the AMA testimony the removal of jurisdiction over the professions from the FTC would leave no gaps in the law because of the continuing jurisdiction by the states and by the Justice Department. The AMA witnesses agreed.

Subcommittee chairman Florio pointed out that the chairman of the FTC, James Miller, and the Office of Management and Budget have opposed moves to strip the FTC of its professional jurisdiction.

In other testimony, American Dental Association (ADA) President Robert Griffiths said the FTC has "no business overriding state laws by administrative fiat." Noting that the ADA was a party to the Supreme Court decision on the AMA advertising case, Griffiths said that to leave the FTC's jurisdiction undefined is to leave the professions "to the whim and caprice of whomever had administrative charge of the agency at any given time."

The National Society of Professional Engineers also urged removal of FTC jurisdiction over professionals.

However, The American Nurses Association, the National Association of Chain Drugstores and the National Chiropractors Association opposed the removal of FTC jurisdiction over the learned professions.

The AMA has opposed two bills in Congress that would alter the Professional Standards Review Organization (PSRO) program. In testimony before the Senate Finance Subcommittee on Health, AMA trustee William H.

Prepared by the Washington D.C. office of the American Medical Association.

Hotchkiss, M.D., said the Association opposed the two bills — S. 2142 and S. 1250 — because "the proposals would continue many of the objectionable features of the existing PSRO program."

S. 2142 would repeal the existing PSRO program and replace it with a Utilization and Quality Control Peer Review Organization. S. 1250 would establish an 11-member advisory group (6 of the members would be physicians with PSRO experience) to advice the Department of Health and Human Services Secretary on consolidating PSRO areas.

Dr. Hotchkiss noted in his testimony that the proposed new program would be mandatory, just as the present PSRO program is. "Just as the PSRO program shifted from quality orientation to cost orientation, we see nothing in the bill that would likely cause a different result," he said. "The mandatory nature of the proposal would give the Secretary significant bargaining power in negotiating contracts with review organizations, and costs would become an overriding factor in negotiating objectives that would again be used in judging an organization's performance."

The AMA also objected to the fact that the new review organizations would be authorized at the government's discretion to conduct pre- and post-review of services, examine Medicare providers' records, and inspect facilities where services are delivered. "This raises the potential that the program could direct medical care and interfere in the physician-patient relationship," Dr. Hotchkiss said.

In addition, Dr. Hotchkiss noted that under the proposed bill review could be performed by an organization that had no physician members, and the HHS Secretary could terminate a review contract at will. "The AMA objects to both provisions," he said.

In conclusion, Dr. Hotchkiss told the committee, "we do believe that a system of voluntary medical peer review could act effectively in assuring the quality of medical care for all patients, and that this could be accomplished without the substantial government expense of either the PSRO or proposed review organization program.

"The AMA will continue in the development of voluntary peer review. We believe that a voluntary system of peer review would serve the best interests of both the recipient and the provider of medical care." Hospital-associated physicians such as many pathologists, radiologists and emergency room physicians should be regarded as independent contractors rather than as employes of the hospitals, the AMA has told Congress.

The definition is of importance under the federal tax laws. Refusal of the Internal Revenue Service (IRS) to recognize such physicians as independent contractors would have an impact on the operations of the hospitals as well as the tax treatment of the physicians involved.

Jerald Schenken, M.D., a member of the AMA's Council on Legislation, told a Senate Finance Subcommittee that the issue of independent contractor status "goes to the very heart of professionalism." Dr. Schenken said there is no attempt by hospitals "to exercise any control or interfere in any way with the physician's independent exercise of medical judgment on behalf of an individual patient."

Speaking for the American College of Radiology, the American College of Emergency Physicians, and the College of American Pathologists as well as the AMA, Dr. Schenken noted that historically hospital-associated physicians have been considered by the IRS to be independent contractors under the common law rules and have not been considered employees of hospitals.

However, starting in the late 1960's, the IRS, "often arbitrarily," attempted to reclassify many independent contractors. Due to protests and uncertainties about the tax agency's policies, Congress in 1978 imposed a temporary moratorium on IRS rulings on the issue. The current moratorium expires July 1, and legislation has been introduced to spell out the criteria for independent contractors.

Dr. Schenken said physicians are concerned that the legislation "fails to take into account the unique circumstances of professionals, such as hospital-associated physicians."

As a result, the AMA has developed draft language to amend the bill to help assure that qualifying physicians who traditionally have been considered independent contractors not be improperly reclassified as employees. "Adoption of these amendments would resolve the independent contractor issue for hospital-associated physicians, thereby relieving both the IRS and these physicians from the expense involved in continued challenges and litigation concerning this issue."

The AMA witness pointed out that the IRS in 1979 conducted a study of income tax compliance by independent contractors. One conclusion was that such contractors had a high rate of noncompliance, but that medical professionals showed a "very favorable income tax compliance rate of 95.8%."

Physicians should be given the necessary training in medical school to provide health care in the most cost-effective manner according to the General Accounting Office (GAO).

A report recommended that the HHS Department monitor incorporation of of such training at medical schools and on a carefully-selected basis provide federal funding for seminars and conferences on the issue.

Medical school courses vary widely in approach and emphasis and need to be increased, said the GAO, recommending "thoroughly integrating cost-containment instruction into the clinical phases of medical education."

One approach might be to include questions that deal with elements of cost containment in medical examinations, said the GAO.

The agency cited one study that showed a one-year course of instruction resulted in a sharp decline in laboratory tests ordered by first year residents, of from 29 percent to 47 percent, an average reduction of $455 per hospitalization.

A cost limitation plan for Medicare hospital reimbursement is gathering momentum in the nation's capitol. Endorsement of the idea by the American Hospital Association (AHA) may have paved the way for Congressional enactment of a new reimbursement method this year.

The prospective fixed price program worked out by the AHA would "establish financial incentives for more efficient hospital services," said AHA President Alex McMahon at a Washington, D.C., news conference.

Hospitals would be paid at a prospectively-fixed rate for their Medicare load (a certain amount for each Medicare patient admitted), with the rate of increase of Medicare hospital payments limited to about 14 percent in the fiscal year starting in October. This compares with the 16 percent increase this year and a possible 17 percent or more next fiscal year. McMahon said the AHA plan could save the government $1 billion in fiscal 1983.

(*continued on page 1124*)

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(*continued from page 1122*)

At present, of course, hospitals are reimbursed under Medicare on the basis of costs incurred rather than according to an advanced formula.

The so-called "prospective reimbursement" plan has been proposed for many years in Congress without reaching passage. The Reagan Administration is preparing its version of a prospective plan that is scheduled to be presented Congress this Spring.

McMahon said the present Medicare reimbursement system has "expansionist tendencies," and was so designed originally. But now in an era of government contraction, there must be a change, he said, declaring that controls won't work and noting the hospitals' opposition to a flat percentage cut, "which is just dead wrong."

McMahon said the AHA intends to make every effort to push its program within the Administration and on Capitol Hill. In answer to a question at the news conference, he speculated that "prospective reimbursement" may be considered seriously in the future by private health insurors as a mechanism for keeping costs down in the private sector.

Asked about the degree of support for the plan among hospitals, McMahon said "my guess is that it would not be a unanimous agreement and that a number of hospitals would not like it at all."

Under the AHA proposal, the basis of payment is a predetermined fixed price per Medicare beneficiary discharge. (For technical reasons, discharge is employed rather than admission).

For fiscal 1983, the fixed price would generally be set by adjusting the hospitals' own actual 1982 Medicare allowable costs per beneficiary discharge by a forecasted price index. Only hospital inpatient services would be covered initially.

The government would be required, after consultation with the hospital industry, to develop and present to Congress within two years a companion fixed price system for paying other hospital Medicare services — outpatient and emergency room.

The system would be mandated for all hospitals located within standard metropolitan statistical areas and for hospitals with 100 or more beds in other areas. The other hospitals would have the option of being paid on either the fixed price basis or the current cost-based reimbursement system.

Hospitals not satisfied with the fixed price would be permitted to bill beneficiaries directly for the difference, but the plan provides numerous incentives for hospitals to accept the Medicare rate as full payment.

In a letter to hospitals, McMahon made a point of the pressures rising in Congress and within the Administration to reduce projected federal health care expenditures.

The AHA plan, he said, "provides opportunities and incentives for excellence in hospital management, while recognizing the new economic and political realities and protecting hospitals from arbitrary or unilateral decision-making by governments."

The American Society of Internal Medicine (ASIM) called on the federal government and other organizations with an interest in health care costs to consider a 10-point program of cost-containment incentives.

The program, which calls for alterations in federal and private health insurance reimbursement, is based on ASIM's contention that the present system includes "perverse incentives that encourage hospitalization, which by its nature is more expensive than ambulatory care."

"Those incentives also unintentionally reward inefficiency and penalize efficiency, promote costly technical/surgical procedures instead of less-costly (and frequently more effective) personalized caring services, and discourage patients, physicians, and hospitals from becoming actively involved in holding down the costs of medical care," according to ASIM.

Among insurance system changes recommended by ASIM are:

* Incentives for ambulatory care. * Prospective reimbursement under Medicare and Medicaid. * Copayments and co-insurance to promote patient cost-sharing in all private and public health insurance plans. * Reimbursement for physicians' "cognitive" or thinking services, as a way to discourage more expensive procedure-oriented care. * Coverage for preventive services, incentives for individuals to adopt positive health habits, and elimination of programs, such as federal price supports for tobacco, that are detrimental to health.

ASIM also urged legislation to expand patient choice of insurance plans and alterations in the tax structure, to discourage over-insurance. It also urged repeal of the federal health planning law, supporting voluntary, private-sector planning in its place, and called on the federal government to tighten up management of the Medicare and Medicaid programs. The Supreme Court has unanimously upheld current review procedures for Medicare recipients whose claims have been denied.

Struck down were two lower court decisions granting additional hearings to protest denials of claims. One case involved a group of beneficiaries and another, a medical supplier. In both cases the lower courts found a risk of bias under present procedures because the hearing officers are appointed by Medicare intermediaries.

However, Justice Lewis Powell, writing for the 9-0 court, said "Congress deliberately intended" to limit appeals by beneficiaries, suppliers and physicians contesting the amounts that are reimbursed. The opinion noted that the hearing officers' salaries are paid by the federal government and the insurance carrier pays all claims from federal funds.

John G. Veneman, 56, Under Secretary of the Health, Education and Welfare Department during the Nixon Administration, died at his home in Sacramento, CA, of an apparent heart attack. Veneman was a forceful advocate for the Nixon Administration's health programs. He was instrumental in securing Congressional approval of some major programs, including Health Maintenance Organizations.

Andrew Biemiller, 75, long-time chief lobbyist in Washington for the AFL-CIO, died April 3. Biemiller, who retired four years ago, was an influential figure in many of the major legislative battles of the past two decades involving health programs. He helped lead the fight for enactment of Medicare and Medicaid, and was a principal spokesman for a national health insurance program.

The Senate has passed a bill making sweeping changes in the way the federal government handles regulations. Congress would have the power to veto regulations the lawmakers don't like. A similar bill is nearing House action. Sponsors of the legislation contend that the government agencies often have gone beyond the intent of Congress in issuing regulations. The bills require cost-benefit analysis on major rules, periodic review of existing regulations, and restrict the use of federal funds to assist private groups attempting to influence regulations.

Nancy Reagan's medical project

A woman is like a tea bag, Nancy Reagan said, not meaning anything derogatory. "You never know her strength until she is in hot water."

She believes that mothers are all like that, and that as a group they can muster plenty of power to combat what she sees as a problem of major proportions among children and teenagers: drug and alcohol abuse.

Sitting at the end of a small sofa with one foot tucked under her, Nancy Reagan seems tiny and vulnerable. Her soft voice, even softer with the remnants of laryngitis during a recent interview, which appeared in the December 4 issue of *American Medical News*, a weekly publication of the American Medical Association, did nothing to diminish the determination behind her message: "Parents are the single most powerful force in this whole problem."

Mrs. Reagan sees addiction as the most democratic illness of all since it cuts across every economic and racial line. But for a long time parents, she feels, weren't involved in combating it. They shifted the responsibility to the schools or the police or the government, anybody but themselves, because, as she said, "it takes time, it take effort, it's not pleasant."

If the refrain of shifting responsibilities sounds familiar by now, Nancy Reagan is not simply echoing her husband's views, for she has put her own imprint on the message by quietly declaring war against drug addiction, and enlisting as her principal allies the nation's parents and a new national spirit of voluntarism.

The dimensions of the problem alone should be enough to make parents sit up and take notice. According to Mrs. Reagan, who is backed up by statistics from the National Institute of Drug Abuse and the American Council on Marijuana, one in every five youngsters between the ages of 12 and 17 is abusing drugs and one of three is abusing liquor.

Clearly this is not a problem that has faded away with the disappearance of what had been labeled the psychedelic age, a time in which many parents, who now have young children and teenagers themselves, grew up.

"We cannot just sit back and watch our children's minds turn to mush," she told *AMN* National Affairs Editor Dennis Breo.

Nancy Reagan, for one, intends to help change that. She has visited drug rehabilitation centers and residential treatment centers in several states, and has talked to young drug abusers and their parents.

"What I have seen at these drug treatment centers and what brings me back is not only the pain and sorrow, but the hope and the determination and warmth."

She has been encouraged by contact with teenagers who have fought and won the drug battle and also by the increased participation of families in fighting the problem, yet she is the first to acknowledge that more has to be done.

Despite the cuts in funds from many drug treatment programs, which have come about as part of her husband's efforts to reduce government spending, Mrs. Reagan has faith in the capacity of the private sector to become as active as it used to be in the past in fighting drug abuse.

"People have gotten into the habit of asking 'Can't the government do something?' instead of asking, 'Can't I do something?' " Nancy Reagan hopes to help change that habit and in doing so, help parents, "to turn this thing around."

New AMA Videocassette gives tips on borrowing money

In today's money market, physicians just starting practices can not be assured immediate access to bank loans. Obtaining start-up funds has become more difficult, and knowing how to prepare for meeting with loan officers is essential.

The American Medical Association now has available a color videocassette entitled "Borrowing Money: What a Doctor Needs to Know." This learning program, an invaluable aid for residents and other physicians planning to start private practices, explores various financing options and shows how to prepare for dealing with bankers.

Topics covered in the instructional program are —

- Documents needed by banks to back up loan requests, such as equipment and furnishing lists, cash flow projections, income tax returns, and net worth statements.
- Estimating money needs for equipment, leasehold improvements, and office rental or purchase.
- Factors banks consider, such as character, capacity to repay, economic and professional conditions in the area, collateral, and capital or net worth.
- Information about different kinds of loans, such as lines of credit, standard installment loans, demand and balloon notes, variable interest loans, and methods of computing interest.

The videocassette runs 27 minutes and is available for rental or purchase in four formats: ¾″ U-Matic, ½″ VHS, and Betamax I and II. The cost is $25 for AMA members to rent, $35 for nonmembers to rent, and $250 to purchase. A free study guide is included which can be retained and used as a reference tool. Additional study guides are available for $2 each.

To order, call the AMA Department of Practice Management at (312) 751-6667 or send a check or purchase order with the type of playback format desired to the Department of Practice Management, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

D.C. leads in percent of women physicians

The District of Columbia leads the fifty states and possessions in the percentage of physician population constituted by women. Its 764 women physicians make up 18.4

percent of all physicians within the District, proportionally the highest in the nation.

As of November, 1981, the national average for women physicians (federal and nonfederal) was 12 percent. The individual state percentages range from 4.5% (Idaho) to 16.7% (New York). States with less than seven percent women physicians are Idaho, Montana, North Dakota, South Dakota, Nevada, Utah and Wyoming. The leaders, all with more than 14 percent women physicians, are Delaware, Maryland, Massachussets, New Jersey, Illinois and New York.

Among the highest on the list were the U.S. possessions, including Puerto Rico (15%), the Pacific Islands (15.6%) and the Virgin Islands (17.9%).

Interestingly, when the figures are broken down to include only residents-in-training, the Virgin Islands fall to last on the list; of the three residents-in-training counted there, not one is a woman. But the Pacific Islands retain their leading position with 100 percent, or both, of the two residents-in-training counted there being women.

State percentages for residents-in-training range from 11.7% (North Dakota) to 27.7% (Delaware). States with fewer than 16 percent women residents-in-training are Louisiana, Florida, Montana, Alabama, Vermont and North Dakota. States with greater than 25 percent women residents-in-training are Connecticut, New Hampshire, Illinois, Wyoming, Massachusetts, Rhode Island and Delaware. Higher still are Puerto Rico (30.3%) and the District of Columbia (31.3%).

The current national average for women residents is 22 percent; for women medical students, the national average is 27.5 percent. According to a report by the American Medical Association's committee on women physicians in organized medicine, increasing enrollment of women in medical schools could swell the national percentage of women physicians to 33 percent within this decade.

Six national organizations join forces out of concern for rising health care costs

In an unprecedented move, six major national organizations have found common ground for concern over the escalating cost of health care at a time when such expenditures have taken an increasingly larger share of the nation's gross national product.

The six organizations — representing health care providers, insurers, business, and labor — issued a joint, formal statement on January 14, in Washington, D.C. expressing deep concern with the rate of increase in health care costs and the effects of public and private policies on the quality and access to health care.

In an effort to assist in the planning of sound programs aimed at maintaining quality health care at the local level, these organizations are encouraging their members or local affiliates to form health care coalitions or to participate in existing ones, and to direct their activities toward restraining health care costs.

The organizations that have issued the joint statement are: the American Medical Association, the American Hospital Association, the Blue Cross and Blue Shield Associations, the Health Insurance Associations of America, the Business Roundtable, and the AFL-CIO.

Entitled "Coalitions for Health Care," the statement is as follows:

"The country is in a period of review and reassessment of private and public policies relating to the costs, planning and delivery of health care.

Health care expenditures have taken an increasingly larger share of the nation's gross national product. While many efforts have been made to restrain rising costs, the problem persists and is of great concern to all health care purchasers (both governmental and private), consumers, and providers. All must share in the responsibility for seeking solutions.

The Federal Government, as a matter of policy, is calling on the states and localities and on the private sector for increased responsibility for health care insurance and services. The states, localities, and the private sector are in the process of redefining their roles in financing and providing personal health services. In this setting and out of these concerns in the past several years, there has grown up a variety of voluntary coalitions of hospitals, doctors, insurers, business, labor, and other concerned groups, public and private, in different combinations and participations.

As representatives of national organizations, we have been reviewing the experience of these local and state coalitions in their diverse forms and activities. Only a relatively few of the more than 70 coalitions of which we have records seem to have advanced beyond the important stage of discourse and exchanging views to the operation of specific programs or projects of cooperative activities. With health care costs rising more rapidly in the recent period and with the prospect of a diminished role, the need for organizing new coalitions and improving the effectiveness of existing coalitions is vital.

We are agreed upon the following conclusions and support the following programs:

Formation of coalitions

1. We endorse, in this period, the potentials of voluntary coalitions on a local, state, or regional basis. We encourage our members of local affiliates to participate together in such coalitions, recognizing that at the outset local conditions and relationships may appropriately result in different configurations, patterns of membership, and programs. But, in due course, for effective results, all concerned groups need to be included. An individual organization is unlikely to have the same impact if acting alone.
2. We view the most appropriate focus of local coalitions generally to be the costs of delivery of medical care, and the numerous factors which locally influence such costs, with related attention to the quality of care, to the availability of proper medical care and access to such care by various groups within the population.
3. Experience shows that, after an initial period of dialogue and getting acquainted, a local coalition is likely to accomplish more with a limited agenda of a very few priority projects. Appropriate staff resources drawn from or financed by coalition members are essential to help collect information, define priorities, and implement action decisions.

(*continued on page 1128*)

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Analysis of local health systems

Local coalitions may find it helpful early to make an inventory or survey of local resources and problems, if that has not already been done. Data for this first level of assessment should be largely available, or can be developed from existing sources. Key areas of analytical concern include:

(1) The rate of increase in total health care costs in the area, the rate of increase in particular costs (hospitals, physicians, etc.) and the reasons for these increases.

(2) Utilization of acute in-patient hospital days of care in the area, how the rate compares with other areas the utilization rates of different population groups, and the steps which can be taken to reduce high utilization where excessive patterns are identified. A similar approach can be taken in regard to utilization rates of other health care services, eg, long term care, physician visits, laboratory and X-ray services, psychiatric care, etc. The effectiveness of existing utilization review systems should be assessed.

(3) Existing health care facilities and services in the community, with an assessment of the availability of needed services, especially for the disadvantaged and unemployed. Excess facility capacity should also be assessed.

(4) Analysis of health benefits packages and options (eg, HMOs and other alternative delivery systems), as well as gaps in coverage of services.

Potential actions

Following the analysis of the local health care system the coalition's next step is to decide on a few priority projects. These projects could take the form of either a demonstration to gain experience, establish relationships and test policies or a community-wide action. Among projects with a demonstrated potential for improving cost and delivery of health care are:

(1) Encourage efforts to place less emphasis on expensive in-patient technology and greater emphasis on alternative forms of care, including ambulatory and home care. Among the activities which may accomplish this objective are:

    a. Redesign insurance benefits to emphasize preventive, primary and home care.

    b. Case management and utilization review with both health care and financial protection for patients.

    c. Encourage efforts to modify use of hospital beds, with protection of patients, workers and trustees, to make the most appropriate use of community health resources.

(2) Increase access to care:

    a. Efforts to finance and provide health care for the unemployed and others who do not have access to care.

    b. Efforts to mitigate the impact of federal (and state and local) budget changes on health care in the community.

(3) Increase opportunities to discuss and develop the most cost effective and equitable forms of provider payment.

(4) Develop more effective programs of health promotion and diseae prevention at the work place.

We intend to issue and distribute this statement to our constituent bodies or members. We further intend to follow the developments in local coalitions for health care and to provide appropriate reports and assistance."

1983 Research opportunities offered by Leukemia Society

The Leukemia Society of America, a national voluntary health agency, is now accepting applications for 1983 grants to support research in the fields of leukemia and related disorders.

According to Dr. Kenneth B. McCredie, vice president for Medical and Scientific Affairs, the grants are intended to encourage studies at both the basic science and clinical levels.

As an important source of funding for individuals whose work is concentrated on uncovering cures for leukemia, the lymphomas, Hodgkin's disease, and multiple myeloma, the Society offers three awards.

Five-year scholarships for a total of $125,000 are available for researchers who have demonstrated their ability to conduct original investigations in the specified fields. Two-year special fellowships and fellowships, for $37,000 and $30,000 respectively, are offered for those in the intermediate and entry stages of career development. In all categories, candidates must hold a doctoral degree but may not have attained the tenured status of associate professor.

Deadline for filing applications is September 1, 1982. Only one application in each grant category from an individual sponsor will be considered. Project proposals will be evaluated on a competitive basis by the Society's Medical and Scientific Advisory Committee. The reviews will take place next January with funding to start July 1, 1983.

For application forms and further information, write to Research Grant Program, Leukemia Society of America, 800 Second Avenue, New York, N.Y. 10017.

Retirement planning for physicians offered

Physicians will find that careful and comprehensive planning can make the difference between enjoying a deserved, rewarding retirement or encountering many unanticipated problems. The American Medical Association is offering intensive one-day workshops on "Gearing Up for Retirement." Physicians planning to retire soon or as much as 10 years from now will find them extremely helpful (and probably profitable).

These workshops feature expert speakers who offer guidance in business, financial, psychological, and even vocational aspects of painlessly winding down the medical practice and preparing for the adjustments that retirement will require.

Discussions cover such topics as tax and estate planning, selling a practice, wills and similar legal documents, investments, social security, the mechanics of closing an office, and personal adjustments to changing roles.

As the successful retirement of a married couple requires planning by both the physician and the spouse, spouses are encouraged to attend the workshops without extra charge. Fees are $100 for AMA members through August and $125 thereafter. Fees for nonmembers are $150. Refreshments and luncheons are included in the fees. Also included are extensive course workbooks that can serve later as guides for personal and financial planning.

"Gearing Up for Retirement" workshops are scheduled at AMA headquarters in Chicago from 8:00 a.m. to 5:00 p.m. Dates during 1982 are April 16, May 14, June 11, July 23, August 20, September 17, October 15, November 19, December 3, and December 4. Hotel reservations may be made nearby at reduced rates. For additional information about these "Gearing Up for Retirement" workshops, call the AMA collect at (312) 751-6381.

Pediatrics group receives grant to study payment plans for Medicaid doctors

A nonregulatory approach to containing health care costs while improving the quality of care for poor children will be tested in a four-year study in Suffolk County, New York, as a result of a grant from the John A. Hartford Foundation to the American Academy of Pediatrics.

The New York City-based foundation has awarded $75,640 to support the first year of planning for the project. When it is implemented the project will experiment with three payment methods to physicians to find the most cost-effective way of providing medical services to Medicaid-eligible children. The project, which also received support from the Health Care Financing Administration (HCFA) of the U.S. Department of Health and Human Services, will be carried out by the County Department of Social Services under a contract from the state of New York.

Explained John P. Connelly, M.D., FAAP, director of the Department of Health Systems, Research & Development for the AAP, "It is based on the fact that physicians are the gatekeepers to most medical services and may be influenced by financial incentives in the care decisions they make." Yet, Dr. Connelly added, in most cases decisions about which and how many services should be provided to patients are not influenced by cost considerations.

One of the three payment methods will be the present Medicaid fee-for-service system in which patients receive care wherever they choose and physicians are reimbursed by the Department of Social Services at the usual rates, which many physicians consider too low. Physicians and patients in this group will serve as a control. A second payment method, also fee-for-service, will require patients to choose a regular primary care physician from or through whom to receive all care. Physicians will be paid at rates close to their usual charges for private patients. The third method is prepayment, in which a group of doctors will sign contracts with the county to delivery care for a monthly fee, no matter how much care is needed. Patients will be required to receive care from or through a single physician.

Dr. Connelly said the AAP would review the claims data on usage periodically to protect clients against being underserved in the prepayment plan, in which physicians will have incentives to use restraint in providing or referring for medical services. Physicians whose Medicaid patients, as a whole, received many fewer services than others would be reviewed by a panel of local physicians.

Medicaid recipients who agreed to participate would be assigned randomly to one of the three groups. Physicians eligible to participate are all those in Suffolk County with $2,000 of Medicaid billings for care of children this year. This qualifies about 200 pediatricians and general and family practitioners.

Dr. Connelly said three years of data on medical services utilization and expenditures for Medicaid children in the county are now being analyzed by AAP under an earlier grant from HCFA and an additional two years of data will be analyzed during the planning year. This long "base-line period" strengthens the researchers' ability to interpret the next two years' findings.

Analysis of the data will also look for differences among the types of physicians. Clients will be surveyed on their experiences in using the systems.

The AAP will collect and analyze data to evaluate the project and will share the results with the federal government and other organizations. The state of New York will monitor the project and benefit from the cost savings. The state hopes to implement successful aspects of the program in other parts of the state.

Suffolk County was chosen for the experiment's location partly because, though it is a generally affluent county, it has a large number of Medicaid-eligible children — approximately 75,000. In addition, because relations between the Medicaid program and local physicians have been cooperative, it is expected that a sufficient number of physicians will participate in each of the plans to be tested.

Dr. Connelly said if the ideas are demonstrated to have merit, they can be adopted for use in the private sector as well as in publicly funded health programs.

The John A. Hartford Foundation, a private foundation with assets of $125 million, makes grants to stimulate health care payment system reforms.

The American Academy of Pediatrics is an organization of more than 23,000 pediatricians dedicated to the health, safety and well-being of infants, children and young adults in North and South America.

American Medical Association Education and Research Foundation grants to approved New York medical schools distributed in March 1981.

	TOTAL
Columbia University College of Physicians and Surgeons, New York	10,367.84
Albany Medical College of Union University	5,654.77
State University of New York, Downstate Medical Center (Faculty Student Association)	6,485.34
New York University School of Medicine	9,406.33
Cornell University Medical College	11,692.99
University of Rochester School of Medicine and Dentistry	6,487.38
Albert Einstein College of Medicine, City University of New York	2,992.26

Mount Sinai School of Medicine, City University of New York	5,965.26
State University of New York, Stoneybrook Health Sciences Center	2,587.26
State University of New York at Buffalo School of Medicine (University of Buffalo Foundation)	5,379.12
New York Medical College, Valhalla	5,247.58
State University of New York Upstate Medical Center (Faculty Student Association)	5,669.34

FDA names new directors

Dr. Harry M. Meyer, Jr. has been named director of the Bureau of Drugs in the Food and Drug Administration and Dr. Marion Finkel has been named director of orphan products development in the Office of the Commissioner.

New Fellow induction New York Academy of Medicine

Two Nobel Laureates, Rosalyn S. Yalow, Ph.D., Senior Medical Investigator at the Bronx Veterans Administration Medical Center, and Joshua Lederberg, Ph.D., President of Rockefeller University, were elected as Honorary Fellows of the New York Academy of Medicine.

Downstate Medical Center resident receives one of the four national Milbank scholarships

Dr. Carolyn L. Westhoff, a chief resident in the Department of Obstetrics and Gynecology at Downstate Medical Center (State University of New York), Brooklyn, has been named one of the four national Milbank Scholars. The Milbank Memorial Fund's Scholar Program is designed to help medical schools bring epidemiology into closer association with the teaching of clinical medicine.

AMA announces 1982 CME/Sports getaway

The American Medical Association's 1982 CME/Golf Digest-Tennis Program will be held October 10–16 at the Doral Country Club and Hotel, Miami, Florida.

New York Academy of Medicine awards given

Dr. René Dubos, bacteriologist, writer and lecturer who was profoundly concerned with the impact of environmental pollution and technology on human life, was the recipient of the Academy Medal, the highest award of the New York Academy of Medicine which is given annually for an outstanding contribution to medicine.

Joseph Post, M.D., Professor of Clinical Medicine at New York University and Attending Physician at Lenox Hill, University, and Goldwater Memorial hospitals, is the recipient of the Academy Plaque, the highest annual award given to New York Academy of Medicine Fellows.

HOPE Vice president named

Dr. E. Croft Long, a prominent medical educator, health administrator and health manpower planning specialist, has been named Vice President of the International Division of Project HOPE, the international non-profit health care organization.

UMD New Jersey Medical school appointment

Gilbert S. Melnick, M.D., has been appointed chairman of the Department of Radiology at the New Jersey Medical School on the Newark campus of the University of Medicine and Dentistry of New Jersey (UMD).

Medical Education director named

Seymour B. Jacobson, M.D., consultant in psychogeriatric medicine at Harlem Valley Psychiatric Center, has been named director of Medical Education at the Center.

Supreme Court upholds FTC order against AMA

On March 23, in a 4-4 tie vote, the U.S. Supreme Court upheld the 1980 decision of the Second U.S. Circuit Court of Appeals that the FTC has the authority to regulate "anticompetitive" practices of professional organizations. The decision means that the AMA must comply with the October 1979 order that the FTC issued against the AMA barring the AMA from interfering with certain physician advertising. However, the Supreme Court issued no opinion with its decision, meaning that the decision has no precedential effect on future disputes dealing with this issue. Both sides of the issue hoped that the Supreme Court decision in the AMA case would set definitive legal guidelines. However, the Court's failure to reach a majority decision proved a disappointment in this regard. The tie vote resulted from Justice Harry Blackmun excusing himself from the case, presumably due to his work as counsel to the Mayo Clinic from 1950 to 1959. In the event of tie votes, the lower decision being appealed remains in effect. There was no indication given of how each Justice voted. A decision had not been expected until July, but when it became clear that the Court was deadlocked, and that there would be no final, definitive opinion, the Justices decided to dispose of the case with the one sentence statement.

The case originated in 1975 when the FTC filed a complaint against the AMA, the Connecticut State Medical Society and the New Haven County Medical Association charging that their principles of ethics forbidding false and misleading advertising were a restraint of trade. Cited by the FTC was a 1975 Supreme Court decision that for the first time applied the antitrust statutes to professional associations in a case involving the Virginia Bar Association and minimum fees. The position of the AMA has been that dissemination of fee information and other non-deceptive information which will help enable patients to make an informed choice among competing professionals is ethical, but that misleading promotional practices are unethical. The Supreme Court heard arguments on the case last January. The AMA urged the justices to rule that the FTC does not have the power to interfere with ethical standards propounded for a professional association. The AMA argued that the FTC does not have the legal au-

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Under these headings the subject is covered in an extensive and timely fashion. The authors, many of them, are well known and all appear to be well informed. They come from the United States, Switzerland, Germany, France, and Denmark. Inevitably, with so wide a spread of authors, there is some uneveness in the chapters, but in general they are based on significant personal experience, including a good review of the pertinent recent literature and a useful discussion. The book represents a valuable source of information in one convenient package on all aspects of clinical coronary artery disease for the trainee or the qualified practitioner in internal medicine, cardiology, or cardiothoracic surgery. It is highly recommended. **Robert W. M. Frater, M.D.**

Understanding Medications: The Hows and Whys of Drug Therapy. By Morton J. Rodman, Ph.D. Oradell, New Jersey, Medical Economics Co., Book Division, 1981. Softcover, 416 pages. Price, $17.50.

Dr. Rodman is a professor of pharmacology at the College of Pharmacy of Rutgers (New Jersey) University. He has written this book primarily for nurses to help them understand the basis of the drug therapeutics in which they participate. This is a readable book that presents the therapeutics of many common and some rare diseases and a good discussion of the pharmacology of the drugs used for them. Some of the chapters, such as the one on drug reactions in the elderly, are very good and provide useful information for physicians as well as for nurses monitoring therapeutics in these patients.

Overall this is a good book to have available in nursing stations, clinic offices, and other places where health care professionals gather to think about what is happening to their patients. **Marcus M. Reidenberg, M.D.**

Lipids in Human Nutrition: An Appraisal of Some Dietary Concepts. By Germain J. Brisson, Englewood, New Jersey, Jack K. Burgess, Inc., 1981. Illustrated, 175 pages. Cloth.

This monograph by an eminently qualified author chronicles a quarter of a century of intensive scientific and clinical investigations which have sought to resolve the relationship of various dietary fats to blood lipids and cholesterol levels to the incidence of athersclerosis and

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thority to take action against non-profit associations, such as the AMA, because Congress has carefully limited the agency's jurisdiction to for-profit organizations.

As a result of this decision, the focus of controversy moves to the Congress where S 1984 is pending. This legislation, described in detail in the *LR Digest* of January 15, 1982, would, among other things, exempt state-regulated professions and their membership associations from the jurisdiction of the FTC.

In statements made to Congress before the Supreme Court decision, FTC Chairman James Miller stated that the FTC "fully, strongly and unalterably opposes any amendment to exempt professionals from FTC enforcement and consumer protection laws of the country."

Senate passes regulatory reform bill

On March 25 the U.S. Senate on a 94 to 0 vote passed S 1080, a bill to reform federal agency rulemaking processes. Earlier in the week the Senate had adopted on a 69 to 25 vote an amendment to the bill providing for a "legislative veto" of agency rules. Under the legislative veto provision a rule would not become effective if both Houses, by majority vote, passed a resolution disapproving the rule. The bill also contains the so-called "Bumpers Amendment" which would make it easier for a regulated group to obtain a court decision invalidating a regulation by removing the current presumption that agencies have in federal courts that their legal determinations are correct. The other major provisions in the legislation require agencies to conduct cost-benefit analyses of proposed rules and to review rules every ten years to determine whether they are still needed. Similar legislation is pending in the House of Representatives.

The legislative veto provision has been controversial. President Reagan has threatened to veto the bill if it contains the legislative veto provision, but legislative veto advocates believe he will sign the bill. Two federal appeals courts have ruled that the legislative veto is unconstitutional. Congressional opponents of the legislative veto see it as leading to the "bureaucratization of Congress" because Congress would have to hire more staff people to study whether regulations should be vetoed. Proponents of the legislative veto see it as making federal agencies more accountable to the public.

In a related development, a report prepared by the Congressional Research Service questions the legality of President Reagan's Executive Order 12291 (see *LR* of May 5, 1982). Executive Order 12291 established the Administration's standards for agency accountability for regulatory actions and initiated an unprecedented level of Presidential oversight of the regulatory process. The Order set out criteria defining "major rules." Major rules have to undergo cost-benefit analysis and be approved by the Office of Management and Budget before they are issued. The Congressional Research Service report indicates that there may be constitutional grounds to challenge the Executive Order. The President did not refer to any specific area of the Consitution or to any federal statute to issue the Order, but rather relied on a very general constitutional and statutory grant of authority.

Subcommittee approves clean air revisions

The Health and Environment Subcommittee of the House Energy and Commerce Committee has approved a bipartisan bill to amend the Clean Air Act. The bill is supported by the Administration and many industries. Provisions in the bill allowing extensions until 1993 for areas unable to attain the national standards by the current deadline of December 31, 1982 were approved by the Subcommittee.

The Subcommittee rejected an amendment that would have required a reduction in sulfur emissions by eastern states as a means of dealing with the acid rain problem. Also rejected was an amendment that would leave the current required motor vehicle inspection and maintenance provisions intact. The bill allows each state to decide whether an inspection and maintenance program is necessary.

Allowable motor vehicle emissions of carbon monoxide and oxides of nitrogen would double under this bill. The Senate Environment and Public Works Committee is also working on a bill to amend the Clean Air Act and should conclude work later this month.

White House retreat on competition

A March 14 article in the *New York Times* stated that the Reagan Administration is abandoning major components of its plan to hold down medical costs by encouraging competition. The article, referring to Administration and Congressional sources, indicated that the proposal to limit the amount of employee health benefits that an employer can deduct as a business expense is "almost certain to be dropped." Also likely to be dropped is a proposed tax credit to encourage companies to offer a choice of plans, according to the article. Instead, a voluntary plan is reportedly emerging that would allow employers to offer tax-free cash rebates to employees who chose less expensive health plans.

HHS Secretary Richard Schweiker said President Reagan has not made a final decision on competition and Schweiker questioned the accuracy of the *New York Times* report.

FTC consent decree on physician advertising

The FTC has published and requested comments on a proposed consent decree with the Broward County (Florida) Medical Association. The complaint alleged that the BCMA adopted a written and unwritten code of ethics that prohibited members from truthfully advertising fees in the yellow pages or other media. The code also is alleged to have prohibited distribution of truthful information including fee information, whether members accepted Medicare assignment, whether credit cards were accepted, office hours and knowledge of languages other than English. Disciplinary actions were threatened against members who violated the code of ethics.

In the consent decree the society does not admit to any guilt. However, the society agreed to an order that prohibits BCMA from restricting, regulating, or declaring unethical the advertising or publishing of prices, terms or conditions of sale, or information about physician's services. The BCMA must revise its constitution and by-laws to comply with the consent decree and publish the revised versions.

Meyer to head FDAs reorganized Bureau of Drugs

FDA Commissioner Arthur Hull Hayes has announced that Harry M. Meyer, Jr., M.D., who has been Director of the FDA's Bureau of Biologics for the last ten years, will be the new Director of the Bureau of Drugs. FDA plans to merge the two bureaus into a new Bureau of Drugs and Biologics under Dr. Meyer's leadership. Present Bureau of Drugs Director J. Richard Crout, M.D., submitted his resignation in September 1980, but has stayed on pending the appointment of a successor.

Dr. Meyer, 53, has been Director of the Bureau of Biologics since 1972, when the regulation of biologics was transferred from the National Institutes of Health to the FDA. He joined NIH in 1959, and in 1964 became chief of the laboratory of viral immunology in the then Division of Biologics Standards. Prior to that he served as chief of the diagnostic section, Department of Virus and Rickettsial Diseases at the Walter Reed Army Institute of Research from 1954 to 1957, after which he served for two years as assistant resident in pediatrics at the University of North Carolina School of Medicine. He received his medical education at the University of Arkansas in Little Rock, and is board-certified in pediatrics.

BRIEFLY * * *

In February the all-items Consumer Price Index increased by 0.3%, the medical care price index rose by 0.9% and the *physicians' services index rose by 1.0%*. For the most recent twelve months, the all-items index increased 7.7% and the physicians' services price index increased by 10.8%. * * * The U.S. Justice Department has informed the *Maryland Health Care Coalition* that the Department does not intend to challenge under antitrust laws the coalition's proposal to review and analyze data collected by the Maryland Health Services Cost Commission. The letter from the Justice Department said that employers and insurers "could obtain data on hospital utilization and charges for specific ailments for their employees and insureds as well as data on statewide averages." * * * Senator Hatch's *home health care* bill (S 234) would add nearly $2.4 billion to Medicare costs in the first nine months of the program and nearly $19 billion to costs over the next five years according to estimates prepared by the Congressional Budget Office. The bill would open the Medicare program to home health care reimbursement and expand existing Medicaid coverage. * * * The Reagan Administration has announced that it will ask Congress to make a series of changes in the status of *tax-exempt industrial development bonds* that could have a significant impact on private not-for-profit hospitals. The Administration will ask that, beginning in 1986, local communities which award the development bonds to hospitals be required to contribute funds to the project being financed.

Pituitary gland removal

A recently enacted *Michigan* statute, similar to an AMA model bill, permits physicians performing autopsies, postmortems or dissections to remove the deceased individual's pituitary gland under specified conditions to further the purposes of medical research, education or therapy. (H.B. 4710)

Professional liability —recent developments

According to a report in the *Pennsylvania* Medical Society's February 26, 1982 "Legislative Bulletin," a committee composed of Pennsylvania legislators and cabinet members is meeting to consider possible amendments to the Health Care Services Malpractice Act. Among the proposals being considered are the following: (1) A mandatory one-year limit in which to prepare a lawsuit for trial; (2) Voluntary binding arbitration by agreement of the parties; and (3) A uniform statewide administrative system for preparing medical malpractice cases for trial.

Meanwhile, a tort reform bill providing for "several liability" is pending in the *California* legislature. According to California Medical Association's "Medical Executives Memo," the medical society-supported bill, S.B. 500, provides that where a defendant is less than 40% responsible for the plaintiff's injury, he will be liable only for those damages apportioned to him based on his degree of fault in causing the plaintiff's injury.

The bill is an attempt to displace the current rule of "joint and several liability," whereby each defendant contributing to the plaintiff's injury can be held liable for the entire injury regardless of his share of the responsibility for causing it. (Interestingly, a California District Court of Appeal recently took steps of its own to dismantle the rule of joint and several liability. In *Baget v. Shepard*, the court ruled that when one of several defendants enters into a settlement with the plaintiff prior to a jury verdict, the amount of damages for which the remaining defendants are liable is reduced by the percentage share of fault attributable to the settling defendant.)

Insurance coverage for nursing home expenses

Legislation was enacted recently in *Indiana* directing the Department of Insurance to adopt a rule prior to March 1, 1983, requiring "reasonable simplification of the terms and coverage of any insurance policy issued for delivery in Indiana that primarily provides coverage for nursing home care expenses." (H.B. 1215)

Agency rules —legislative nullification

On February 10, 1982, by joint resolution, the *Iowa* general assembly proposed an amendment to the Iowa Constitution which would give the general assembly the power to nullify an administrative rule of a state agency by passage of a resolution by a majority of the members of each house. (S.J.Res. 6)

Health care study —anticompetitive practices

Professional Regulation News reports that the National Antitrust Litigation Council of the National Association of Attorneys General is sponsoring a study of anticompetitive practices in the health care industries in *New York*, *Ohio*, *Pennsylvania* and *West Virginia*. The study, which is expected to take a year to complete, will result in recommendations on innovative, competitive methods of delivery as a means of keeping down consumer health care costs.

Smoking—public places

A pending bill in *New York*, similar to AMA model legislation, would ban smoking in places of employment and in certain indoor areas. A.B. 2746 has the support of the Medical Society of the State of New York.

Guilty but mentally ill

A *New Mexico* statute, adopted March 8, 1982, provides for the plea and verdict of guilty but mentally ill in criminal trials. Where the court accepts a plea of guilty but mentally ill, or where the court enters such a verdict following trial, the defendant may be sentenced in the same manner as a defendant convicted without a finding of mental illness. However, if the defendant is sentenced to the corrections department, the department is required to examine the "nature, extent, continuance and treatment" of the defendant's mental illness and provide treatment as it deems necessary. (S.B. 99)

Methaqualone transfer to schedule I

Florida S.B. 100, signed into law March 15, 1982, transfers methaqualone from Schedule II to Schedule I ("no currently ccepted medical use"). The bill also amends Florida law to make it a felony of the second degree for a physician to prescribe methaqualone. The bill had the support of the Florida Medical Association.

Sex education on TV urged to combat teen pregnancies

Contraceptives should be widely advertised on television and in the public press to combat the massive wave of teenage pregnancies and spreading venereal disease.

This is the recommendation of Donald E. Greydanus, M.D., pediatrician at the University of Rochester Medical Center, Rochester, N.Y. Dr. Greydanus is a specialist in the social implications of adolescent medicine.

Writing in an American Medical Association publication, Dr. Greydanus says that many young people are not aware of specific means to prevent or reduce the risk for pregnancy or sexually transmitted diseases.

More than half of all American adolescents are sexually active or experienced by the age of 19, Dr. Greydanus says. The increase in sexual activity in the young has brought a million adolescent pregnancies annually, and several million cases of sexually transmitted diseases, he reports.

Many youths use no contraceptives at all, use effective methods poorly, or even rely on techniques that have a high failure (or pregnancy) rate. Many become pregnant within six months of sex initiation, some even within one month. Large numbers of these young people are sexually active months before going to a health service for contraceptive advice, Dr. Greydanus points out.

"Certainly one way to deal with this problem is to provide the youth with as much education as possible about human sexuality. Though many accept abstinence as a contraceptive, millions of our youth do not. This latter group must become fully aware of the many effective contraceptive methods that are available."

If contraceptives were freely available to all youth, teenage pregnancy would be reduced by more than 300,000 annually, he says.

There are no studies to support the contention that education per se increases sexual activity, the New York physician says.

"The lack of education can be devastating to the individual, his or her family, the offspring, and, indeed, society. Youths who are motivated and educated to avoid pregnancy and sexually transmitted diseases can dramatically reduce these problems. Teenagers who are carefully educated and followed up in teenage centers have reduced markedly the pregnancy and sexually transmitted disease rates."

Television is the best communications medium to reach the teenage population with the sex education message, Dr. Greydanus declares. Television, he points out, can and does present powerful educational messages to the public on the health dangers of cigarette smoking, alcoholism, other drug addiction, work stress, and other hazards. Education about sexuality should now be added to this growing list, he urges.

"The powerful educational effect of newspapers and magazines should also be used. This is not to condone or encourage adolescent sex, but to acknowledge its existence and take a responsible step for the solution of attendant problems."

Dr. Greydanus calls for specific emphasis on the use of barrier contraceptives, such as the diaphragm or condom, because they can not only prevent pregnancy but also offer considerable protection from disease.

Dr. Greydanus is associated with the University's Division of Biosocial Pediatrics and Adolescent Medicine.

The article appears in the August issue of American Journal of Diseases of Children, an American Medical Association publication.

Abortion rate unaffected by Hyde amendment

Women who want and need abortions will have them, it seems, no matter who pays for them.

In the two years that the Hyde Amendment was in effect, there was no significant decline in the number of abortions performed in the U.S., says an article in the September 4 Journal of the American Medical Association.

While the amendment succeeded in almost eliminating federal funding for abortion, 94 percent of all women eligible for Medicaid funding before the amendment received legal abortions, 65 percent with state funds and 29 percent with other funds. Only five percent carried their pregnancies to term. One percent sought illegal abortions, said the report.

The Hyde Amendment, enacted in August, 1977, limited Medicaid funded abortions to those pregnancies that threaten the mother's life. This was changed in 1978 to include pregnancies caused by rape or incest and those inducing "severe and long-lasting physical health damage." The amendment, lifted in February, 1980, due to judicial decision, was reinstated in September and is currently enforced.

According to researcher William Cates, Jr., M.D., M.P.H., the abortion trends do not support the opinions of either the "pro-life" groups, who felt the amendment would eliminate abortions for low-income women, or "pro-choice" groups, who felt that illegal abortions would become widespread.

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cardiovascular diseases. Each of the seven chapters—Dietary Fats and Body Lipids; The Technology of Edible Fats and Oils; The Enigma of the Transfatty Acids; Cholesterophobia; Saturated and Polyunsaturated Fats; Lipoproteins and the Major Intervention Studies—are clearly written and generously illustrated; this makes for ease of reading and understanding of the present status of the metabolic and clinical aspects of lipid nutrition in man. The author's detailed scrutiny of the large body of data supports conclusions that:

1. Total blood cholesterol levels seem to be poor parameters of coronary risk.
2. The major prevention studies based on hypocholesterolemic diets and drugs show that the slight lowering of blood cholesterol levels has no significant effect on total mortality; in some instances undesirable side effects were encountered.
3. Diets high in polyunsaturated fatty acids do not seem to increase serum levels of lipoproteins known as the "good" cholesterol.
4. After more than two decades of numerous investigations by numerous investigators it is concluded that dietary cholesterol has no significant clinical effect on blood cholesterol of healthy persons of the general population.

This point of view was unequivocally adopted by the Department of National Health and Welfare of Canada in 1977 and the U.S. Food and Nutrition Board of the National Research Council in 1980.

The book is recommended reading for physicians, dietitians, and other health professionals. Those in the field of food science and production, as well as those in animal science and production, will find the volume a very useful and ready source of past and current development in lipid nutrition. **Anthony A. Albanese, Ph.D.**

Introducing the Diabetes Self-Care Program

A new free-standing regional facility that provides the modern resources and expert personnel required to train diabetic patients in the latest techniques of blood glucose self-regulation has opened in New York City.

Supervised by nationally-recognized physicians, highly qualified nurse clinicians, nutritionists, and an exercise physiologist, the program provides an intensive five-day saturation experience designed to make the patient an "expert" in diabetic health maintenance.

The program thus makes available to the primary care physician resources and expertise hitherto available only at a few medical centers on a limited basis.

After completing the program, which is ambulatory and designed to simulate real life activities, each patient returns to the primary case physician, proficient in the techniques of titration of insulin doses, meal management and exercise planning so as to maintain blood glucose levels in a near normal range around the clock, with safety.

Courses are available for health care professionals. There are also special pre-pregnancy protocols available for diabetic women.

Many physicians in the Greater New York area and throughout the Northeast have welcomed this new program as a valuable adjunct to the management of their diabetic patients.

For details, write, visit or call:

THE DIABETES SELF-CARE PROGRAM

344 East 63rd Street New York, N.Y. 10021
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During the years 1977 to 1979, 19 states and the District of Columbia continued to provide state funds for abortions under most circumstances, said Cates. Women seeking abortions in restricted states were forced to pay with personal funds or seek reduced fees, county hospital services, or other contributions.

In spite of limited availability, research findings indicated only five percent of qualifying women in restricted states sought illegal or self-induced abortions. This resulted in one death directly attributable to restricted funding and three indirectly attributable, said the report.

Increased demand for amniocentesis foreseen

National projections for the 1980s point to more births among women aged 35 and older, and fewer births among teenagers, according to a report by investigators at the Centers for Disease Control in Atlanta in this week's *Journal of the American Medical Association*.

The implications drawn from these projections by the authors are an increased demand for prenatal genetic testing among women aged 35 and older — who as a group are at greater risk than younger women for bearing a child with the genetic abnormality known as Down's Syndrome — and a decreased demand for teenage prenatal services.

The genetic abnormality responsible for Down's Syndrome can be detected in fetal cells drawn from a pregnant woman's womb in a precedure called amniocentesis.

The authors estimate that about 1.1 million pregnant women 35 years or older will seek this test through this decade.

They also said that the demographic trend pointing to fewer births among teenagers ought to be taken into account in evaluating programs aimed toward reducing births to teenagers, otherwise health workers may conclude erroneously that such programs were more successful than they were in fact.

As for actual numbers, the authors project that between 1980 and 1990 births among teenagers will decrease by 28%, from 562,825 to 407,435. This represents a 32% decline in the proportion of births in this age group, measured against total estimated births for all ages.

Projections for women between 35 and 49 years old show an opposite trend, with the number of births expected to increase 46%, from 156,428 in 1980 to 227,818 in 1990. This represents a 37% increase in the proportion of births among women in this age group.

By far, the majority of births to women in the 35 to 49 year age group will be to women between the ages of 35 and 39.

All these projections are based on figures from the U.S. Bureau of the Census, which show that between 1980 and 1990 the number of women aged 35 to 44 years — the baby boom generation — will increase from 13 million to 18.5 million, while the number of women aged 15 to 19 will drop from 10 million to 8 million.

The projected increase in the number of older women and the projected decrease in teenage women largely account for the predicted trends in motherhood in the two groups, according to Melissa M. Adams, the principal author of the study, who noted that the fertility rates in the two groups are not expected to change.

The fertility rate is calculated from the number of live births per 1,000 women in a particular age group.

In an accompanying editorial, William Barclay, M.D., who stepped down as editor of *JAMA* at the beginning of this year, sounded a note of caution in appraising the statistics at face value. Forecasting motherhood, he said, is as difficult as predicting next week's weather.

While the data on which the forecast is made may be reliable, Dr. Barclay said, the predictions might be upset by such factors as the trend to block teenagers' access to abortion, and the movement to limit sex education in schools, the number of vasectomies among men married to women over age 35, and the number of older women who find themselves unable to conceive.

"LOOK ALIKE" DRUGS: Society's latest drug-Induced headache

It is a common scenario, played out in communities across the country: The schoolyard is crowded with junior high- and high school-aged youngsters. Around the corner, a younger man is leaning against a sign post, talking to a much younger boy. The man reaches into his pocket, pulls out a handful of black capsules and gives ten of them to the boy in exchange for $20. The boy believes they're "black beauties" and gladly hands over the money in anticipation of the "high" he'll get from them.

An illegal drug sale? Not one that can be easily prosecuted.

The pills do not contain amphetamine, a controlled substance commonly called "speed." They contain a combination of legal, over-the-counter (OTC) ingredients found in many so-called appetite suppressants and in decongestants. And because the pusher is not selling a controlled substance, federal and state authorities are essentially powerless to do anything.

The pills are called "look alike" drugs, or imitation controlled substances, and their manufacture and sales are creating serious problems for state and federal officials, medical personnel and, especially the unwitting victims who've suffered strokes or died after consuming counterfeit drugs.

They're called "look alikes" because they mimic the size, shape, and color of controlled substances — usually amphetamines or tranquilizers — and may even feature identical trade markings, so they're indistinguishable from the real thing.

Physiologic effects

The typical "look alike" stimulant contains a combination of phenylpropanolamine, caffeine and ephedrine, or caffeine alone. Both phenylpropanolamine (an appetite suppressant and nasal decongestant) and ephedrine (a nasal decongestant) increase the heart rate and raise blood pressure. When taken in a high enough dosage or by an extremely sensitive individual, a stroke may result.

Caffeine is a central nervous system stimulant which, in moderate consumption, is relatively harmless to most individuals. The exact amount of caffeine required to cause side effects varies from person to person and, therefore, cannot be predicted, according to Donald R. Bennett, MD. "An extremely sensitive person," says Bennett, who is associate director of the American Medical Association's Division of Drugs, "may react strongly to one gram of caffeine, others may tolerate more than that without noticeable psychic or physical effects."

Although the amount of each ingredient varies among manufacturers, a typical "look alike" has up to 200 milligrams caffeine, 50 to 75 milligrams phenylpropanolamine and 30 milligrams ephedrine. According to the U.S. Food and Drug Administration (FDA), these are the only drugs on the market containing all three ingredients and their combined effect is unpredictable.

While most of the "look alike" drug trade centers around stimulants (the most popular imitate Fastin, Ionamin, Biphetamine and Dexamyl), tranquilizers, such as Dilaudid and Quaalude, are also being counterfeited. The phony "downers" contain one or more antihistamines, ingredients found in sleep preparations and cold tablets. Since antihistamines tend to make one drowsy, the user actually may feel sedated — and/or mellow — after consuming the counterfeits.

According to *AMA Drug Evaluations* (a clinical guide to drugs), antihistamine "overdosage may be difficult to treat. In children, symptoms resemble atropine poisoning (excitation, convulsions) and, in adults, both depression and stimulation of the central nervous system appear alternately. Cardiorespiratory collapse and death may occur."

Teenagers who use "look alikes" often take them with alcohol, a dangerous combination that may have fatal consequences. And even more insidious danger exists for the person who's been using the phony drugs in modest amounts and then unknowingly takes the real thing. If he experiences mild euphoria after taking three or four fake "black beauties," an equivalent number of true Biphetamine-20s will cause intense excitation.

The FDA has conducted investigations and confirmed 12 deaths associated with the use of "look alikes." Although not typical of most people's experiences with imitation drugs, the news media have reported stories about:

- A 17-year-old Belvidere, Ill., girl who died after taking what police presumed to be "black beauties;"
- A 15-year-old Philadelphia girl who took two fake amphetamines and suffered a paralyzing stroke;
- A healthy 17-year-old boy from Albuquerque, N.M., who consumed two counterfeit Biphetamines, fell into a coma and died;
- The 21-year-old musician who had a stroke shortly after taking three imitation stimulants. He is recovering today from the paralysis that numbed the right side of his body.

At least nine suicides are known to have occurred from "look alikes" (most of them attributed to acute caffeine overdose, some after consuming as many as 50 capsules or more). While it's true that death might have occurred if they took the same number of true amphetamines, it isn't likely the real drug would have been as readily available.

The counterfeit drug industry

Although touted as "100% legal" by those in it, the counterfeit drug industry is not operating entirely within the law. Manufacturers of "look alikes" maintain they do nothing illegal since the drugs are labeled in compliance with FDA regulations. But when a manufacturer intentionally produces a drug to look exactly like a controlled substance, and the manufacturer is not licensed to produce the controlled substance, he may be prosecuted for violating the counterfeiting provision of the Federal Food, Drug and Cosmetic Act. Bulk distributors and street pushers only break the law in those with legislation that specifically prohibits fraudulent misrepresentation of drugs, a difficult case to prove. Distributors do face penalties, however, when they use the U.S. Postal Service to solicit customers.

A small drug manufacturer, usually in business legitimately to make generic drugs, may be at the bottom of the "look alike" scheme. He either produces or purchases capsules with the legitimate manufacturer's trade markings on them so the finished product looks lilke a known controlled substance. The drugs are labeled in compliance with the FDA's current OTC drug labeling requirements for use a decongestants, bronchodilators and OTC stimulants to aid mental alertness. The manufacturers, who are properly registered with the FDA, sell to distributors, who then tout the "look alikes" in advertising leaflets as "black beauties," "yellow jackets," "dexies," and other drug culture terms for speed.

Since OTC drug advertising is not regulated by the FDA, the distributor's practices fall outside FDA jurisdiction. (The FDA regulates prescription drug advertising; the Federal Trade Commission oversees OTC drug advertising.)

The distributors place the leaflets under windshield wipers near high schools, college campuses and truck stops or send them through the mail. Customers are encouraged to order the pills usually in minimum orders of $25 for 100 or $150 for 1,000. One distributor will package them in lots of 100,000 pills for $4,000.

At this point, the purchaser pays 25¢ for a pill that cost pennies to manufacture. He will turn around and sell them for anywhere from 50¢ to $3.

Since the street pusher is selling a drug that is technically legally mandated, his actions fall outside the jurisdiction of the U.S. Drug Enforcement Agency, whose responsibility it is to enforce the Federal Controlled Substances Act.

In some states, distributors have opened "pill boutiques" or very esoteric drug stores, dealing in only one retail item — bogus "uppers" and "downers."

Stores have opened and closed in major cities throughout the country. One such store, in Los Angeles, was met with fierce resistance from local residents. After daily picketing by neighbors, including stars from television shows such as "Quincy" and "Hill Street Blues," the LA store was shut down by state health officials.

Legislative action

State and federal officials have not been unresponsive to the problem. To date, legislation to combat the imitation drug industry has been enacted by 15 states — Arkansas, Colorado, Connecticut, Delaware, Florida, Indiana, Kansas, Louisiana, Maryland, North Carolina, Oklahoma, Oregon, Pennsylvania, South Dakota and Wisconsin.

The American Medical Association recently adopted a firm policy directed at banning the manufacture, sale and distribution of imitation controlled substances. The Association drafted model state legislation which would make it illegal for anyone except those authorized by law to manufacture, process, package, distribute or sell a noncontrolled, nonprescription substance which itself resembles or is labeled to resemble a specific controlled substance. The bill also makes it unlawful for anyone to fraudulently misrepresent a drug as a controlled substance. Other states are considering legislation now and the AMA anticipates its new model bill will prompt even more states to enact such laws.

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YOUR MEMBERSHIP BENEFITS

Members of the Medical Society of the State of New York are entitled to the many benefits outlined below. We suggest that you retain this section for future reference, bring it home and share it with your family. Use the return coupon on facing page to obtain detailed information on the benefits that interest you.

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a. **Disability Income Program with Special Renewal Guarantee*.**
Medically insurable members under the age 55 may add protection of up to $500 per week payable if they become totally disabled by accident or sickness. Guaranteed coverage of $150 a week under Plan 5–2 to new members under 45 who apply within 60 days of joining the Society.

b. **Disability Overhead Program with Special Renewal Guarantee*.**
Medically insurable members under age 60 may add up to $2,500 a month expense reimbursement for continuing practice expenses in the event of disability. The cost of this protection is tax-deductible.

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Members under age 60 may add protection up to $100,000. Total amount is also paid if the member is permanently and totally disabled as the result of an accident, after 12 consecutive months of total disability.

Continued

**The renewal of your policy is guaranteed* so long as (a) you are a member of MSSNY, (b) you are under age 70, (c) you remain actively engaged in medicine and (d) the Society sponsors this Plan and does not sponsor or endorse any other similar program.

e. **Student Disability Income Protection Plan*.**

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Renewal guarantee: By special agreement with MSSNY, the Company cannot cancel or refuse to renew your group life contract so long as the Society sponsors this plan and no competing life plan.

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The Society Group Life Plan is underwritten by Bankers Life Co., Des Moines, Iowa, a leader in the professional association life field. The other endorsed plans are written by the Commercial Insurance Co's of New York City. Commercial Insurance has written many of the county and district branch programs in New York for many years.

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NEW YORK STATE JOURNAL OF MEDICINE. Published monthly, the Journal provides continuing medical education through original scientific articles, case reports; symposia and seminar meeting dates throughout New York State. It also lists physician placement opportunities, classified advertising, and the annual convention program.

MEDICAL DIRECTORY OF NEW YORK STATE. A biennial listing of over 35,000 physicians licensed in New York State indicating their office addresses, specialty boards and colleges and official hospital staff appointments; as well as the staff lists of hospitals throughout the state.

NEWS OF NEW YORK. This twice-monthly newsletter is MSSNY's main channel of communication of socioeconomic and legislative information to the membership.

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( ) Hospital Indemnity Insurance ( ) Accidental Death & Dismemberment Insurance.

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- ☐ Car Purchasing
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Please return questionnaire to: Division of Insurance & Membership Benefits, c/o MSSNY, 420 Lakeville Rd., P.O. Box 5404, Lake Success, N.Y. 11042. Phone: (516) 488-6100, ext. 235/6.

(*continued from page 1137*)

Federal crackdown

Last fall, the FDA, in conjunction with the U.S. Department of Justice, seized millions of phony capsules and tablets at nine factories in five states (New York, Illinois, Pennsylvania, Alabama and Florida). This was the agency's first crackdown on the "look alike" industry (a second seizure was made in January at a plant in Wisconsin). According to an FDA spokesman, these factories represented the major suppliers of phony drugs and, since they have been forced to stop producing them, the supply nationwide has been curtailed.

The U.S. Postal Service has filed charges with an administrative law judge against more than 40 distributors, claiming they are using false and misleading advertising to solicit money through the mail. Distributors cited by the Postal Service have either signed consent agreements or have failed to respond to the charges. In the latter, the Postal Service won by default and mail-stop orders were issued against those distributors.

The damaging effects of "Look Alikes"

While these actions by state and federal authorities have stemmed the problem somewhat, the imitation drug scheme has had harmful effects, particularly on teenagers and children. Notably:

- School children and others who don't normally abuse drugs are introduced to "look alikes" and told they're legal and safe;
- Imitation drugs give the impression that real controlled substances are not as potent and dangerous as they really are;
- Traditional drug abuse education programs are thwarted by the wide availability of the imitation drugs;
- Physicians and poison centers are deceived by the fake drugs, and
- Law enforcement officials are confounded in their efforts to stop illegal traffic of real controlled substances.

Another type of "look alike" drug problem exists, though this one isn't being fought on school playgrounds and college campuses. It involves the drug manufacturing industry and the Supreme Court.

The fight revolves around the right of manufacturers of generic drugs to duplicate in size, color and shape the brand-name counterparts. The generic drug manufacturers claim that imitating the appearance of brand-names is particularly important for the elderly who use a number of medications and often come to rely on the color of a pill to differentiate between drugs. They point to the problems of patient acceptance and patient anxiety in the person who takes a familiar looking drug for years, refills the prescription and receives a medication he doesn't recognize.

Opponents of "look alike" generics argue that consumers today take a greater interest in their health care and its costs, so a switch in appearance would not be disturbing if it alerts them to a price savings.

What's more, "look alike" drugs may endanger patient health, the opponents say, because they make it difficult to trace the original manufacturer if a problem develops after marketing.

Generic manufacturers feel that a ban against "look alikes" could put smaller firms out of business; the brand-name makers contend the imitations pose unfair competition since the generic manufacturers rely on the reputation established by the trade name companies.

Now the problem is, as they say, a matter for the court to decide.

Material for inclusion in the medical news must be received eight weeks prior to publication date.

Books Received*

EYE DISEASES

Visual Electrodiagnostic Testing: A Practical Guide for the Clinician. By Ronald E. Carr, M.D., and Irwin M. Siegel, Ph.D. Baltimore, Md., Williams & Wilkins, 1982. Illustrated, 126 pages. Cloth, $32.00.

A practical manual of the clinical applications of visual electrodiagnostic tests.

PERINATOLOGY

Advances in Perinatal Medicine. Edited by Aubrey Milunsky, MB.B.Ch., Emanuel A. Friedman, M.D., and Louis Gluck, M.D. New York, Plenum Medical Book Co., 1982. Volume 2. Illustrated, 384 pages. Cloth, $39.50.

A new series, to provide a critical forum for the needs of the interdisciplinary perinatal health team involved and interested in the optimal outcome of pregnancy.

NEUROPHYSIOLOGY

Basic Neurophysiology. By Beverly Bishop, Ph.D. Garden City, N.Y., Medical Examination Publishing Co., 1982. Paperback, 602 pages. Price $22.50

A flexible self-study system.

CANNABIS

Working Men and Ganja: Marihuana Use in Rural Jamaica. By Melanie Creagan Dreher. Philadelphia, Pa., Institute for the Study of Human Issues, 1982. Illustrated, 216 pages. Cloth, $18.50.

Exploring the role of marihuana in the daily lives of rural Jamaicans.

INFECTIOUS DISEASES

Notes on an Emergency. A Journal of Recovery. By Elizabeth Leonie Simpson. New York, W. W. Norton & Company, Inc., 1982. Hardcover, 170 pages. $12.95.

A personal account of the author's experience with tubarcular meningitis and the effect thereof.

NUTRITION

Human Nutrition. Current issues and controversies. Edited by Andre Neuberger and Thomas H. Jukes, M.D. Englewood, New Jersey, Jack K. Burgess, Inc., 1982. Illustrated, 249 pages. Hard cover.

A detailed overview of some of the most important and difficult issues facing nutritionists at the present time.

CANCER

Cancer. A Comprehensive Treatise 1. Etiology: Chemical and Physical Carcinogenesis. 2nd Edition. Edited by Frederick F. Becker. New York, Plenum Press, 1982. Illustrated, 714 pages. Hardcover, $69.50.

A reference book for all those interested in elucidating the numerous unknown aspects of cancer etiology.

ETHICS

Clinical Ethics. By Albert R. Jonsen, Ph.D., Mark Siegler, M.D., and William J. Winslade, Ph.D., J.D. New York, Macmillan Publishing Co., Inc., 1982. Hardcover, 187 pages. $15.95.

Jointly authored by an ethicist, a clinician, and a lawyer, this book attacks ethical problems in medicine in real-life terms.

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* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

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CARDIOLOGY—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in cardiology. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

INTERNAL MEDICINE—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in internal medicine. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

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OTOLARYNCOLOGY—NORTHEASTERN Pennsylvania Dynamic practice opportunity available for specialty in Otolaryncology. Modern JCAH approved 160 bed general acute care hospital in Coaldale, PA. Provides outstanding potential and opportunity in excellent geographic location for building specialty practice. Economic incentive program available. Send resume to Tod Mammuth, NEEMA Medical Services, Inc., 399 Market St., Suite 400, Philadelphia, PA 19106 or call (215) 925-3511 in Pa. or (800) 523-0776 outside PA.

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FINANCIAL AND BUSINESS SEMINAR, June 28th—7:30 p.m.–9:00 p.m. You are cordially invited to Citibank's Medical Banking Team's financial and business seminar designed specifically for physicians. The panel of speakers will include a CPA, lawyer, physicians' business consultant, an insurance agent, and the Medical Banking Team. Open discussion and reception to follow. For more information and to make reservations, please call Danielle Violi at (212) 750-5579 or Lisa Renshaw (212) 750-5746.

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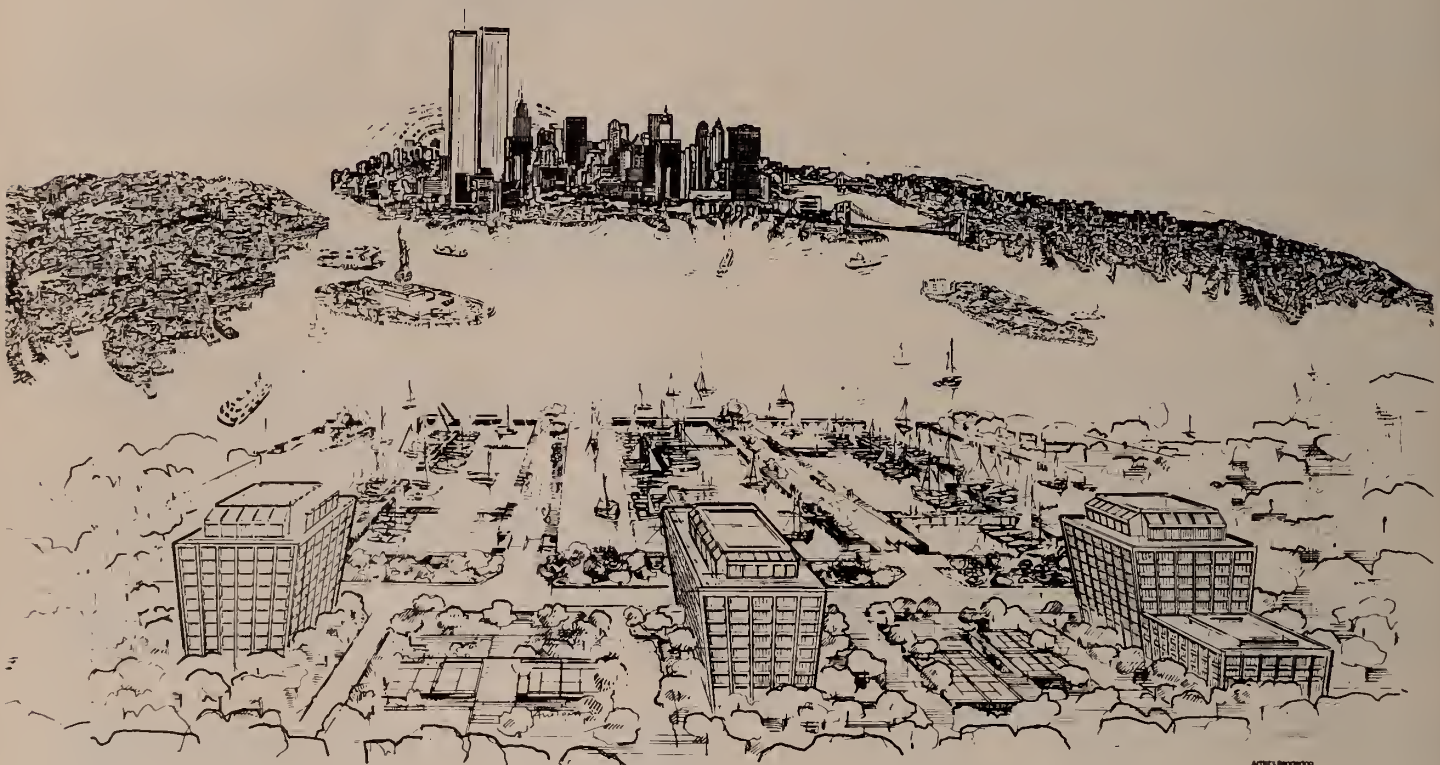

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IN
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George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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219 Bryant Street
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Toronto, Ontario
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THE 5th NATIONAL BUFFALO CONFERENCE ON PEDIATRIC/ADULT ALLERGY AND CLINICAL IMMUNOLOGY
Drs. Elliott Middleton and Elliot F. Ellis
FEE: $225 CREDIT: AMA Cat. 1 (18 hrs.)
For further information contact Rayna Dutton, CME Coordinator at State University of New York at Buffalo. Tel: 716/878-7630.

FUTURE EVENTS

Memorial Sloan-Kettering Cancer Center

1275 York Avenue
New York 10021
September 13–15, 1982
SOFT TISSUE TUMOR SYMPOSIUM
Steven I. Hajdu, M.D.
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September 15–18, 1982
DIAGNOSTIC CYTOPATHOLOGY
Patricia E. Saigo, M.D.
FEE: $350. CREDIT: AMA Cat. 1 (36 hrs.)
For further information contact Charlene Landis, CME Planner, Memorial Sloan-Kettering Cancer Center at 212-794-8406.

International Medical Education Corporation

64 Inverness Drive East, Englewood, CO. 80112
*The Concord Hotel
Kiamesha Lake, New York
August 6–8, 1982
AMBULATORY ELECTROCARDIOGRAPHY: CLINICAL APPLICATIONS, METHODOLOGY AND INTERPRETATION
FEE: $245. CREDIT: AMA Cat. 1 (13 Hrs.)
For further information contact Mary A. Follenweider, CME Coordinator at 800-525-8651.

State University of New York at Buffalo Sponsored by Dist. VII and The New York State Society of Anesthesiologists Inc.

30 East 42nd Street, New York 10017
*The Buffalo General Hospital
Buffalo, New York
September 20, 1982—5:00 p.m.—6.00 p.m.
SNIFFERS, STICKERS, AND SHOOTERS
Edward R. Johnson, M.D.
*Sheraton Inn-East
September 20, 1982—7.00 p.m.-9:00 p.m.
STRESS FREE ANESTHESIA AND THE TRAUMA PATIENT
*Buffalo General Hospital
September 21st, 1982—4:00 P.M.-5:00 P.M.
FRONT-LOADING: FEELINGS, FLUIDS AND FENTANTL
*Buffalo General Hospital
September 22nd, 1982—7:30 a.m.-8:30 a.m.
COMBINED CONFERENCE
CREDIT: AMA Cat. 1 (4 Hrs.)
For further information contact Kurt G. Becker, Office of the Secretary, The New York State Society of Anesthesiologists, Inc. 30 East 42nd Street, Suite 1501, New York. Tel: 212-867-7140.

State University of New York—Upstate Medical Center

750 East Adams Street, Syracuse, N.Y.
*Hotel Syracuse
Syracuse, New York
September 28–October 2, 1982
17th ANNUAL REFRESHER COURSE IN ANESTHESIOLOGY
Howard L. Zauder, M.D.
FEE: $375. CREDIT: AMA Cat. 1
For further information contact Program Coordinator, Office of CME SUNY—Upstate Medical Center, 766 Irving Avenue Syracuse, New York 13210. Tel: 315-473-4606.

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Classification codes

CN = Contemporary Nutrition
CNT = Clinical Note
CPC = Clinicopathologic Conferences
CR = Case Reports
DI = Drug Information
ED = Editorials
GER = Geriatrics
HIST = History of Medicine
HYP = Hypertension
ID = Infectious Diseases
IHN = Interesting Historical Notes
LE = Letters to the Editor
PH = Public Health News
RPC = Correlation Conferences in Radiology and Pathology
SH = School Health
SPEC = What's New in Specialties?

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*Hannemann, R. E., Erb, R. J., Stoltman, W. P., Bronson, E. C., Williams, E. J., Long, R. A., Hull, J. H. and Starbuck, R. R.: Digital Plethysmography For Assessing Erythrityl Tetranitrate Bioavailability. Clin Pharmacol and Ther 29:35-39, 1981.

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Abstracts

Vaughan JE, Borja AR, Good RE, et al: Coronary Artery Surgery; Is it necessary to travel 2,000 miles? ***New York State J Med*** **82:** 1181 (July) 1982.

Results of coronary artery surgery in a moderate-sized community hospital are presented. Operative mortality in the one-year series of 192 patients is 0.5%, with a postoperative graft patency of 89.3%. This group of patients is compared with other reported series, and the advantages of a community-hospital coronary surgical program are discussed.

Shimaoka K, Bakri K, Sciascia M, Razack M, Rao U, Mettlin C, Shedd D, Gajera R, Walsh D: Thyroid screening program: follow-up evaluation, ***New York State J Med*** **82:** 1184 (July) 1982.

A thyroid screening program for persons at a higher risk of developing nodular disease of the thyroid due to previous radiation therapy for benign conditions in the head and neck areas, was established at Roswell Park Memorial Institute in 1977. The results for the first four-year period are reported here. Fifteen hundred patients were registered and offered annual screening examinations. On the initial screening, 331 (22.1%) were found to have nodular disease of the thyroid and an additional 175 were discovered on repeat screening. There were 465 patients with nodular disease who underwent observation on suppressive therapy for six months. Among those who did not achieve complete remission of nodular disease, 85 accepted thyroid surgery. Seventeen thyroid carcinomas (20%) were encountered. In addition, six patients were found to have parathyroid adenoma or hyperplasia. We conclude that the thyroid screening is an effective and efficient way to identify at an early stage the patients who may have malignant or other disorders.

Scheidt A, Drusin LM, Krauss AM, Machalek SG: Nosocomial outbreak of resistant *Serratia* in a neonatal intensive care unit. ***New York State J Med*** **82:** 1188 (July) 1982.

A multiply resistant, nonpigmented strain of *Serratia marcescens* was isolated from 30 infants in a neonatal intensive care unit. Twenty-two neonates who were colonized grew the epidemic strain primarily from stool, urine, and umbilical catheter. Of the eight infants who were infected, four had positive blood cultures, two grew the organism from their eyes, one had a positive cerebrospinal fluid culture, and one had an abscess. The primary reservoir for this outbreak seemed to be gastrointestinal colonization. Other factors contributing to the outbreak were passive transfer of the organism by the staff and the generous use of broad spectrum antibiotics. The outbreak was terminated by the introduction of stringent infection control practices including cohorting, isolation, meticulous handwashing, and disinfection of both equipment and environmental surfaces.

Firooznia H, Benjamin VM, Pinto BS, Golimbu G, Rafii M, Leitman BS, McCauley DI: Calcification and ossification of posterior longitudinal ligament of spine: its role in secondary narrowing of spinal canal and cord compression. ***New York State J Med*** **82:** 1193 (July) 1982.

Calcification of the posterior longitudinal ligament occurs in about 3% of the adults in Japan, and in about 0.7% of the adults in the United States. The cervical spine is involved in about 75% of the cases. The condition may be asymptomatic, particularly in patients who have a large spinal canal. However, in other patients, when calcification is large enough it may cause significant narrowing of the canal leading to compression of the cord and myelopathy with resultant sensory and motor disturbances which are mild at first but may get progressively worse culminating in paralysis and incontinence. Radiographic diagnosis is easily made when one is familiar with the condition. Lateral tomograms of the spine are necessary in doubtful cases. Computed tomography is particularly helpful because it reveals the size and the extent of the calcification, as well as the size of the spinal canal and the extent of its narrowing by the calcification. Treatment is aimed at relieving the pressure on the spinal cord by laminectomy and/or anterior decompression.

May AG, Betts RF, Andrus CC, Freeman RB, Hoy WE, Tibi PR, Carey SA: Effect of cytomegalovirus on renal transplantation. ***New York State J Med*** **82:** 1199 (July) 1982.

Cytomegalovirus (CMV) is rather ubiquitous. The incidence of the carrier state increases with age. The virus is not transmitted by transfusion of frozen blood. Transplantation of a CMV-free recipient with a CMV-positive kidney will usually result in primary infection. Primary infection causes symptomatic disease. The parent-to-child transplant is associated with primary infection. Transplantation of a CMV carrier will usually result in reactivation of infection which may be asymptomatic and easily overlooked. Both primary and reactivation infections are equally deleterious to allograft survival. CMV infection markedly attenuates the beneficial effect of pre-operative blood transfusion on the outcome of cadaveric transplantation. This is additional evidence that the beneficial effect of transfusion is not simply a selection process. CMV is a risk factor in transplantation, causing greater morbidity, allograft failure, and patient mortality. Individuals of blood type O are resistant to CMV. Potential kidney recipients who are CMV antibody free should preferably receive kidneys from CMV free donors. It is possible to test a potential cadaveric donor for CMV antibody in less time than it takes to perform a comprehensive lymphocyte cross-match.

(*continued on page 1173*)

Letters to the Editor

Danger of BB guns

To the Editor: I am writing to you in hopes of showing the dangers inherent in even the most innocuous appearing firearms.

A three-year-old male presented to the Hempstead General Hospital with lassitude and vomiting several hours after having been in the line of fire of a BB gun. He had a penetrating wound of the abdomen and, on laparotomy, was found to have a lacerated liver and a perforation of the proximal jejunum with the missile (a BB) lodged in the small bowel mesentery next to the superior mesenteric vein.

His recovery was uneventful.

It is my firm belief that all firearms are potentially dangerous. Even a simple BB gun can obviously cause grievous harm, especially where children are involved.

BURTON J. GLASS, M.D.
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Rockville Centre, New York 11570

Viewpoint: medical education

To the Editor: Twenty-five years ago, I married a medical student. Our oldest child is now in medical school. As a free-lance writer and college teacher of English, I am not in a position to evaluate the system, but I do hear platitudes, instead of encouragement, for those presently between B.A. and M.D.

Because of lab work, premeds spend more time without comparable credit-hours in classrooms than do other arts and science undergraduates. For example, 13 hours each week, in organic chemistry lecture and organic chemistry laboratory, only earns them six credits. My students merely sit three hours a week in my English class and receive three credits. Premeds also take two semesters learning biology plus biology labs. They register for physics and a physics lab, chemistry and a chem lab, while advisors suggest embryology and physiology as electives. Our nonpremed middle child will graduate this semester, summa cum laude, from the University of Pennsylvania without ever having taken a course needing any laboratory work!

Nonrequired courses are possible but mandatory math, foreign language, and English fill empty slots on student schedules. Has one a choice between an interesting optional course that carries with it the possibility of a final C grade, or an elective less eagerly approached but an assured better-than-B? A needed cumulative average of 3.7 and up for medical school consideration solves the dilemma. Learning to become educated has less emphasis than earning necessary A's in necessary courses, and necessary A's in elective ones.

Selected students in six-year programs—two premed and four medical school years—lose a liberal education because it takes two full years to complete just the standard science requirements.

After 3½ years of studying, forming new friendships among his competitors, our son decided to complete the last semester of the University of Pennsylvania at night and enroll in the Pennsylvania Academy of Fine Arts days. At the time, we wondered how medical schools would look at this situation. Would an interviewer react negatively to an "artist days and a scientist evenings?" Might the boy be rejected for daring to pursue what shall continue as his life-long hobby? We opposed his joining the rowing team as a sophomore since too many missed classes would have occurred when competing. A more mature senior, who had finished all required premed studies, he was firm about his choice of art school. No, he didn't want university courses in that field.

We were so wrapped up in the goal of getting into medical school that we almost dampened his desire to become a reasonably rounded individual. In spite of the system, he took astronomy, philosophy, a summer session of painting and drawing, and the concentrated art courses I mentioned.

The first acceptance arrived; the second envelope represented a choice. We felt relieved, exhilarated, and ashamed we had made the acceptance more important than his creative development.

Time is an enemy in medical education. Its rapid passage dictates acceptance of information instead of how-and-why questioning. Scientific advances add chapters to textbooks, but years allotted to understand the material remain stable. For example, the Watson-Crick model of double helix was not detailed until the 1950s. Our son now must memorize DNA and RNA data along with the plagues and polio his father was required to know. Medical schools are trying to find solutions to this time problem. Some remove sections of courses to allow hours to hear recent developments, others send students into hospitals for the second year and then back to school for the third and fourth. Premed pressure of time, parents, and peers is a problem for which there is no answer.

We knew no course could prepare our son for possible rejection. We also understood that all the right courses plus all the right grades would not guarantee his getting a graduate school seat. Time is an enemy, but fear is no less a foe.

We would now like to praise all stubborn students who select subjects for personal enrichment, after required sciences have been met. Yes, we might have put the blame

(*continued on page 1172*)

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• 8 FULL DAYS IN ENGLAND •

(*continued from page 1170*)

on art school, if medical school acceptance had not happened—but it did. Other parents and students need to know!

I wonder if advisory boards could use some input from private practice doctors? Suggestions for ways to improve or modify the process from diploma to doctorate might be meaningful from persons who once were participants. The phrase, "you can't learn it all" does not help the would-be physician who wants to try and is innocent enough to think he or she can.

LOIS GREENE STONE
5 Wide Waters Lane
Pittsford, New York 14534

Pseudo-speed

To the Editor: As stated in the article by R. J. Dougherty,[1] pseudo-speed, look-alikes, or pea-shooters are composed of varying concentrations of phenylpropanolamine (PPA), ephedrine, and caffeine. These are mass-produced for street sale.

Although diet-aid products (Dietac, Dexatrim, and Control) also contain PPA, data collected from emergency room reports show that street-purchased pseudo-speed is nearly always used by patients when psychic effects are mentioned. Commercially available diet products are rarely mentioned in this group.

Since the street-purchased drugs also contain unknown quantities of caffeine and/or ephedrine, it is reasonable to draw attention to the effects of these drugs at doses above recommended levels.

According to Oldendorf,[2] caffeine readily passes the blood/brain barrier and directly stimulates the central nervous system. Graden[3] reports that doses higher than 250 mg can produce symptoms indistinguishable from those of anxiety neurosis such as nervousness, irritability, tremulousness, muscle twitching, insomnia, sensory disturbances, palpitations, flushing, arrhythmias, diuresis, and gastrointestinal disturbances. In rats, caffeine stimulates release of norepinephrine in the brain.

Ephedrine, at doses higher than recommended levels (100 to 200 mg per day), produces insomnia, nervousness, headache, vertigo, palpitation, sweating, nausea, and vomiting, according to Remington.[4]

Because of problems in resolving the contribution of each of the drugs involved in pseudo-speed, it appears that solving abuse problems of PPA by limiting sales to prescription only would be useless unless caffeine and ephedrine were similarly restricted in the regulation. Obviously, it is almost impossible to limit sale of caffeine to prescription because of its availability in coffee, cola drinks, and chocolate (1 cup of coffee contains 100 to 150 mg). Even if PPA and ephedrine were limited to prescription-only status, it is unlikely that street sales would be affected because, as Dr. Dougherty states, these compounds can be synthesized easily in "garage" laboratories.

It should also be noted that although PPA is similar in chemical structure to amphetamines, it is devoid of abuse potential[5] and produces minimal increases in metabolic rates[6] and central excitant effects.[7] Reports of hypertension, renal failure, or psychotic episodes in connection with PPA are rare and, in almost all cases, were due to overdoses or interaction with other drugs. Dr. Dougherty's case reports also illustrate this point because all three patients took large doses of street-purchased material of unknown composition plus alcohol and/or marijuana.

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Dr. Dougherty's reply

To the Editor: In his recent letter to the editor regarding my article published in the January 1982 issue of the *Journal*, "Pseudo-Speed: Look-alikes or Pea-shooters," Dr. Saltzman mentions that the diet-aid products such as Dietac, Dexatrim, and Control are rarely mentioned directly in data collected from emergency room reports; most often the pseudo-speed or phenylpropanolamine involved in an abuse episode is from nondrug store or grocery store purchased items. We at the Benjamin Rush Center in Syracuse have seen several instances of adults who have been abusing these diet-aid products such as Dietac, Dexatrim, and Control.

I do disagree with the statement that PPA is devoid of abuse potential and apparently I am not alone in my opinion. The American Medical Association recently prepared model legislation which it has forwarded to its state societies recommending efforts to control the traffic in look-alikes. This legislation was prepared in a cooperative effort between the AMA with suggestions from the Pharmaceutical Manufacturers Association and the proprietary association. These included recommendations to the state medical societies that legislation be passed making it a crime to manufacture, process, package, distribute, or sell any substance other than a prescription drug if the substance, its label, or packaging substantially resembles a specific controlled substance. This model law would also be on either expressed or implied representation of a look-alike as a controlled substance or indication that the recipient could pass it off as being such.

Recently Pennsylvania became the 15th state to pass legislation forbidding sale and distribution of look-alike drugs. When Governor Thornberg of Pennsylvania signed the law, he made note that approximately 150 registered

(*continued on page 1288*)

(*continued from page 1169*)

Rosenfeld W, Jhaveri R, Evans H, Schaeffer H, Salazar JD, Cheng CC, Schiffer M: Decreasing perinatal mortality in a large urban center. ***New York State J Med*** 82: 1208 (July) 1982.

The perinatal mortality rate at an inner city hospital over a six-year study period (1974 to 1979) significantly decreased from 34.2 to 9.5 despite continued economic deterioration of the surrounding community and an unchanged proportion of high risk mothers, and low birth weight (less than 2,501 g) infants. The decrease in perinatal mortality reflected declines in both fetal and neonatal deaths. Decreased fetal deaths were associated with improvements in the monitoring program and a decreased proportion of forceps deliveries and oxytocin inductions. The number of primary cesarean sections increased in only one year (1978) of the study period. The significant decrease in neonatal mortality was temporally associated with major construction changes in the neonatal intensive care unit, new equipment, and increasing number of staff (nurses, housestaff, and attendings). Decreased mortality due to idiopathic respiratory distress syndrome (IRDS) was significant. Immaturity emerged as the major cause of death in the last two years. Indeed, a major remaining unsolved problem is the nearly uniform mortality among infants with birth weights of less than 750 g.

Abstracts in Interlingua

Vaughan JE, Borja AR, Good RE, et al.: Chirugia del arterias coronari. Es necessari viagiar 2000 millias? ***New York State J Med*** 82: 1181 (Julio) 1982.

Le resultatos del chirurgia del arterias coronari in un hospital communitari de magnitude moderate es presentate. Le mortalitate operatori in un anno, intra un gruppo de 192 patientes esseva 0.5 pro cento; iste teneva un graffo functionante post-operatori. Iste gruppo de patientes esseva comparate con altere gruppo reportate previemente de un hospital communitari con un programma chirurgic del arterias coronari e le resultatos obtenite es commentate.

Shimaoka K, Rakri K, Sciascia M, Razack M, Rao U, Mettlin C, Schedd D, Gajera R, e Walsh D: Programma thyroide selective; evalutation ulterior, ***New York State J Med*** 82: 1184 (Julio) 1982.

Un programma thyroide selective per personas in risco grande de disveloppar morbo nodulari del thyroide debite a radiotherapia previe per morbos benigne del capita e collo, esseva establite in 1977 in le Roswell Park Memorial Institute. Le resultatos del prime periodo de 4 annos es reportate. Esseva registrate 1500 patientes e esseva examinate selectivemente cata anno. Depost le selection initial, 331 (22.1 pro cento) habeva morbo nodulari del thyroide. Altere 175 patientes presentava le morbo durante le repetition del studio selective. Un total de 465

(*continued on page 1179*)

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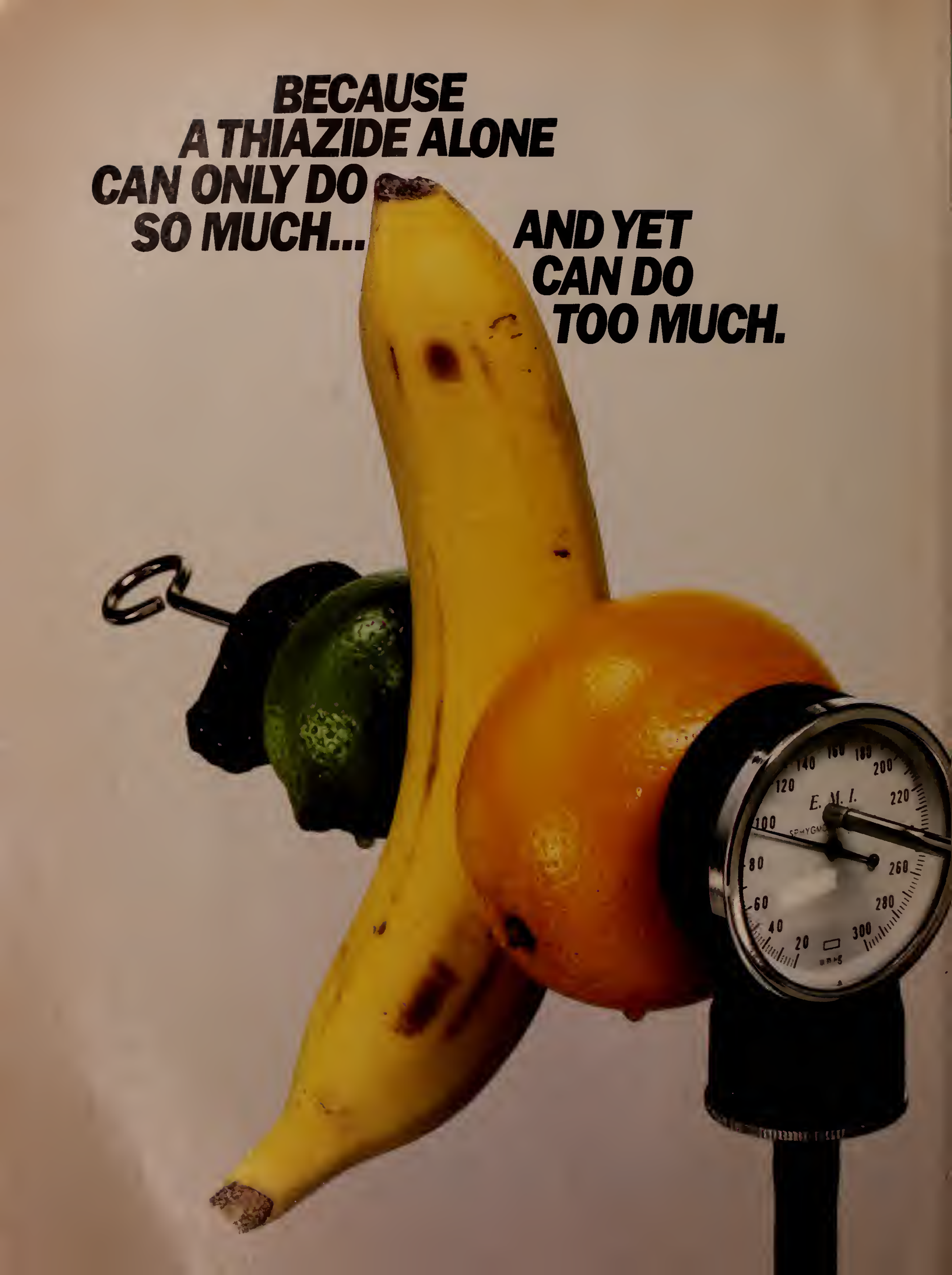
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AND YET
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E. M. I.

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No 476—Each INDERIDE®-80/25 tablet contains	
Propranolol hydrochloride (INDERAL®)	80 mg
Hydrochlorothiazide	25 mg

WARNING: This fixed combination drug is not indicated for initial therapy of hypertension Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant

DESCRIPTION: INDERIDE combines two antihypertensive agents: INDERAL (propranolol hydrochloride), a beta-adrenergic blocking agent, and hydrochlorothiazide, a thiazide diuretic-antihypertensive

INDICATION: INDERIDE is indicated in the management of hypertension (See boxed warning)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in 1) bronchial asthma; 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, e.g., isoproterenol or levarterenol However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e.g , CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease In patients with renal disease, thiazides may precipitate azotemia In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers Thiazides appear in breast milk If the use of the drug is deemed essential the patient should stop nursing

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis, and hypokalemia Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (*e.g.*, increased ventricular irritability) Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient Thiazides may decrease arterial responsiveness to norepinephrine This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular* bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia; visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm.

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous. reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

Hydrochlorothiazide: *Gastrointestinal* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System. dizziness, vertigo, paresthesias, headache, xanthopsia

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia

Cardiovascular orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reaction

Other hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION: The dosage must be determined by individual titration (see boxed warning).

Hydrochlorothiazide is usually given at a dose of 50 to 100 mg per day. The initial dose of propranolol is 40 mg twice daily and it may be increased gradually until optimum blood pressure control is achieved The usual effective dose is 160 to 480 mg per day

One to two INDERIDE tablets twice daily can be used to administer up to 320 mg of propranolol and 100 mg of hydrochlorothiazide. For doses of propranolol greater than 320 mg, the combination products are not appropriate because their use would lead to an excessive dose of the thiazide component.

When necessary, another antihypertensive agent may be added gradually beginning with 50 percent of the usual recommended starting dose to avoid an excessive fall in blood pressure

OVERDOSAGE OR EXAGGERATED RESPONSE: The propranolol hydrochloride (INDERAL) component may cause bradycardia, cardiac failure, hypotension, or bronchospasm

The hydrochlorothiazide component can be expected to cause diuresis. Lethargy of varying degree may appear and may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function, and in the absence of significant serum electrolyte changes or dehydration. The mechanism of central nervous system depression with thiazide overdosage is unknown. Gastrointestinal irritation and hypermotility can occur temporary elevation of BUN has been reported, and serum electrolyte changes could occur, especially in patients with impairment of renal function.

TREATMENT: The following measures should be employed GENERAL If ingestion is, or may have been, recent, evacuate gastric contents taking care to prevent pulmonary aspiration. BRADYCARDIA—Administer atropine (0 25 to 1 0 mg) If there is no response to vagal blockade, administer isoproterenol cautiously CARDIAC FAILURE—Digitalization and diuretics HYPOTENSION—Vasopressors, e g., levarterenol or epinephrine. BRONCHOSPASM—Administer isoproterenol and aminophylline STUPOR OR COMA Administer supportive therapy as clinically warranted GASTROINTESTINAL EFFECTS—Though usually of short duration, these may require symptomatic treatment. ABNORMALITIES IN BUN AND/OR SERUM ELECTROLYTES—Monitor serum electrolyte levels and renal function, institute supportive measures as required individually to maintain hydration, electrolyte balance, respiration, and cardiovascular-renal function

HOW SUPPLIED: *No 474*—Each INDERIDE®-40/25 tablet contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000 Also in unit dose package of 100.

No 476—Each INDERIDE®-80/25 tablet contains 80 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 and 1,000 Also in unit dose package of 100

References: 1. Veterans Administration Cooperative Study Group on Antihypertensive Agents J A M A 237 2303 (May 23) 1977 2. Bravo, E L , Tarazi, R C , and Dustan, H P N Engl. J Med 292 66 (Jan 9) 1975 3 Hollifield, J W , and Slaton, P E Acta Med Scand. [Suppl] 647 67, 1981 4 Holland, O B , Nixon, J V , and Kuhnert, L Am J Med. 70.762 (Apr) 1981

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(*continued from page 1173*)

patientes habeva le morbo nodulari e esseva observate durante le tractamento supressive de 6 menses. De intra le patientes que non habeva un remission complete del morbo nodulari, 85 acceptate le chirurgia del thyroide. Esseva trovate 17 carcinomas del thyroide (20 pro cento). Altere 6 patients habeva adenoma parathyroid o hyperplasia. Nos conclude que le studio selective del thyroide es un methodo effective e efficiente pro identificar le patientes con morbo maligne o altere morbo in un stadio temprane.

Scheidt A, Drusin LM, Krauss AM, Machalek SG: Epidemia nosocomial ab *Serratia* in un Unitate de Attention Intensive pro neonatos, ***New York State J Med*** **82:** 1188 (Julio) 1982.

Un specie de *Serratia marcescens* multi-resistente e non pigmentate esseva isolate de 30 infantes de un Unitate de Attention Intensive neonatal. In 22 neonatos, le epidemia originate primarimente de un specie bacterian in le excrementos, le urine e de catheteres umbilical. De 8 infantes infectate, in 4 le culturas del sanguine esseva positive. In 2, le bacteria proveneva del oculos, e in un le cultura del liquido cerebro-spinal esseva positive; un altere, le bacteria esseva presente in un abscesso. Pareva que le reservorio primari del epidemia esseva le tracto digestive. Altere factores contribuente al epidemia esseva le transferentia passive del microorganismos desde el personal del hospital e etiam el uso excessive de antibioticos de spectro ample. Le epidemia esseva controlate mediante stricte mesuras pro controlar le infection; iste mensuras includite le restriction de contactos interhuman, le aislamento, le meticulose lavage del manos e le desinfection de equipos e del superficie ambiental.

Firooznia M, Benjamin VM, Pinto RS, Golimbu C, Raffi M, Leitman RS, e McCauley DI: Calcification e ossification del ligamento spinal longitudinal posteriori; su rolo in le strictamento secondari del canal spinal e compression del medulla spinal, ***New York State J Med*** **82:** 1193 (Julio) 1982.

Le calcification del ligamento longitudinal posteriori dorsal es observate in circa del 3 pro cento del adultos in Japon, e in circa del 0.7 pro cento del adultos in le Statos Unite. Le columna cervical es compromitite in circa del 75 pro cento del casos. Iste morbo pote esser asymptomatic, particularmente in le patientes que ha un canal spinal grande. Mais, in altere patientes con calcification sufficientemente extense pote se presentar un strictamento significative del canal medullari que conduce al compression del medulla spinal e al disveloppamento de myelopathia. Iste resulta in un disturbamento sensorial e motor que primemente es leve, mais posteriormente termina progressivemente pejor culminante in paralysis e incontinentia. Le diagnose radiologic es facite facilmente quando le medico es familiari con le morbo. Le tomogramma lateral del spina dorsal es necessari in le casos dudose. Le tomographia computarisate es particularmente utile per que revela le magnitude e extension del calcification como etiam le magnitude del canal medullari e le extension de su strictamento debite al calcification. Le tractamento es dirigite al alivio del pression supra le canal spinal mediante le laminectomia e/o le decompression anteriori.

May AG, Betts RF, Andrus CC, Freeman RB, Hoy WE, Tibi PR, e Carey SA: Effecto del virus cytomegalic supra le transplantation renal, ***New York State J Med*** **82:** 1199 (Julio) 1982.

Le virus cytomegalic (VCM) es ubiquitose e le frequentia del stato e portador augmenta con le etate. Le virus non es transmitite mediante le transfusion de sanguine congelate. Le transplantation a un recipente libere del VCM de un ren de un donante VCM positive, in general produce un infection primari asymptomatic. Le transplantation de padre a filio produce un infection primari, e ille de un portador del VCM, in general produce un reactivation del infection asymptomatic que es facilmente inadvertite. Le transplantation de un ren de cadavere produce le reactivation del infection. Tanto le infection primari como le infection reactivate es equalmente deleteriose pro le superviventia del allograffo. Le infection VCM marcate reduce le effecto del transfusion pre-operatori pro facer le transplantation de ren de cadavere. Iste es un evidentia additional de que le effecto beneficiose del transfusion non es simplemente un processo selective. Le VCM es un factor riscose del transplantation e es causante de un major morbiditate, etiam del fallimento del allograffo e major mortality del patientes. Le individuos de sanguine del typo O es resistente al VCM. Le recipentes potential carente de anticorpores VCM debe reciper, preferentemente, le ren de donantes libere de VCM. Es possible examinar si un donante cadaveric potential ha le anticorpores VCM in minus tempore del que toma le facer un examination crusate complete del lymphocytos.

Rosenfeld W, Jhaveri R, Evans H, Schaeffer H, Salazar JD, Cheng CC, e Schiffer M: Mortalitate perinatal decrescente in un centro urban grande, ***New York State J Med*** **82:** 1208 (Julio) 1982.

Le mortalitate perinatal in un hospital intra-city durante un periodo de studio de 6 annos (1974–1979) descendeva de 34.2 a 9.5, ben que persisteva le deterioration economic del communitate circunvecine e le population non cambiante de matres in risco elevat e etiam le basso peso corporal al nascentia del pueros (<2501 g). Iste reduction del mortalitate perinatal esseva observate in fetuses e neonatos. Le descenso del mortalitate fetal esseva associate con le melioramento del programmas monitor e le reduction del uso de forceps e del induction con oxytocina. Le numero de operationes cesareae primari augmentava solmente in un del annos del studio (1978). Le reduction significative del mortalitate neonatal esseva temporalmente associate al cambio importante del construction del Unitate de Attention Intensive Neonatal, adquisition de equipo nove e augmento del personal (nurses, medicos tratante). Le reduction del mortalitate debite al "IRDS" esseva significative. Le immaturitate emergeva como le causa principal del morte in le ultime 2 annos. Certemente, le problema que persiste non solvete es le mortalitate quasi uniforme intra infantes de peso inferiori a 750 grammos.

Translated by Edwardo I. Juliet, M.D.

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Coronary Artery Surgery

Is it necessary to travel 2,000 miles?

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Results of coronary artery surgery in a moderate-sized community hospital are presented. Operative mortality in the one-year series of 192 patients is 0.5%, with a postoperative graft patency of 89.3%. This group of patients is compared with other reported series, and the advantages of a community-hospital coronary surgical program are discussed.

The role of surgery in the treatment of coronary artery disease has expanded dramatically over the past decade. Lowered surgical mortality rates during this period, as well as the favorable long-term results reported by many institutions, have led to an increasing number of people undergoing coronary surgery. Even in the least favorable studies reporting patients with "chronic, stable angina," surgery has shown prolongation of life in patients with triple-vessel disease and left ventricular (LV) impairment, as well as in patients with left main-stem lesions.[1] In more favorable series with lower surgical mortality and higher graft patency, five-year survival rates in patients without prior ventricular damage have equaled the average national death rate of the United States corrected for age and sex.[2,3]

With the increased number of people undergoing surgery, serious questions arise as to where this type of surgery should be performed. Initially, coronary surgery was confined primarily to larger teaching institutions, and patients were transferred to these hospitals from outlying communities. Now, however, with the continuing increase in the need for coronary surgery, this system has serious drawbacks. Many patients and families have been advised to travel hundreds, even thousands of miles and to wait weeks, even months for proposed coronary bypass surgery.

This type of referral places a heavy burden on the financial and emotional resources of the patient and family, as well as imposing some risks to the patient's health. The normal family structure undergoes a major disruption and if postoperative problems occur, this disruption can continue for a prolonged period. In addition, the interval between the decision for surgery and the actual operation is a very anxious one for both patient and family. When that interval is prolonged, the anxiety is needlessly extended. Also inherent in this type of disease is a certain morbidity and mortality rate in patients after diagnosis. Patients with a long period between catheterization and surgery have a higher risk of myocardial infarction or even death prior to the surgery itself.

On the other side of the ledger is the absolute necessity to have coronary surgery performed in a setting that can produce excellent technical results—a low surgical mortality rate combined with a high graft patency. Certainly, if these results can only be obtained in a surgical program connected with a major teaching hospital, the inconvenience, cost, and anxiety are secondary issues, and the interval chance of death has to be accepted.

This paper, however, presents the results of an adult cardiac surgical program in a moderate-sized community hospital to compare the coronary surgical results with those published previously throughout the United States.

The cardiac surgical program at Arnot-Ogden Memorial Hospital in Elmira, New York, has been in existence for seven years. The hospital has 306 beds and is located in a city of 40,000 people. Because the large surrounding area has no urban medical center, Arnot-Ogden is the only non-university-affiliated hospital in upstate New York to be granted a cardiac surgical program by the New York State Department of Health.

In 1979, among 245 diverse adult cardiac procedures, 192 patients underwent purely coronary bypass surgery, both elective and urgent. This paper will discuss the results of these 192 consecutive bypass patients in terms of patient selection, operative technique, operative mortality and graft patency with comparison to other reported series.

TABLE I. Age and Sex Distribution of Coronary Bypass Patients

Age (Yr)	No. Male Patients	No. Female Patients	Total	Deaths
30–39	5	...	5	...
40–49	26	...	26	1
50–59	63	14	77	...
60–69	43	16	59	...
70–75	12	4	16	...
Over 75	3	6	9	...

Average age, 59 years.

Patient Selection

Patient selection certainly plays a paramount role in equating results from different series. The patient's sex, age, number of vessels diseased, and preoperative ventricular function have been shown to be important indications of surgical survival. In all, 152 men and 40 women underwent surgery. With extremely rare exception, these patients represent all patients referred for coronary surgery from the Arnot-Ogden Catheterization Laboratory. No patients were sent elsewhere because of complexity or risk factors. Table I lists the age and sex distribution of this group of patients. The ages ranged from 32 to 86 years, with the average age 59 years. In comparison, other comparable studies showed average or mean ages of 51 to 54 years.[1,4,5]

The number of vessels diseased per patient is shown in Table II. Single bypasses accounted for 16 patients, or 8.3%; double-vessel bypasses, 29 patients, or 15.1%; triple-vessel disease, 68 patients, or 35.4%; and greater than three vessels, 79 patients, or 41.4%. Other series vary considerably in terms of an "average" number of vessels involved per patient.[1,2,4–6] Single-vessel disease ranged from 12% to 37% of all patients; double-vessel disease, 26% to 46%; and triple-vessel disease, 22 to 62%.

Preoperative ventricular function is universally accepted as a major indicator of operative risk for coronary surgical patients. Some difficulty exists, however, in comparing different groups of patients quantitatively, since indicators of ventricular function vary. We have routinely used the left ventricular ejection fraction (EF) as an indicator of LV function. Table III lists our patients in terms of ejection fraction. Using these data, we have arbitrarily labeled patients with EF greater than 50% as low risk, those with EF 30% to 50% as moderate risk, and those with EF less than 30% as high risk. By these criteria, 144 patients, or 75%, were low risk; 40 patients, or 20.9%, were moderate risk; and eight patients, or 4.1%, were high risk.

TABLE II. Distribution of Coronary Bypass Patients by Number of Vessels Grafted

Vessels	No. of Patients	Percentage of Total	Deaths
CABG-1	16	8.3	...
CABG-2	29	15.1	...
CABG-3	68	35.4	...
CABG-4	66	34.4	1
CABG-5	13	6.8	...

TABLE III. Ejection Fraction Study for Coronary Artery Bypass Graft

Preop Ejection Fraction	No. of Patients	Percentage of Total
10%–19%	2	1.0
20%–29%	6	3.1
30%–39%	16	8.3
40%–50%	24	12.6
> 50%	144	75.0

Postop Ejection Fraction Total No. Studied	No Change	Improved	Decreased
82	54 (66%)	19 (23%)	9 (11%)

Other groups who reported LV function by EF showed similar preoperative LV function, with 63% of patients having EF greater than 60% and only 0.8% less than 30%.[6] Still other groups report LV function only as "normal," "abnormal," and "diffusely abnormal."[1,2,8] These groups report 34% to 45% as normal, with less quantitative breakdown of the "abnormal group."

Operative technique

All coronary surgery is performed by the same basic technique. Saphenous veins are routinely used as the graft conduits. The veins are harvested from the legs while the patient is being placed on cardiopulmonary bypass. Ascending aortic cannulation is used for arterial perfusion and venous blood returned by the cannulation of both superior and inferior venae cavae. The left ventricule is routinely vented through the right superior pulmonary vein. After establishing bypass, the patient is cooled to 27°C and the heart is topically cooled with iced normal saline. With a fibrillated heart at 27°C, distal vessels are dissected. The aorta is then cross-clamped, using myocardial protection of iced cardioplegic solution (Ringer's lactate, 30 mEq/L KCL, 50 cc of 50% dextrose/L, 1 g solumedrol/L), which is perfused by gravity into the ascending aorta. An initial 500 cc is given, with an additional 200 cc after each distal anastamosis. The patient is rewarmed during the final distal anastamosis and then weaned off bypass while the proximal anastamoses are performed with the aorta partially occluded.

Operative mortality

Operative results are tabulated in Table IV. An operative death in this paper is defined as any patient

TABLE IV. Coronary Surgery Mortality

Total Number of Patients	Early Operative Death (30 d)	30-Day Operative Mortality (%)
192	1	0.5

expiring either within 30 days after surgery or prior to leaving the hospital after surgery. Of the 192 patients undergoing coronary surgery, both elective and urgent, one patient expired, giving an operative mortality rate of 0.5%. Other excellent series reported across the nation showed an early mortality rate of 1% to 6%.[1,2,5,7,8]

Postoperative graft patency and ventricular function

Of the 192 patients, 82 underwent postoperative catheterization approximately eight weeks after surgery, representing 131 out of 607 total grafts. These patients essentially represent a random cross section of patients since they were selected solely to determine the patency of the grafts and the selection was not influenced by presence or absence of symptoms. Of these 131 grafts, 117, or 89.3%, were patent (Table V). Essentially all major arteries had similar patency rates. Other groups reporting postoperative patency rates have shown graft patency ranging from 70% to 90%.[1,2,4,5,7,8]

In the same study, postoperative ventricular function was estimated by EF (Table III). An improvement or decline in EF was arbitrarily designated as a change of greater/lesser than 10% from original values. As can be seen from the table, 66% had no change in EF, 23% had an improvement, and 11% a decline. These results both verify the relative safety of the operative technique of cold cardioplegic myocardial protection and essentially match other successful surgical series.[2]

Summary

Although this paper represents only the one-year period of 1979, the statistics of the program through 1981 show essentially similar results in terms of both operative mortality and graft patency.

We believe that the mortality rate of 0.5% and graft patency of 89% justify the place of coronary surgery in the correct, well-controlled community-hospital setting. The surgery is carried out within a few days of the initial catheterization, and the anxiety, expense, and danger of long-distance travel and preoperative wait can be avoided with the justified expectation of excellent surgical results. In addition, postoperative problems can be evaluated and treated with relatively little impingement on the normal life of patient and family.

TABLE V. Patency Rate

Vessel	Patent	Occluded	Individual Patency Rate (%)	Total
LAD	29	3	90.6	32
Diag 1	11	...	100	11
Diag 2	5	...	100	5
Circumflex	10	...	100	10
Lat or obtuse marg	13	5	72.2	18
Post Lat	18	2	90	20
PDA	3	...	100	3
RCA	23	2	92	25
PDA	5	2	71.4	7

Total grafts patent: 117
Overall patency rate: 89.3%
Total grafts occluded: 14
Total patients recathed: 82

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Thyroid Screening Program

Follow-up evaluation

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A thyroid screening program for persons at a higher risk of developing nodular disease of the thyroid due to previous radiation therapy for benign conditions in the head and neck areas, was established at Roswell Park Memorial Institute in 1977. The results for the first four-year period are reported here. Fifteen hundred patients were registered and offered annual screening examinations. On the initial screening, 331 (22.1%) were found to have nodular disease of the thyroid and an additional 175 were discovered on repeat screening. There were 465 patients with nodular disease who underwent observation on suppressive therapy for six months. Among those who did not achieve complete remission of nodular disease, 85 accepted thyroid surgery. Seventeen thyroid carcinomas (20%) were encountered. In addition, six patients were found to have parathyroid adenoma or hyperplasia. We conclude that the thyroid screening is an effective and efficient way to identify at an early stage the patients who may have malignant or other disorders.

We have previously reported the results of the first year operation of a thyroid screening program for the high-risk population that received radiation therapy for benign conditions in the head and neck areas during infancy, childhood, and beyond adulthood.[1] The program was designed to offer annual examination to these previously irradiated individuals. We are now reporting the results of the screening in the first four years of operation.

Patients and methods

The acquisition of the patients for screening was essentially the same as described in our previous report.[1] In addition, the treatment records of one deceased dermatologist and a list of patients who were previously studied by Simpson[2] were provided to the Department of Cancer Control and Epidemiology for an attempt to recall these patients. However, due to the long elapsed time, our attempt has been only partially successful. Of 361 individuals irradiated in the 1950s, 22 were identified as deceased, 52 were contacted and declined offers to be examined, and 93 entered the screening program. One hundred ninety-four individuals could not be contacted in spite of reference to last known address, current directories, review of church records, and contact of neighbors at last known address. The remaining 1,407 patients voluntarily requested the screening examination.

The methods of evaluation were essentially the same for those newly acquired and those who returned for repeated screening on an annual basis, except the elimination of carcinoembryonic antigen assay which proved not to be useful in screening. In brief, all new and old patients reporting to the thyroid screening clinic were interviewed for short history, and physical examinations of the head and neck areas were carried out. The laboratory tests included complete blood count, ESR, SMA-12, and serum thyroxine (T4) by radioimmunoassay. When palpable abnormalities of the thyroid were found, six-hour uptake and thyroid imaging were performed by ^{123}I and a scintillation camera with a pinhole collimator. In addition, serum thyroid-stimulating hormone (TSH), thyroglobulin, triiodothyronine, thyroxine-binding globulin (TBG), and antithyroglobulin and antimicrosomal antibodies were obtained as well as cholesterol, triglyceride, and HLA histocompatibility antigen typing. Indirect laryngoscopy was performed on all patients. Needle aspiration cytologic study was performed on consenting patients with larger nodules. If there were no clinical findings to suggest the presence of thyroid cancer, monthly observation by the same physician while the patient was on suppressive therapy for six months was recommended. If steady growth of the nodules was documented while on suppressive therapy, the patients were urged to have surgery. Otherwise, at the end of six months, a thyroidectomy was offered to the patient whose nodules had not completely disappeared.

Those patients who had no palpable abnormalities or no abnormal laboratory findings were scheduled for reexamination at yearly intervals. Those with abnormal laboratory test results were recalled for repeat determination or referred to their primary physicians, or both. Although we were well aware of the development of parathyroid disease from previous radiation therapy to the head and neck areas at the time the thyroid screening program was instituted, our concern was heightened by high prevalence of this condition among our patients. As a result, when abnormally high serum calcium values were noted on the random samples, more frequent calcium determinations were obtained. When abnormally high calcium values were noted on multiple occasions, further evaluations of parathyroid functions were instituted.

Results

Our first report of the thyroid screening covered a period of February 1977 to January 1978 when 735 patients were examined. In this report, we have arbitrarily divided the year from January 1 to December 31. During the four years of operation of the thyroid screening clinic from 1977 to 1980, we have seen a total of 1,500 new patients. A total of 506 patients were found to have nodular disease of the thyroid and 465 of them were observed on suppressive therapy. Eighty-five patients thus far have accepted surgery and 17 were found to have thyroid carcinoma. These new and revisit patients are summarized in Table I and further divided to each year of operation. There were 544 males and 956 females with mean ages of 36.6 and 40.3 years, respectively. The mean age of patients overall was 39.0 years. Among the 1,500 patients who were screened, we found 33.7% of these people with nodular disease of the thyroid at some stage of the screening. In spite of the fact that a larger number of women were examined than men, the frequency of the nodular disease of the thyroid was not different. Unlike the other screening programs,[3] more than one half of our patients were treated for acne and other skin conditions.

The most commonly encountered laboratory abnormalities were elevations of lactic dehydrogenase, which occurred in 39% of our patients. However, most of these were moderate elevations and returned to the normal range on repeat determination. Other than the abnormal blood sugar values which were encountered in 16% of the screening population, the remainder of abnormalities were encountered in less than 10% of the screened population. The serum calcium determinations were found to be out of the normal range (9.0 to 10.5 mg/dL) in 8% of screened patients. The abnormal values of serum T4 were found in 7% of screened patients, and most of them were associated with the finding of nodular disease of the thyroid. The remainder of the patients with abnormal values of the serum T4 were carefully evaluated clinically; three patients turned out to be hypothyroid and one patient was found to have idiopathic increase of thyroxine-binding globulin.

Table II shows number of patients randomized for suppressive therapy to compare the effectiveness of desiccated thyroid and liothyronine annually. The preliminary results of this phase of observation were published elsewhere.[4] There may have been several weeks to several months delay between the detection of nodular disease and entry to the suppressive therapy phase. Ten patients were in this phase and 31 patients decided to be followed by their private physicians. Approximately one quarter of the patients treated thus have shown complete disappearance of their nodules. Eighty-five of these patients who did not achieve complete response accepted surgery and 17 were found to have carcinoma. The incidence of carcinoma among the patients who underwent thyroidectomy was 20.0%. Nine of the 17 thyroid cancer patients had been previously treated for acne. Those who declined to have surgery were continued on suppressive therapy and followed at three- to six-month intervals.

Table III shows the discovery rate of new nodular disease on repeated screening; the first screening found nodular disease in 22.1%. Some patients did

TABLE I. Incidence of Nodular Disease in Screening by Year

	1977	1978	1979	1980	Total
New patients	735	285	317	163	1,500
Nodular disease	133	93	81	24	331
Nodular disease rate	18.1%	32.6%	25.5%	14.7%	22.1%
Revisiting patients	2	378	349	448	1,177
Nodular disease	0	77	73	25	175
Nodular disease rate	...	20.4%	20.9%	5.6%	14.8%
Total nodular disease detected	133	170	154	49	506

TABLE II. Number of Patients with Nodular Disease Entering Medical and Surgical Phases of Therapy by Year

	1977	1978	1979	1980	Total
Suppressive therapy	94	140	170	61	465
Thyroid surgery	5	35	26	19	85
No. with cancer	3	7	3	4	17
Rate of cancer among those receiving surgery	60.0%	20.0%	11.5%	21.0%	20.0%

TABLE III. Prevalence of Nodular Disease on Repeated Screening

Data	Screening 1st	2nd	3rd	4th	5th
No. of patients	1,500	725	325	117	10
New nodular disease	331	121	47	7	0
Rate of nodular disease	22.1%	16.7%	14.5%	6.0%	. . .

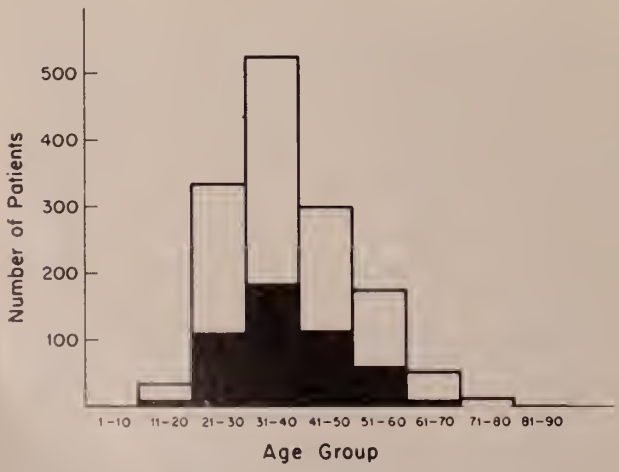
TABLE IV. Prevalence of Nodular Disease Among Those Treated for Acne and for Other Causes Than Acne

Type of Radiation Therapy	Nodular Disease No. (%)	Disease Free No. (%)	Total
Acne	234 (35.3)	428 (64.7)	662
Other than acne	272 (32.5)	566 (67.5)	838
TOTAL	506 (33.7)	994 (66.3)	1,500

not return for subsequent follow-up despite mailed reminders. Among those who did return, new nodular disease was found in the previously normal gland, albeit with lesser frequency. The number of patients who underwent more than four screenings is small but the results among this group suggest diminished screening impact; however, continued observation is required to determine the proper screening intervals.

Comparison of age distribution of 506 patients who were found to have nodular disease and all patients in the screening program showed no significant statistical differences as shown in the figure. The prevalence of nodular disease in patients with previous radiation therapy for acne was no different from those patients who received radiation therapy for the other conditions as shown in Table IV.

To date, we have found six patients with adenoma or hyperplasia of the parathyroid which were pathologically confirmed. Two of these cases were incidental findings at the time of thyroidectomy for nodular disease, and on retrospective review, an elevated level of serum calcium was confirmed on single occasion in one patient. Three other patients were operated on for combined thyroid and parathyroid diseases and one patient was explored for parathyroid disease after complete regression of the thyroid nodule on suppressive therapy.



Age distribution of all patients (open bars) and patients with nodular disease (closed bars)

Comment

We have reported previously the efficiency and effectiveness of the thyroid screening on the high-risk population.[1] The present report further confirms our findings and indicates the frequency of new disease after initial screening. The similar observation was also made by the team from Michael Reese Hospital where reexamination was carried out on 158 subjects from a group of 226 previously normal persons.[5] Additional thyroid abnormalities and thyroid cancer were found in these patients. They have also combined the serum thyroglobulin determinations in their follow-up and reported its usefulness. In our program, the emphasis was placed on the physical findings and laboratory testing has been limited to the minimum of routinely available tests.

Earlier study indicated that superficial x-ray treatment by low-voltage machine for benign dermatosis was an effective, safe, and justifiable treatment in selected patients, provided it was administered by a fully qualified dermatologist according to recognized standards.[6] Unfortunately, previous research examined only the development of radiation-associated skin changes and skin cancer. Subsequently, Albright and Alday in 1967[7] reported five cases of thyroid carcinoma developing five to 40 years after radiation therapy for adolescent acne.

Inadequate calibration of equipment, incomplete treatment records, inconsistent use of the shielding, and other factors make the assessment of the relationship difficult. It appears that the prevalence of nodular disease of the thyroid depends solely on radiation dose absorbed by the thyroid tissue. Radiation delivered for dermatologic conditions is no different from radiation given for other conditions. This is evident from the study of Ron and Modan[8] on the consequence of radiation therapy for tinea capitis, in which an average radiation dose delivered to the thyroid was estimated to be 6 rads, yet a significantly high prevalence of thyroid cancer was reported. An unusually high 60% incidence of thyroid carcinoma among 20 patients with a history of radiation therapy for acne vulgaris who came to thyroidectomy was reported by Paloyan and Lawrence.[9] However, these patients were preselected for surgery and do not reflect the actual incidence in the population that was irradiated for skin conditions.

Many of the thyroid nodules detected in our screening program were relatively small and only 59% of the patients demonstrated abnormalities on thyroid imaging. More than one half of the patients who underwent surgery showed some features of chronic lymphocytic thyroiditis. This was by far the most common pathologic condition found in our patient population. This is in agreement with our study of malignant lymphoma patients treated with a much higher dose of radiation to the neck area.[10] Approximately one half of the thyroid cancer found in our surgical cases are so-called minimal carcinoma, although many of these show clinical and pathologic evidence of the aggressiveness. The follow-up of patients with carcinoma is still too short to draw any conclusion regarding their ultimate clinical course. Results of follow-up of 108 radiation-associated thyroid cancers at the Michael Reese Hospital have been reported to be not different from those of thyroid cancers not associated with radiation.[11]

The prevalence of primary hyperparathyroidism in various clinic and hospital populations has been estimated to be 100 to 200 per 100,000.[12] The study of primary hyperparathyroidism in Olmsted County, Minnesota, indicates an average annual incidence of 51.5 cases per 100,000; 6.4 for those under age 39, 67.7 for those aged 40 to 59, and 154.1 for above age 60.[12] Although based on small numbers, our data indicate an incidence of 100 per 100,000 per year, which would be clearly higher than expected in the general population with an average age of 39 years. An increased prevalence of hyperparathyroidism following head and neck irradiation has been reported by the other investigators.[13-15]

We feel that screening of this high-risk population is an effective and efficient way to detect the diseases early and should be repeated at reasonable intervals until the incidence of new nodular disease declines substantially; then it may become more feasible to widen the interval between the screenings.

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Nosocomial Outbreak of Resistant *Serratia* in a Neonatal Intensive Care Unit

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A multiply-resistant, nonpigmented strain of Serratia marcescens *was isolated from 30 infants in a neonatal intensive care unit. Twenty-two neonates who were colonized grew the epidemic strain primarily from stool, urine, and umbilical catheter. Of the eight infants who were infected, four had positive blood cultures, two grew the organism from their eyes, one had a positive cerebrospinal fluid culture, and one had an abscess. The primary reservoir for this outbreak seemed to be gastrointestinal colonization. Other factors contributing to the outbreak were passive transfer of the organism by the staff and the generous use of broad spectrum antibiotics. The outbreak was terminated by the introduction of stringent infection control practices including cohorting, isolation, meticulous handwashing, and disinfection of both equipment and environmental surfaces.*

In recent years outbreaks of hospital-acquired infection with *Serratia marcescens* have been reported in intensive care units,[1] urology units,[2,3] and nurseries.[4] *Serratia* survives well in moist environments, and in these and other epidemics it has been recovered from respiratory therapy equipment,[5–7] fiberoptic bronchoscopes,[8] catheters,[9,10] arterial pressure monitors,[11] and scalp vein needles.[12] Characteristics of the host are also important. Physiologic factors, altered immunity, underlying disease, structural abnormalities, or diagnostic and surgical procedures all increase the likelihood of infection.[4,9,10,13–15]

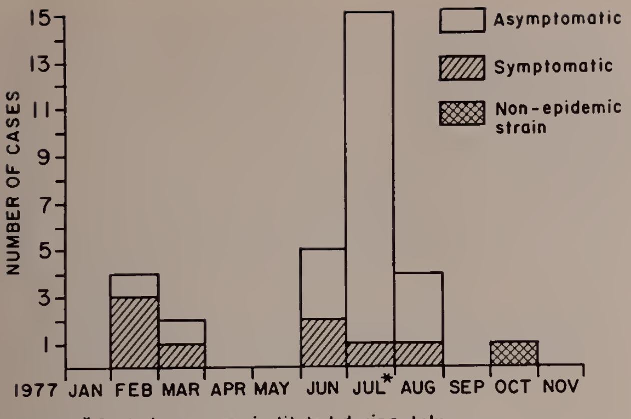
Neonatal intensive care units have many patients with impaired resistance who require chronically indwelling intravascular catheters and humidification equipment. It is also well recognized that the use of antibiotics can select for the predominance of an antibiotic-resistant strain of bacteria, and that antibiotic resistance can be transferred from one bacterial species to another.[16–18]

This report describes an outbreak of a multiple antibiotic resistant, nonpigmented *S. marcescens* in a neonatal intensive care unit. Based on the results of stool cultures and selective environmental sampling, it appeared that the neonatal gastrointestinal tract, rather than an environmental source, was the important reservoir. Control of the outbreak was achieved through measures directed at breaking staff transmission from infected to noninfected infants. This required little more than standard infection control practices that date to Semmelweis.

Results

Outbreak. The New York Hospital Neonatal Intensive Care Unit (ICU) is a 50-bed unit which runs at 100% occupancy. It is divided into three intensive care rooms of five beds each, three intermediate care rooms of eight beds each, and a special care unit containing ten beds and one isolation room. All infants are admitted to an intensive care room. Approximately 900 high-risk or premature infants are admitted yearly, of whom 600 are transferred from outside hospitals. The average length of stay is 22 days; the age range is from under four weeks to one year. Routine cultures of the nose and umbilicus are taken on admission and at discharge; urine is cultured at discharge only. When clinical sepsis is suspected, cultures of the nose, umbilicus, urine, stool, cerebrospinal fluid, and blood are done, and antibiotic therapy with ampicillin and gentamicin sulfate is initiated. This regimen is discontinued or changed if negative cultures or a different sensitivity pattern is found.

During the first year that the unit was open, no *Serratia* isolates were recovered. In the first two months of the second year, February and March 1977, six sporadic cases of *Serratia* occurred (see figure). Infected infants were either isolated in the single room or remained in an ICU room on isolation precautions if their medical condition demanded it. Only two of the infants had occupied the same room, and at no time were more than two infected infants on the unit. The last infected infant was discharged in April, and no cases of *Serratia* appeared during April and May. Since there was no microbial



*Control measures instituted during July

Infants with cultures positive for *Serratia marcescens* by month

screening of all the infants, it was not known what percentage of infants were colonized with this strain of *Serratia.*

In early June, positive cultures of the umbilicus and umbilical catheter appeared in one infant; in late June an infant in an intensive care room died from sepsis due to *Serratia.* These cases exhibited a similar pattern of antibiotic sensitivity and were totally resistant to ampicillin, chloramphenicol, tetracycline, colistin sulfate, cephalothin sodium, and gentamicin. Most were sensitive to streptomycin sulfate and almost all to tobramycin sulfate. Cultures of the nose, umbilicus, urine, and stool of the three other infants in the room revealed one asymptomatic infant with *Serratia* in the urine and stool. This infant was isolated, subsequently developed a urinary tract infection unresponsive to appropriate antibiotics, and died two months later from hyaline membrane disease and bronchopulmonary dysplasia. On postmortem examination *Serratia* was recovered from the endotracheal tube. Cultures of the umbilicus, urine, and stool from the second infant were positive; cultures from the third were initially negative but urine and stool became positive for *Serratia* in early July.

Simultaneously, environmental cultures were performed in the unit housing the infants. Cultures of the blood pressure machines, transducer jelly, electrocardiogram paste, refractometers, and respiratory therapy nebulizers were negative. *Serratia* was found, however, in the water reservoir of one of the four isolettes cultured. Ineffective disinfection using soap and water followed by alcohol was found to be common. A new procedure using an iodine detergent-disinfectant at a strength of 150 ppm was developed and instituted. The use of water in the isolettes was curtailed. No other inanimate source of contamination was identified. The room containing the infected infants was closed, and all supplies, equipment, and surfaces were disinfected or sterilized. A schedule for routine intensive cleaning and disinfection of all rooms was instituted. Handwashing between patient contacts was repeatedly emphasized.

Despite these measures, postmortem cultures taken on June 30 of spleen and lung from one additional infant were positive for *Serratia.* Nine additional infants from different locations on the unit were identified as positive for *Serratia* between July 3 and July 14 (1 urine, 1 urine and stool, 1 umbilicus and stool, 1 cerebrospinal fluid post mortem, 1 stool and umbilical catheter, 1 eye and stool, 3 stool only). A prevalence survey conducted on July 13 and 14 yielded six of these infants with stool cultures positive for *Serratia:*

Infants cultured:	25
Positive stool:	6
Point prevalence:	24%

At this time, all infants in the neonatal intensive care unit were put on gown and glove precautions, handwashing was again stressed, and all infants and staff were cohorted. New admissions were put into freshly cleaned and disinfected rooms and attended by personnel who had no contact on any shift with any of the babies on isolation.

For the next three months, this protocol was followed rigidly. From mid-July to mid-August, 10

Infants Positive for *Serratia*, by Month and by Site*

Month	No. Infants	Eye	Umb	Urine	Stool	Blood	Umb Cath	CSF	Abcess	Post
February	4	1	1	2	1	2	1	...	...	...
March	2	...	...	...	2	1	1	...	...	...
April	0	...	...	...	...	...	...	...	...	...
May	0	...	...	...	...	...	...	...	...	...
June	5	...	2	2	2	1	1	...	...	1
July	15	1	3	3	12	...	1	...	...	1
August	4	...	...	1	4	...	...	...	1	...
September	0	...	...	...	...	...	...	...	...	...
October	1†	...	1	...	...	...	...	...	...	...
TOTAL NO.	30**	2	7	8	21	4	4	0	1	2

* Most infants had multiple culture sites.

† Nonepidemic strain.

** Excludes nonepidemic, nonnosocomial strain.

Abbreviations: umb = umbilicus; cath = catheter; CSF = cerebrospinal fluid; post = postmortem additional infants in the isolation group had positive cultures for *Serratia;* 6 stool only, 2 stool and urine, 1 umbilicus and stool, 1 umbilicus only. No additional neonates colonized with *Serratia* were identified from the isolation group after mid-August, and the last of these infants was discharged in mid-November. None of the neonates admitted to the "clean" rooms ever became colonized with *Serratia.* Two weeks prior to discharge of the last infant, *Serratia* was recovered from an admission culture of the umbilicus of an infant transferred to the unit from another hospital. The antibiotic sensitivity pattern of this organism was different from the epidemic strain. Neither the 14 infants who had been cultured because of possible contact with this infant nor any other infant on the unit became infected or colonized with this new strain.

In all, *S. marcescens* was isolated from 30 infants; the table summarizes infants with positive cultures for *Serratia.* Twenty-two were colonized and eight were infected. Six infants died—two from sepsis, and two from bronchopulmonary dypslasia, one of whom also had hyaline membrane disease. Two of the six were not symptomatic for infection during life, but cultures obtained during postmortem examination of spleen and lung of one infant and cerebrospinal fluid of the other grew the epidemic strain of *Serratia.*

Comment

None of the 30 cases acquired a positive culture for *Serratia* before having been in the neonatal intensive care unit for at least seven days. Therefore, either colonization or infection was most probably hospital-acquired. Four infants with positive blood cultures, two with positive eye cultures, and one each with positive spinal fluid culture and abscess formation had symptoms from their *Serratia* infections. Only three of these neonates developed significant clinical illness secondary to infection. The 22 asymptomatic infants grew *Serratia* primarily from stool, urine, and umbilical catheter.

Serratia does not colonize the adult gastrointestinal tract and is rarely found there.[19–21] Our data revealed that over 70% (21 of 30) of the colonized neonates had *Serratia* in their stools, and 81% (17 of 21) of stool carriers were asymptomatic. This strongly suggests that significant colonization occurs in the infant gastrointestinal tract which then became the reservoir, an observation that has been made by others.[12] It is unlikely that infant nourishment was the source of the gastrointestinal colonization. Either commercially prepared individual bottles of sterile formula or formula obtained from a service was fed to each infant through a sterile nipple or a sterile syringe. Both preparations were cultured weekly.

Although the epidemic strain of *Serratia* was recovered from the water reservoir of an isolette, it was probably also passively carried on the hands of personnel and disseminated from infected to noninfected infants.[22,23] Inadequate handwashing after changing diapers or pads and weighing them on a common scale crowded between the disposal area and the sink probably contributed to the spread of infection.

The generous use of broad spectrum antibiotics, both for treatment and prophylaxis, may have increased the likelihood that these neonates would acquire an antibiotic-resistant organism. *S. marcescens* has a high level of antibiotic resistance[16,24] which is mediated by factors that are transferrable to other strains of *Serratia* as well as other *Enterobacteriaceae.*[16,17,25] Extensive use of broad spectrum antibiotics has been followed by the appearance of *Serratia* strains resistant to antibiotics such as kanamycin sulfate,[24] gentamicin,[4,14] and amikacin sulfate.[18] Approximately two thirds of the infants in this unit received a 72-hour course of ampicillin and gentamicin. This antibiotic regimen was probably in part responsible for increasing the number of *Serratia* infections in our patients; indeed these antibiotics may have eliminated more benign organisms from the infant gastrointestinal tract and allowed *Serratia* to flourish.

Because the modern intensive care unit is a marvel of technology, attention has been focused on its complex equipment as possible hazards of infection. In this outbreak, passive transfer by staff from a gastrointestinal reservoir may have been the most important mechanism for dissemination of the epidemic organism. Therefore, environmental control measures may not always be the primary steps indicated if *Serratia* is found in neonatal nurseries. Other important factors which favored the emergence of a drug-resistant strain of *Serratia* included a compromised host, use of broad spectrum antibiotics, prolonged hospital stay, and manipulations of the respiratory and urinary tracts.

Only after introducing stringent infection control practices formulated by an interdisciplinary team consisting of a neonatologist, infectious disease physician, nurse epidemiologist, and a hospital sanitarian was *Serratia* successfully eradicated from this unit. These measures include cohorting, isolation, meticulous handwashing, and disinfection of both equipment and environmental surfaces.

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MDs report actual pencillin allergies rare

Are you allergic to penicillin?

Only about two percent of all patients are actually allergic to the drug, writes Irwin J. Polk, MD, MPH, in the March 26 *Journal of the American Medical Association*.

Penicillin allergy is frequently overreported by patients says Polk, a senior scientist in the AMA's Department of Drugs, replying to a physician's query about testing for penicillin allergy. It has been estimated that serious allergic reactions follow 10 to 40 of every 100,000 injections; only two of every 100,000 injections end fatally. Skin rashes and other reactions appearing in patients after administration of penicillin sometime occur in later stages of the viral infections for which the drug was prescribed, Polk explained in a separate interview.

In another response to the query, Richard D. DeSwarte, MD, states that currently available skin tests for penicillin allergy can detect sensitivity in some but not all potential reactors. New skin tests are being developed that will allow physicians to identify virtually all patients who are at risk of immediate allergic reaction to penicillin, adds DeSwarte, an allergist at the Rockford Clinic, Rockford, Ill.

Blood pressure taken in physicians' offices may be misleading

People who have been told that they have hypertension have consistently higher blood pressure readings in a physicians' office than they do at home, according to an article in this week's *Journal of the American Medical Association*.

This may give the physician a false impression of the severity of hypertension, says Thomas G. Pickering, MD, of the New York Hospital-Cornell Medical Center in New York City, in his report on a study on 24-hour blood pressure recordings.

Writing in the Feb. 19 issue of *JAMA*, he and his coauthors attribute the higher readings in physicians' offices to a defensive reaction triggered by anxiety or nervousness. The effect of having been labeled as hypertensive, they wrote, might be to increase the level of anxiety of such individuals when they next visited physicians' offices for blood pressure measurement.

In contrast, people with normal blood pressure were found to have slightly lower pressure readings, on average in physicians' offices than at home.

The authors suggest that a 24-hour blood pressure recording may be helpful in determining whether or not treatment is warranted in people with mild or borderline hypertension.

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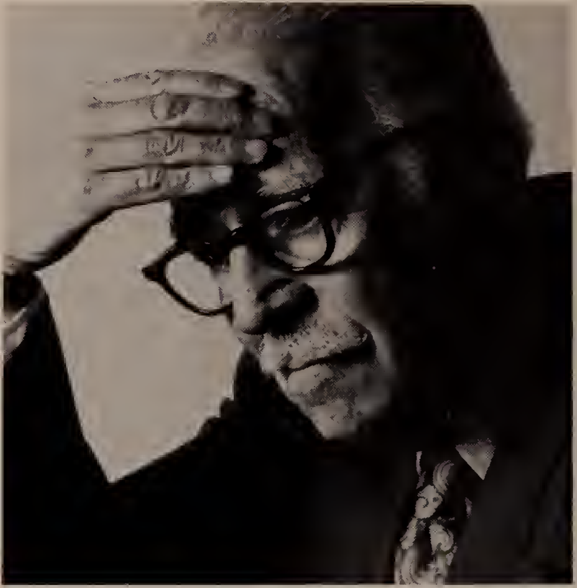

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CONTRAINDICATION: Idiosyncrasy to this drug.

WARNINGS: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Use with caution in patients with glaucoma. Tolerance to this drug, and cross-tolerance to other nitrates and nitrites may occur.

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache may commonly occur, and may be both severe and persistent. Transient dizziness and weakness, in addition to other signs of cerebral ischemia associated with postural hypotension may occasionally be seen. ISO-BID can act as a physiological antagonist to norepinephrine, histamine, acetylcholine and many other medications. An occasional patient may show marked sensitivity to the hypotensive effects of nitrite; severe responses (nausea, vomiting, weakness, restlessness, pallor, excessive sweating and collapse) can occur, even with the usual therapeutic dosage; alcohol may enhance this effect. A drug rash and/or exfoliative dermatitis is occasionally seen.

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Calcification and Ossification of Posterior Longitudinal Ligament of Spine

Its role in secondary narrowing of spinal canal and cord compression

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Calcification of the posterior longitudinal ligament occurs in about 3% of the adults in Japan, and in about 0.7% of the adults in the United States. The cervical spine is involved in about 75% of the cases. The condition may be asymptomatic, particularly in patients who have a large spinal canal. However, in other patients, when calcification is large enough it may cause significant narrowing of the canal leading to compression of the cord and myelopathy with resultant sensory and motor disturbances which are mild at first but may get progressively worse culminating in paralysis and incontinence. Radiographic diagnosis is easily made when one is familiar with the condition. Lateral tomograms of the spine are necessary in doubtful cases. Computed tomography is particularly helpful because it reveals the size and the extent of the calcification, as well as the size of the spinal canal and the extent of its narrowing by the calcification. Treatment is aimed at relieving the pressure on the spinal cord by laminectomy and/or anterior decompression.

Calcification of the spinal ligaments occurs in a number of conditions, particularly ankylosing spondylitis, spondylosis, ankylosing spinal hyperostosis (ASH) or Forestier's disease, trauma, and long-standing instances of immobilization of the spine.[1-9] In these conditions, however, calcification has usually been recognized in the anterior longitudinal ligament and in the paraspinal soft tissues. Curiously, calcification and ossification of the posterior longitudinal ligament of the spine (OPLL), however, has not been readily recognized, and its role in secondary narrowing of the spinal canal and compression of the spinal cord has not been, and still is not, commonly appreciated.

Lack of familiarity with this entity may lead to a delay in the diagnosis, and to incorrect diagnosis, or inappropriate treatment. A review of the literature reveals a substantial delay, usually one to several years, between the onset of the symptoms and the establishment of the correct diagnosis, with resultant progression of the disease, sometimes to severe and irreversible motor and sensory deficit.[10,11]

According to Nakanishi et al,[12] Key[13] was the first person to call attention to the association of OPLL and myelopathy in 1838. He described two cases of paraplegia secondary to OPLL. In one patient, the lesion was in the upper thoracic region and, in the other, in the lumbar region. The entity, however, went almost completely unrecognized for more than 120 years, until in 1960 Tsukimoto[14] published an autopsy-documented case of marked narrowing of the spinal canal and compression of the cord and myelopathy secondary to OPLL of the cervical spine. Following this report, a fairly large number of cases were reported by the Japanese authors in Japanese patients.[10,12,15-21] Okamoto and Yasuma's paper[16] was first presented in English in 1967, and Minagi and Gronner[22] were the first to report the condition in two Caucasian patients in 1969. Since then, only a few reports have been published in the English literature.[7,9,11,23] The purpose of this presentation is to report 11 additional cases of OPLL in Caucasian patients and review the role of this condition in cord compression and myelopathy. The table contains a summary of our patients. More detailed case histories of three of these patients have been selected and are presented as illustrative examples.

Case reports

Case 1 (patient 2). A 66-year-old man was seen with marked weakness, atrophy, and numbness of the upper and lower extremities. He first noticed progressive weakness of his upper extremities at age 45. A diagnosis of spondylosis was made. Cervical OPLL, noted retrospectively, was not detected at this time. A partial laminectomy of the third and fourth cervical vertebrae (C-3–C-4) was performed, following which

Summary of Clinical Findings and Course of OPLL in 11 Patients

Patient No.	Age, Sex	Site of Calcification	Clinical Findings and Course	Associated Diseases
1	56 F	T2–T5 C4–C6	6 years, progressive pain and weakness upper & lower extremities → paralysis	. . .
2	66 M	C2–C6	20 years pain & weakness upper extrem. → partial C3–C4 laminectomy → marked improvement 10 years → recurrence further laminectomy → temporary relief → recurrence C4–C5 anterior decompression → moderate improvement	ASH
3	62 F	C3–C6	weakness & tingling L hand, progressive weakness both legs, 5 years C3–C7 laminectomy → moderate improvement → recurrent leg weakness → spastic gait	Degenerative disk disease
4	61 M	C3–C6	7 years, progressive weakness lower extrem.; sensory deficit below C5 → C3 & C4 anterior decompression → moderate improvement	ASH
5	63 M	C3–C7 T1–T4	moderate weakness lower extrem. 7 years → tingling, weakness L arm 2 years	ASH
6	70 F	T6–T8	progressive weakness lower extrem. 4 years	
7	63 M	C2–C6	asymptomatic	ASH
8	59 F	C2–C6	1½ years progressive worsening pain & weakness lower extrem.; 3 months weakness upper extrem.; C3–C4 anterior decompression → marked improvement	ASH
9	32 M	C2–C6	asymptomatic	ASH
10	84 M	C5–T1	1 year history, sudden pain & weakness lower extrem.; following a fall	ASH
11	46 F	C2–C6	3 years pain & weakness L arm, forearm, and hand	. . .

the patient's condition improved markedly, lasting for about ten years. But then progressive weakness, pain, and paresthesia of all four extremities developed. By 62 years of age the condition became very severe and a second laminectomy (C-2 to C-6) with widening and removal of a dural scar was performed. Once again there was marked but temporary improvement following which the patient's condition deteriorated further and he became unable to walk and developed urinary incontinence. Calcification of the posterior longitudinal ligament was noted at C-2 to C-6 (Fig 1). A complete epidural block at C-5 was seen on myelography. Ankylosing spinal hyperostosis (ASH) was also noted. Anterior decompression was performed at C-4 and C-5. At surgery a 0.5-cm thick slab of calcification was noted in the anterior portion of the spinal canal which had engulfed the posterior longitudinal ligament and the dura, and which was adherent to the spinal cord. A 1- by 3-cm segment of this calcification was resected. Moderate improvement was noted postoperatively.

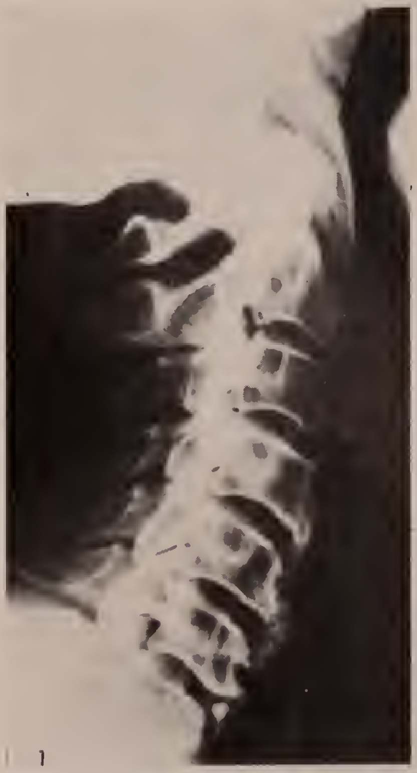

FIGURE 1. Case 1 (patient 2). Calcification of the posterior longitudinal ligament is noted extending from C-2 to C-6.

Case 2 (patient 3). A 62-year-old woman was in good health until five years ago when she noted weakness and paresthesia of her left hand, followed by weakness of her legs. The condition became progressively worse until she developed considerable difficulty on walking. Physical examination revealed moderate muscular atrophy of the left hand and right leg, and sensory deficit below C-6. OPLL of C-3 to C-6, noted retrospectively, was not detected at this time (Fig 2). A myelogram revealed a complete block at C-4 (C-1–C-2 puncture). A C-3 to C-7 laminectomy was performed followed by moderate improvement lasting for 18 months. Then pain, paresthesia, and weakness of the lower extremities recurred. The patient did not undergo further surgical treatment because of unrelated medical conditions.

Case 3 (patient 8). A 59-year-old woman was in good health until 1½ years ago when she noted frequent cramps in her thighs and knees, and gradual onset of weakness of her legs. The condition became progressively worse and weakness of the upper extremities also developed. OPLL was noted at C-2 to C-6. Myelography revealed epidural compression anteriorly at C-2 to C-6 due to OPLL. The calcification had caused narrowing of the spinal canal, particularly at C-3 and C-4 (Fig 3, 4). Anterior decompression was performed at C-3 and C-4 and the calcification was re-

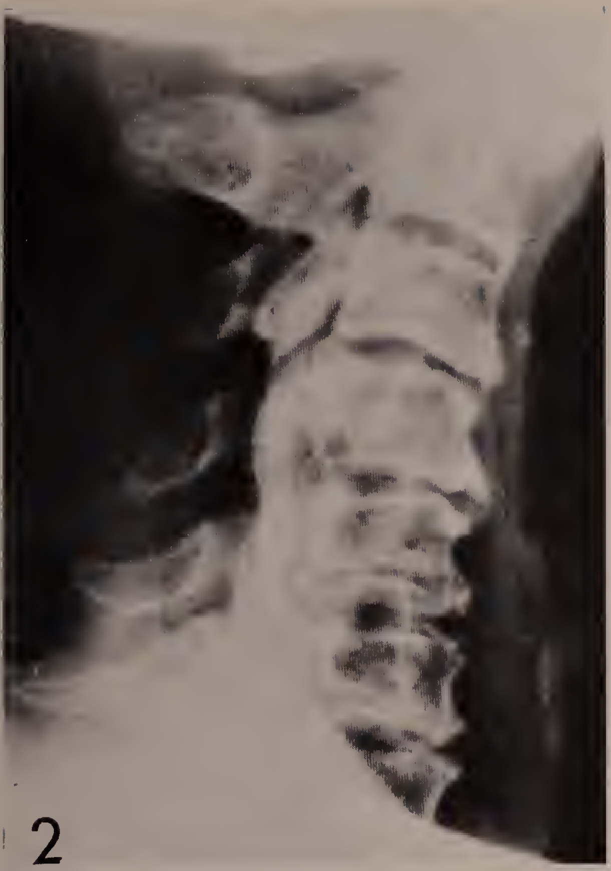

FIGURE 2. Case 2 (patient 3). Calcification of the posterior longitudinal ligament is seen at C-3 to C-6. There is loss of lordosis and reversal of the spinal curvature at C-3 and C-4, marked narrowing of the intervertebral disks, hypertrophic changes, and osteosclerosis.

sected at this point. Following surgery, the patient's condition improved gradually and at one year follow-up she was asymptomatic.

Comment

Incidence in Caucasians. The true incidence of OPLL in Caucasian people is not known. However, there are indications that the condition is not rare in the US population. For example, in a study of a group of 74 patients with ASH, 50% had OPLL of the cervical spine.[11] Whereas ASH is a fairly common disease with an incidence of 3%[24] of the general population above 50 years of age, and may reach as high as 12%[25] in middle-aged and elderly, its frequent association with OPLL[11,25] suggests that OPLL itself cannot be a rare disease in Caucasians. We reviewed 1,000 consecutive radiographs of the spine (431 cervical, 107 dorsal, and 462 lumbar) in adults 20 years or older and found seven instances of OPLL or 0.7%.

Incidence in Japanese. Takahashi et al,[10] based on compilation of various series, give an incidence of 0.8% to 2.4%, Onji et al[15] 1.7%, and Okamoto and

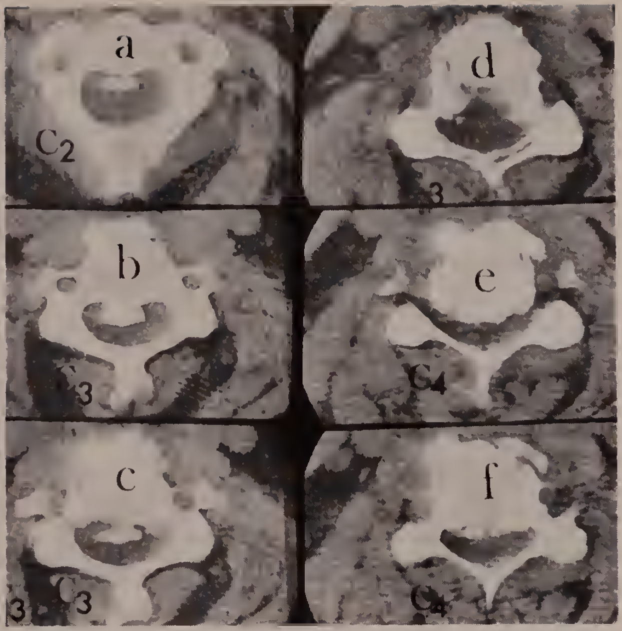

FIGURE 3. Case 3 (patient 8). Computed tomograms of cervical spine reveal calcification of posterior longitudinal ligament at C-2 and C-3 (a and b). Hypertrophic changes are noted on anterior surface of body C-3 (b and c). Evidence for surgical resection and insertion of bone plug is noted at C-3 and C-4 (c, d, e, f). Note that portion of calcification has been removed at C-3 and C-4, (c, d, e, f).

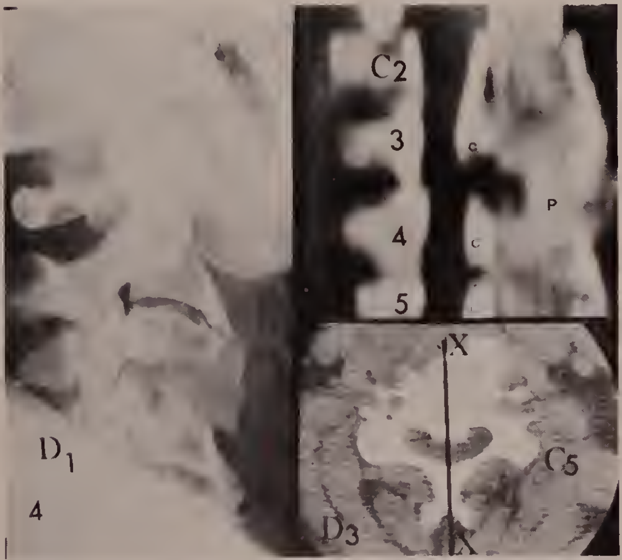

FIGURE 4. Case 3 (patient 8). D1: Lateral view of cervical spine reveals anterior resection of part of body of C-3 and C-4 and insertion of bone plug. D2: midsagittal reconstruction of computerized tomogram along X—X axis as depicted in D3. Note narrowing of canal by calcified posterior longitudinal ligament, c, directly posterior to vertebral bodies. Note surgical bone plug, P, at C-3 and C-4, and resection of calcification directly posterior to it at C-3 and C-4.

Yasuma[16] 2.1% in unselected patients with spinal disorders. The incidence of asymptomatic OPLL of the cervical spine in 698 unselected individuals who underwent voluntary cervical spine tomography was 3.5%.[12]

Age and sex distribution. Most patients with this condition are more than 40 years old. The incidence increases with advancing age, up to 11% in 60- to 70-year-old Japanese subjects.[12] In our evaluation of 1,000 consecutive spine examinations, there were 146 patients 60 years or older, 4 (2.6%) of whom had OPLL. The male to female ratio is about 3 : 1.

Incidence of OPLL at various segments of the spine. The sites of involvement, in descending order of frequency, are cervical (70% to 75%), thoracic (15% to 20%), and lumbar spine (10%). Occasionally, OPLL is noted at two or more levels simultaneously.[10,17]

Pathology. The morphology of the calcification varies considerably. It may consist of a thin layer of calcification limited mostly to the anterior layer of the ligament, with small areas of attachment to the annulus fibrosus. In these patients, the deep layer of the ligament, which lies directly against the posterior surface of the spine, is thickened and unossified. This accounts for the radiolucent band seen between the calcification and the posterior surface of the vertebrae. In advanced cases, there may be a well-organized slab of bone, several millimeters thick, extending well beyond the confines of the ligament and attached to the posterior surface of the vertebral bodies. Histologically, it may vary from unorganized calcification to fully formed bone with fatty marrow and haversian canals.[9,11,19] The calcification may be adherent to the dura.[9] In one of our patients, it had engulfed the dura completely and was adherent to the surface of the spinal cord. In the cervical spine, the calcification is often limited to the C-2–C-4 region, but it may be significantly more extensive.[17]

Clinical findings and their relationship to OPLL. Calcification of the posterior longitudinal ligament may be asymptomatic,[10,12,17] or associated with findings indicative of cord compression.[10,24,26–28] The determining factors seem to be the size of the spinal canal and the degree of narrowing produced by the calcification and other pathologic processes. If the spinal canal is large and there are no other factors causing its narrowing there may be no findings even when a thick layer of calcification is present.[29] If, on the other hand, the canal is developmentally small,[27,29] or it is secondarily narrowed, eg, by hypertrophic spondylotic changes or a herniated disk,[23] even a thin layer of calcification may be enough to cause compression of the cord. In one study,[28] 15 patients with myelopathy and OPLL were evaluated by computed tomography. When more than 30% of the surface area of the canal was occupied by the OPLL, severe myelopathy was also present.

Although OPLL may be asymptomatic when it is first diagnosed, and may remain so afterwards, provided the spinal canal is large, it must be realized that the condition is progressive,[30] and the calcification increases in thickness, width, and length over a period of years.[10] Eventually a point may be reached when cord compression becomes inevitable and clinical findings are produced. These findings are gradual in onset but may get progressively worse. Thus, the patient may have pain, paresthesia, hypalgesia, mild to marked sensory or motor deficit of the neck, extremities, and trunk, and vesical and rectal incontinence.[9–11,16,19,30] Less commonly, some patients are encountered who have been almost completely asymptomatic prior to the sudden onset of a severe neurologic deficit, eg, quadriplegia that develops secondary to a seemingly insignificant injury.[9,27] In these patients, usually a fairly large OPLL is present with marked narrowing of the spinal canal, sometimes by more than 50% to 60%.[12] From these observations it has been concluded that the spinal cord has a high degree of tolerance to slowly increasing mechanical pressure, as in OPLL. But when the narrowing of the canal reaches a critical point, even the slightest added pressure, for example, from a herniated disk or trauma, may be just enough to cause severe cord compression and a neurologic catastrophe.[31]

Relationship of OPLL to spondylosis. In approximately 30% to 40% of the patients with OPLL, some degree of spondylosis is noted.[10,20,28] Protrusion and herniation of the intervertebral disks have also been observed at surgery and autopsy in these patients.[17] Because of these observations, it was postulated that distortion of the ligament due to disk herniation is the most probable cause of its calcification. This concept, however, is no longer accepted and OPLL is felt to be independent of spondylosis. This is confirmed by the observation that in cervical spine, even in advanced cases of OPLL, marked spondylosis is infrequent. Furthermore, spondylotic changes often occur at C-5 to C-6 level while OPLL typically involves C-2 to C-4.[10,20,28]

Relationship of OPLL to ASH. A high degree of correlation between ASH and OPLL has been reported. Ankylosing spinal hyperostosis (ASH) of Forestier and Rotes-Querol[6,26,32] is a common condition characterized by abnormal bony bridging on the anterolateral surface of the spine, which may involve virtually the entire vertebral column but is most prominent in the dorsal and lower cervical spine. Not uncommonly these bony excrescences exhibit a peculiar continuous and flowing manner and they are occasionally quite massive. Although spondylosis may coexist with ASH, in the classic ASH, marked narrowing of the disk spaces and osteophytes are not usually seen.

The first reports of ASH did not emphasize calcification of the posterior longitudinal ligament.[6,33] However, subsequently, it was found that a large number of these patients have moderate to severe

OPLL. In one series,[11] out of 74 patients with ASH 37 (50%) had OPLL of the cervical spine. Mitsui et al[26] reported 71 patients with ASH, 21 of whom (30%) had OPLL, mostly in the cervical spine. Arlet et al[34] analyzed 40 patients; 17 (43%) had both ASH and stenosis of the cervical canal secondary to osteophytosis and OPLL. Onji et al[15] investigated 166 patients of whom 77 (44%) demonstrated concomitant OPLL and hyperostosis of the anterior aspect of the vertebral column.

Diagnosis. Clinically, OPLL should be included in the differential diagnosis of all conditions causing spinal cord compression. The radiographic appearance is quite characteristic. Once the entity is known, its recognition and differentiation from other conditions present no problem. The diagnosis is made by discovering a layer of calcification on the posterior surface of the vertebral column in the spinal canal. It may or may not be attached to the posterior surface of the vertebrae. Tomography is often very helpful, particularly in the earlier cases. The midline lateral cuts usually show the calcification to best advantage. Myelography is helpful for detection and evaluation of the extent of the extradural compression and distortion of the subarachnoid space and the spinal cord. Computed tomography (CT) is the procedure of choice because it reveals the calcification, its thickness, and the extent of its lateral extension. CT is also the best method for a definitive evaluation of the exact degree of narrowing of the spinal canal because the surface area of the canal, as well as calcification, can be measured accurately.[28,35] Evaluation by CT is considered to be essential when surgery is contemplated.[28] The radiographic differential diagnosis includes ankylosing spondylitis, rheumatoid arthritis of the cervical spine, spondylosis, and ASH of Forestier. These conditions all have clinical, laboratory, and radiographic features quite distinct from OPLL, and should be readily differentiated. However, one must remember the fairly high association between ASH of Forestier and OPLL. The most important differential diagnosis is between OPLL causing cord compression and other diseases which produce similar symptoms. These include: spondylosis, tumors, multiple sclerosis, and other diseases of the spinal cord. OPLL is a surgically curable disease in most instances. However, if the patient is to receive proper treatment, a definitive diagnosis has to be made in time. It is therefore imperative that physicians dealing with the diagnosis and treatment of the diseases of the nervous system be familiar with this entity and diligently search for it.

Treatment. A detailed discussion of the treatment is beyond the scope of this presentation. Treatment should be aimed at relieving the pressure on the spinal cord. Conservative treatment should be attempted when there is a possibility that acute swelling and edema exist, eg, from disk herniation or trauma. It should be continued only if there is a definite evidence for improvement. Otherwise, unduly prolonged conservative treatment may permit further progression of the disease and worsening of the myelopathy.[16] Surgical treatment usually consists of posterior decompression by means of laminectomy, or anterior decompression of involved vertebrae and fusion. In selected patients a two-stage surgical procedure is employed using a combination of these procedures.[31]

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"It Came! The research grant . . . . . but, there are a few strings attached."

Effect of Cytomegalovirus On Renal Transplantation

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Cytomegalovirus (CMV) is rather ubiquitous. The incidence of the carrier state increases with age. The virus is not transmitted by transfusion of frozen blood. Transplantation of a CMV-free recipient with a CMV-positive kidney will usually result in primary infection. Primary infection causes symptomatic disease. The parent-to-child transplant is associated with primary infection. Transplantation of a CMV carrier will usually result in reactivation of infection which may be asymptomatic and easily overlooked. Cadaveric transplantation is associated with reactivation infection. Both primary and reactivation infections are equally deleterious to allograft survival. CMV infection markedly attenuates the beneficial effect of preoperative blood transfusion on the outcome of cadaveric transplantation. This is additional evidence that the beneficial effect of transfusion is not simply a selection process. CMV is a risk factor in transplantation, causing greater morbidity, allograft failure, and patient mortality. Individuals of blood type O are resistant to CMV. Potential kidney recipients who are CMV antibody-free should preferably receive kidneys from CMV-free donors. It is possible to test a potential cadaveric donor for CMV antibody in less time than it takes to perform a comprehensive lymphocyte cross-match.

Cytomegalovirus (CMV) was incriminated as the agent causing pneumonitis in half of patients dying after renal transplantation by Hill and coworkers in 1964.[1] Craighead and associates[2] then showed that the incidence of CMV after transplantation was almost twice as high in patients who had antibody to the virus before transplantation compared with those who did not. Fine et al[3] documented CMV infection in 38% of 22 pediatric transplant patients as a cause of anicteric hepatitis, "transplant lung," and febrile illness. Coulson et al[4] described the clinical tetrad of fever, pneumonitis, and hepatic and renal functional impairment and attributed this tetrad to CMV infection. Most patients were younger than 40 years of age. Simmons et al[5] reported that 89 of 132 patients contracted CMV infection after transplantation, and that six of these died within one month in a state of immunologic incompetence.

Systematic studies were undertaken to define the source of CMV infection. It is now recognized that virtually all CMV infection after transplantation can be accounted for by reactivation of latent virus under the influence of immunosuppression. This reactivation occurs in the recipient or in the donor allograft or in both. However, not all donors and recipients have latent infection. Two factors are predictive as to which patients are likely to carry the virus: age and socioeconomic circumstance. In a crowded environment person-to-person transmission occurs in the young, whereas in a better environment there is a much slower rate of infection, and most children and young adults remain infection-free. In any socioeconomic group the older adults usually have latent infection.

At the University of Rochester the mean age of both donor and recipient in the sibling category of transplant is 32 years (Fig. 1). There are relatively few sibling donors or recipients who carry the virus, and the incidence of cytomegalovirus infection after transplantation is low. In the parent-to-child category the mean age of the parental donor is 48 years. Consequently, most parental donors carry the virus and the frequency of infection of the transplanted child is high. Although the mean age of cadaveric donors is 24 years, the mean age of the recipient of cadaveric kidneys is 35 years, relatively high. Consequently, recipients of cadaveric kidneys suffer a high incidence of CMV infection. Further study has also shown that individuals who have reactivated their own virus are much more likely to be symptomatic if they receive antilymphocyte globulin.[6]

Perhaps more important is the relationship between CMV and acute allograft failure. The first evidence that CMV might somehow be associated with allograft rejection was reported by David et al.[7]

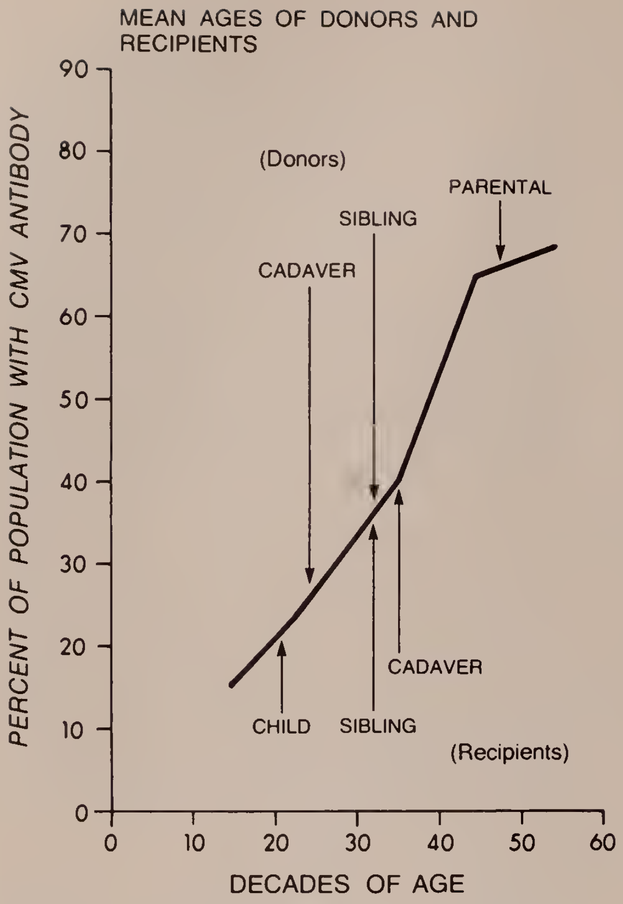

FIGURE 1. Incidence of CMV in general population of Rochester, New York, according to age with notations of the incidence of CMV in renal donors and recipients.

A similar observation was made by Lopez et al[8] who discounted several theories for this association in favor of one in which the virus behaved as an adjuvant which tipped toward rejection a delicate immunologic balance between graft and host.

Influences of CMV and HLA antigen matching on renal transplantation

The effects of CMV and HLA antigen matching on allograft survival were compared in 85 transplant patients at the University of Rochester.[9] There were 59 cadaveric, 15 parental, and 11 sibling transplants. Seven of the sibling transplants were HLA-identical. The remainder were haplo-identical.

Sera for 56 of the 85 donors and for all 85 recipients were tested for CMV antibody before transplantation using immunofluorescent techniques. After transplantation all previously seronegative recipients were tested weekly for 16 weeks or until two successive positive sera were detected. Also after transplantation, urine, blood, and saliva were tested weekly for six weeks, and biweekly for six weeks, and thereafter monthly for three months for all patients. Infection was defined as virus shedding after transplantation. Virus was identified by the typical cytopathic effect in human foreskin fibroblasts. Cultures that were negative at one month were blind-passaged once and observed for an additional month before declaring them negative.

Two observations were made. First, 58 of 59 patients who were antibody-positive before transplantation or who developed an antibody after transplantation shed virus in one or more secretions after transplantation. The mean time of virus shedding was 42 days after transplantation. Only two patients shed virus within the first postoperative month, and all who eventually shed virus did so by the 80th day. In contrast, none of those who were CMV antibody-negative and received a kidney from an antibody-negative donor shed virus after transplantation.

There were two kinds of infection. Reactivation infection occurred in 44 patients who had CMV antibody detected before transplantation and who shed virus after transplantation. Presumably these patients had been harboring latent virus which was reactivated by immunosuppressive therapy. All but one of these patients developed reactivation infection after transplantation. Reactivation infection was usually asymptomatic. Primary infection developed in 15 patients, of whom 10 were children receiving parental kidneys. They were usually symptomatic with an illness during the second or third month after transplantation. The illness consisted of fever, malaise, elevations of liver transaminase, and sometimes pneumonia.

Seventy-six percent of the live-related donor grafts and 46% of the cadaveric donor grafts were functioning between six and 120 months after transplantation. In this study no unsuccessful transplants were excluded for any cause.

The second observation was that CMV infection influenced allograft survival. In Figure 2, left, graft survival curves are constructed for the 26 live-related donor transplants according to whether they are HLA-identical or haplo-identical matches, and in Figure 2, right, according to whether they were infected with or free of CMV. None of the patients free of CMV lost grafts whereas 40% of patients with CMV infection lost their grafts by two years. The single unsuccessful HLA-identical graft occurred in a patient with CMV. However, the differences were not statistically significant.

A similar analysis of the cadaveric donor group of 59 transplants also suggested that CMV was a more influential risk factor for allograft survival than HLA antigen matching. In Figure 3, left, transplants mismatched for zero to two HLA antigens succeeded no more often than those mismatched for three to four HLA antigens, whereas as shown in Figure 3, right, the 12-month survival rate for cadaveric transplants free of CMV infection was about 80% compared with 45% in transplants infected with CMV. But, again, this difference was not statistically supportable.

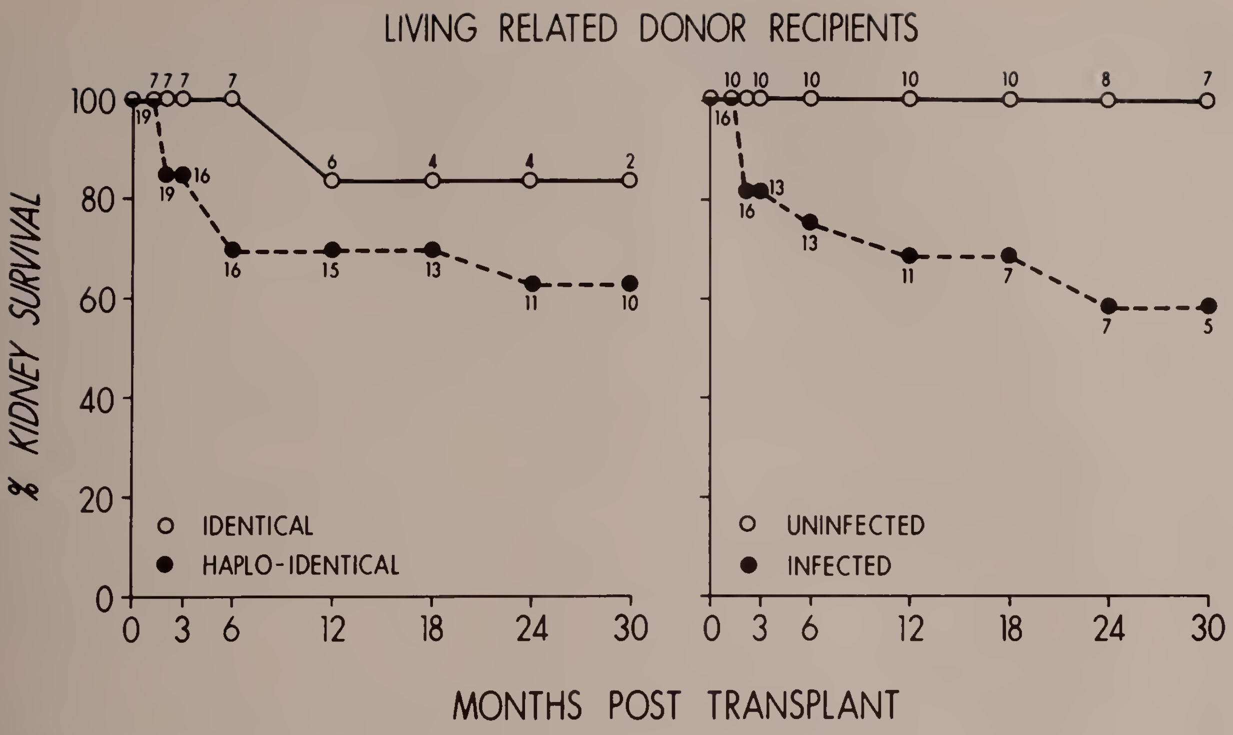

FIGURE 2. Allograft survival curves of 26 live-related donor transplants according to (left) genotyping and (right) CMV infection.

Influence of CMV on the beneficial effect of transfusion

By 1979 the number of cadaveric transplants available for study at the University of Rochester had increased to 109, and it had been shown by others that pretransplant blood transfusions had a beneficial effect on allograft survival. Therefore, these patients were studied to determine the relationship, if any, between CMV infection and this transfusion

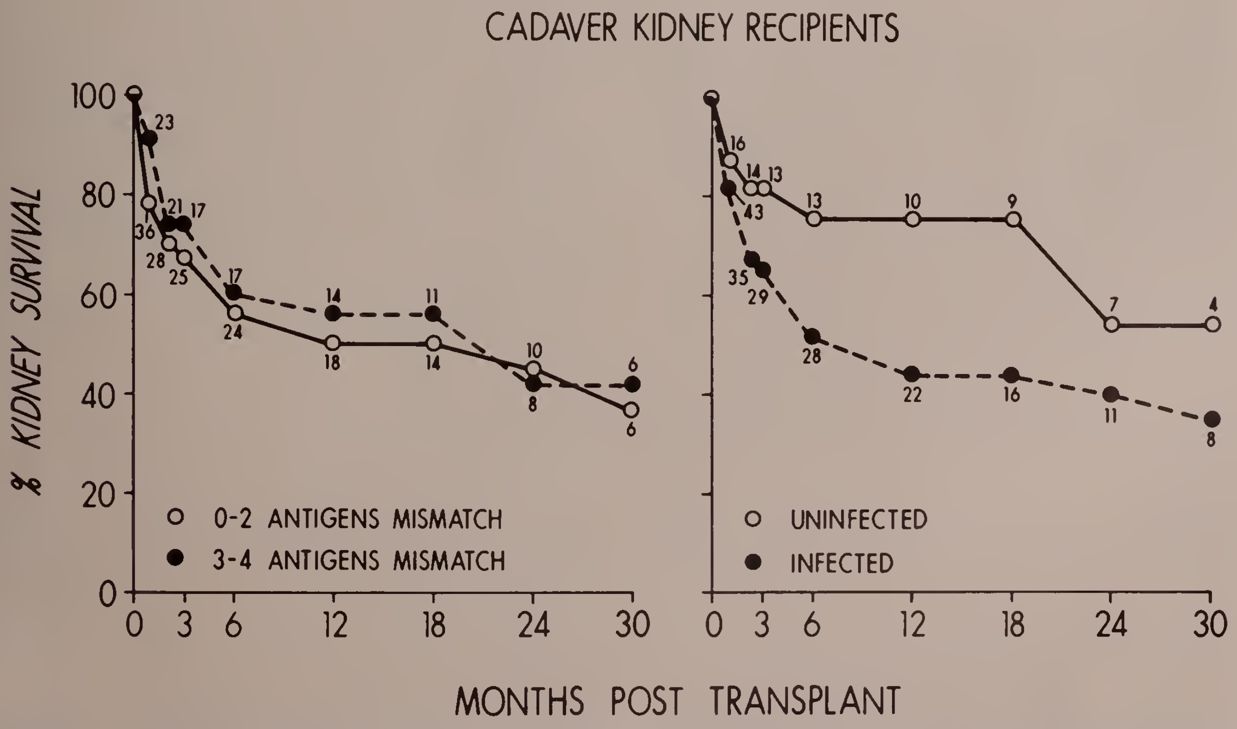

FIGURE 3. Allograft survival curves of 59 cadaveric transplants according to (left) HLA antigen match and (right) CMV infection.

effect.[10] Inasmuch as the CMV antibody status had turned out to be an excellent marker for CMV infection after transplantation, the criterion for CMV infection was defined by the presence of CMV antibody.

When these 109 recipients of cadaveric kidneys

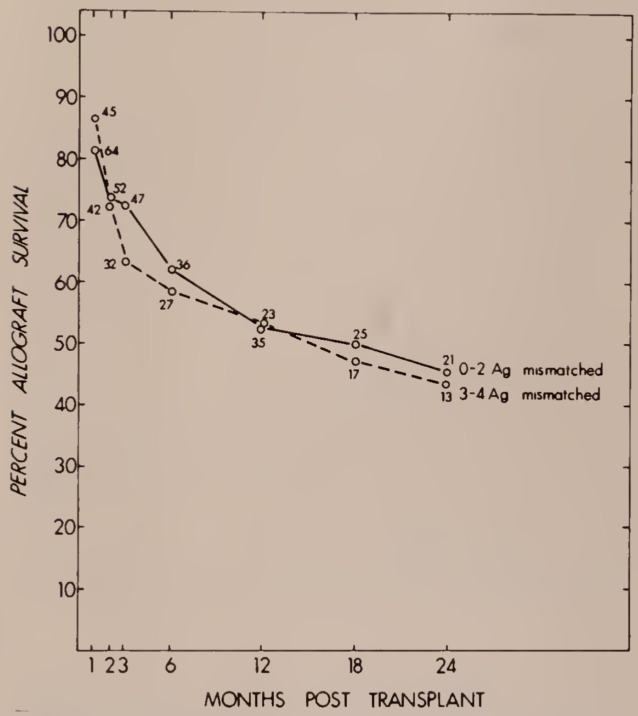

FIGURE 4. Comparison of survival of 109 cadaveric allografts depending on number of HLA antigens mismatched.

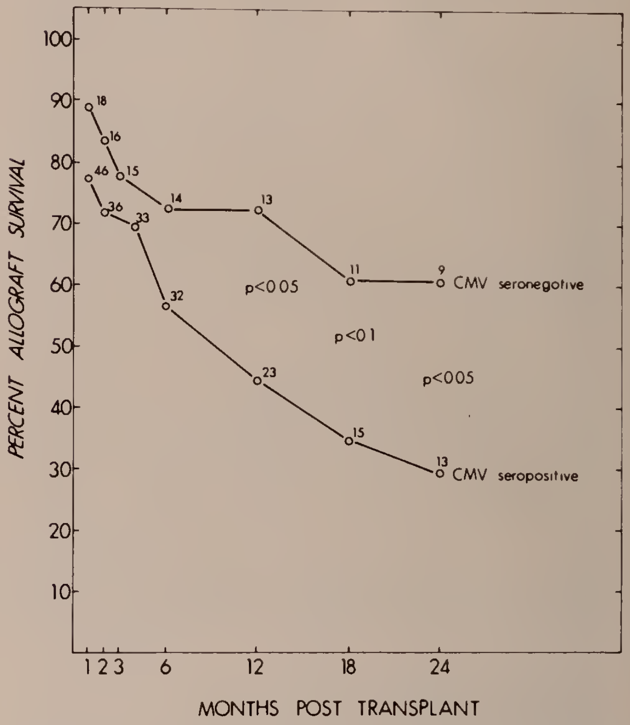

FIGURE 6. Comparison of survival of 55 well-matched cadaveric allografts according to whether CMV antibody-positive or negative.

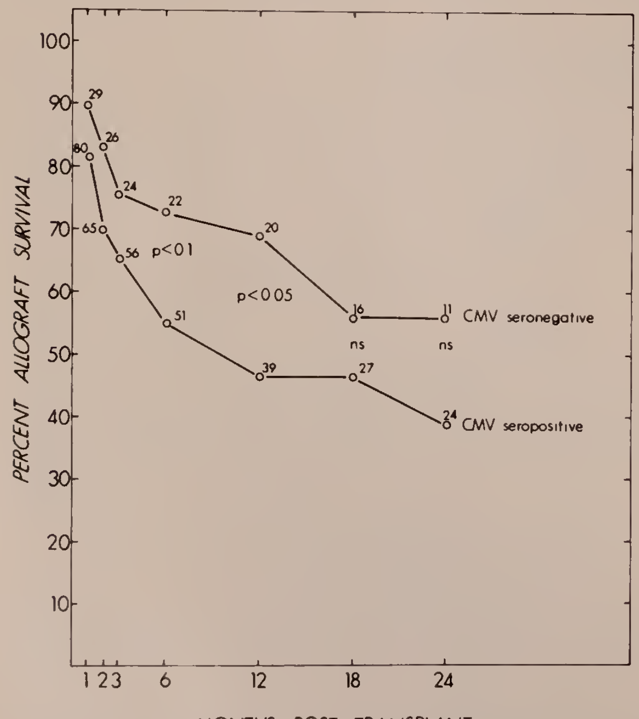

FIGURE 5. Comparison of survival of 109 cadaveric allografts according to whether CMV antibody-positive or negative.

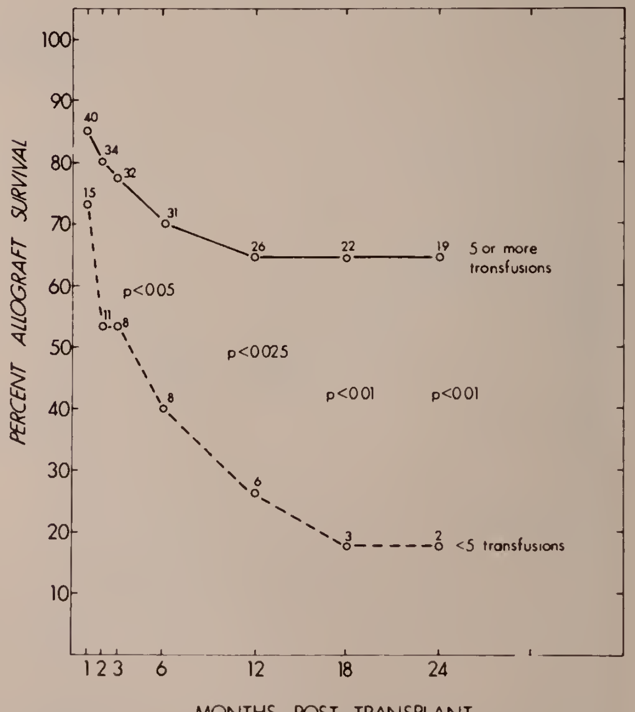

FIGURE 7. Comparison of survival of 55 well-matched cadaveric allografts according to transfusion history (less than 5, or 5 or more transfusions).

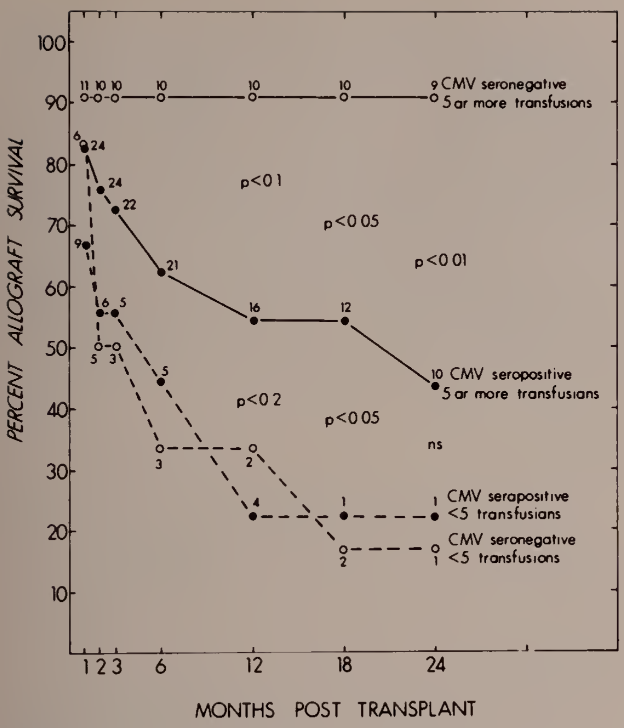

FIGURE 8. Survival curves of 55 well-matched cadaveric allografts according to CMV antibody status and to transfusion history.

were divided into HLA well- and poorly matched groups, the respective allograft survival curves were essentially identical, the second-year survival rate being just under 50% (Fig. 4). When divided into CMV antibody-negative and antibody-positive groups, there was a statistically significant advantage for the group that remained free of CMV antibody, that is, free of cytomegalovirus infection (Fig. 5).

When a smaller subset of cadaveric transplants, in which two or more HLA antigens were matched, was plotted in a similar manner, the favorable effect on allograft survival was more obvious (Fig. 6). Figure 7 shows graft survival curves of 55 well-matched cadaveric transplants grouped according to transfusion history. Virtually all blood transfused was in the form of frozen, washed red blood cells.

The group of patients who received five or more transfusions preoperatively had a two-year success rate of 65%, whereas the group with less than five transfusions preoperatively had a two-year graft survival rate of only 19%.

The same well-matched cadaveric transplants were divided into four groups depending on CMV and transfusion status (Fig. 8). The patients who were transfused with five or more units of blood and were CMV antibody-negative had a two-year cadaveric allograft survival rate of 91%. Those who were transfused but infected with CMV had a two-year graft survival rate of 45%. Those who were not transfused with five units of blood, whether or not they were CMV antibody-positive, had a graft survival rate of about 20% at two years. Thus, CMV infection appeared markedly to attenuate the beneficial effect of blood transfusion. However, freedom from CMV infection was not beneficial unless preoperative blood transfusion therapy had been administered.

Examination of the effects of CMV and transfusion on transplantation was carried a step further because of independent observations made by Burleson et al,[11] Bore et al,[12] and Joysey et al.[13] Burleson and Bore had shown that transplant patients who were of erythrocyte type O usually had a better rate of allograft survival than those of non-O erythrocyte type. Furthermore, Joysey reported that the beneficial effect of preoperative transfusion was limited to transplant patients of red cell type O.

Apparent risk factors in renal transplantation

One hundred twenty consecutive transplants were ranked in groups according to the number of transfusions, according to CMV status, and according to erythrocyte type, that is type O or type non-O.[14] Risk factors were considered to be the presence of CMV antibody, the presence of erythrocyte types A, B, and AB, and fewer than five blood transfusions before transplantation. The table shows that the top group of 17 patients had none of these risk factors and showed a graft survival rate of 82% at 12 months. As one descends the list, the risk factors increase in

Survival of 120 Cadaveric Allografts in Groups Ranked by Risk Factors and Compared to Other Factors

		Risk Factors				Other Factors			
No. Recipients	Graft Survival at 12 Months (%)	Trans-fusion	CMV	Red Cell Type	No. Risk Factors	Mean Age	Percent Male	Percent Black	Mean No. HLA Antigens Mismatched
17	82	+	–	0	0	32	34	6	2.13
3	66	–	–	0	1	36	100	0	1.3
8	60	+	–	non-0	1	29	63	13	2.88
27	58	+	+	0	1	41	55	41	2.57
37	52	+	+	non-0	2	38	33	86	2.36
7	43	–	+	0	2	34	71	0	1.57
5	40	–	–	non-0	2	28	80	0	1.8
16	19	–	+	non-0	3	44	56	25	2.5

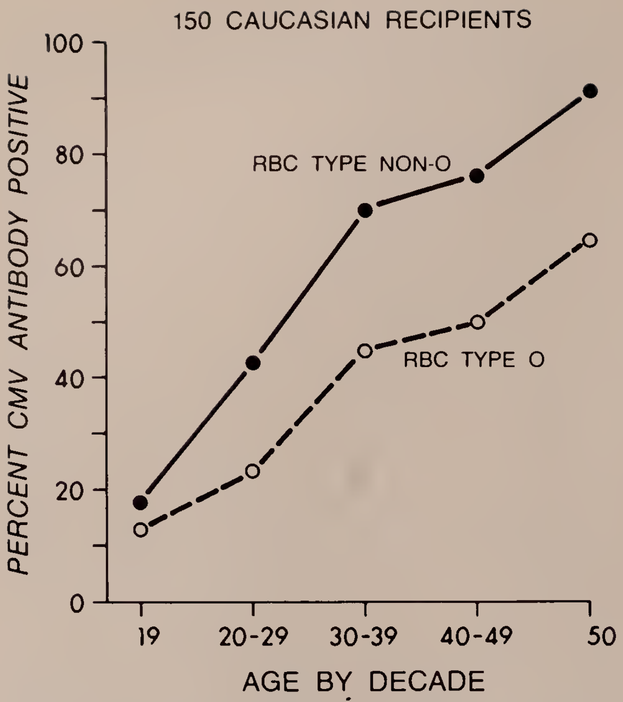

FIGURE 9. Incidence by age of CMV antibody in 150 renal allograft recipients according to major erythrocyte type.

number and the 12-month graft survival rate steadily decreases to a low of 19% when all three risk factors are present. It is pertinent here to mention that the studies that have reported no correlation between ABO blood groups on allograft survival have come from centers in which the incidence of CMV infection approaches 100% in subjects of each major ABO blood group.[15]

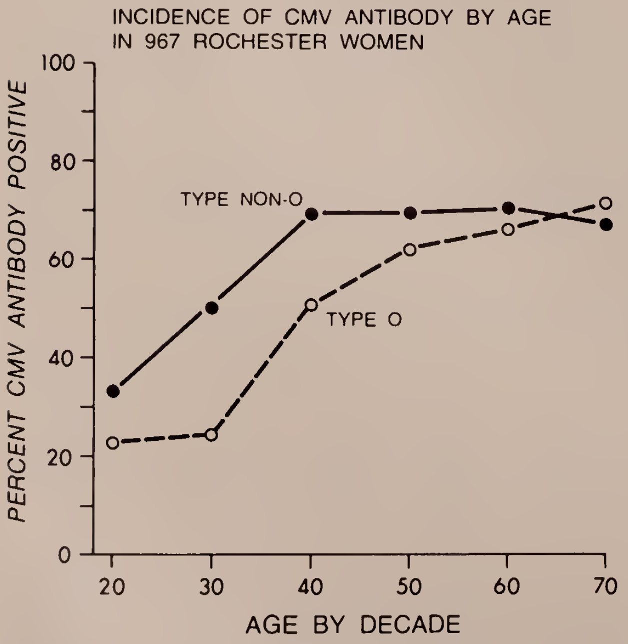

FIGURE 10. Incidence by age of CMV antibody in 967 Rochester women according to major erythrocyte type.

This observation led to an attempt to determine whether or not there was a differential incidence of CMV antibody in 150 transplant patients depending on the erythrocyte blood type (Fig. 9). The data obtained suggest that red cell type O transplant patients are more resistant to CMV infection. Next, 967 Rochester women of known erythrocyte type were tested for CMV antibody (Fig. 10). Again, in these subjects, there seemed to be a differential susceptibility for CMV. The women of red cell type O appeared to be more resistant to CMV infection. This resistance was also seen in type O male subjects, but not so strikingly.

Comment

These data support a relationship between CMV infection and allograft failure. The data also show that the factor of CMV cannot be examined *in vacuo* but must be considered with other factors. Two reports seemingly not consonant with the interpretation that CMV is detrimental in renal transplantation should be mentioned. Cheeseman et al[16] could find no correlation after transplantation between renal allograft function and the CMV experience of the patient, although he found that 38% of CMV antibody-positive patients secreted virus after transplantation. However, that study population was highly selected. It was limited to patients who had passed the two-year mark with a functioning allograft and for whom complete data were available. Similarly, Chatterjee and Jordan[17] reported that CMV infection in their experience was not lethal nor did it affect patient or graft survival. It is not clear in these studies whether or not other important factors were analyzed.

It appears that CMV is of significance in renal transplantation mainly because it is so ubiquitous. The frequency of the carrier state is roughly proportional to the age of the population. About 50% of people age 40 carry the virus. At the University of Rochester the vast majority of transplant patients who end up with CMV arrive as new, chronic renal failure patients with latent virus or else acquire the virus when transplanted with a kidney from a carrier. Transmission by blood transfusion or by airborne means is extremely rare.[18]

The classic disparity of allograft survival rates between HLA-identical siblings, parental, and cadaveric transplants can be partially explained by the transplantation epidemiology of CMV infection. Figure 11 illustrates the possible contribution of CMV to the distribution of the allograft survival curves. The classic distribution is usually attributed to inheritance. On the left are those curves representing the original patients studied at the University of Rochester, and on the right are the graft survival curves of the same patients depending on their CMV status. The recipients who received cadaveric kidneys and who remained free of CMV do as well, if not better, than recipients who are infected with CMV

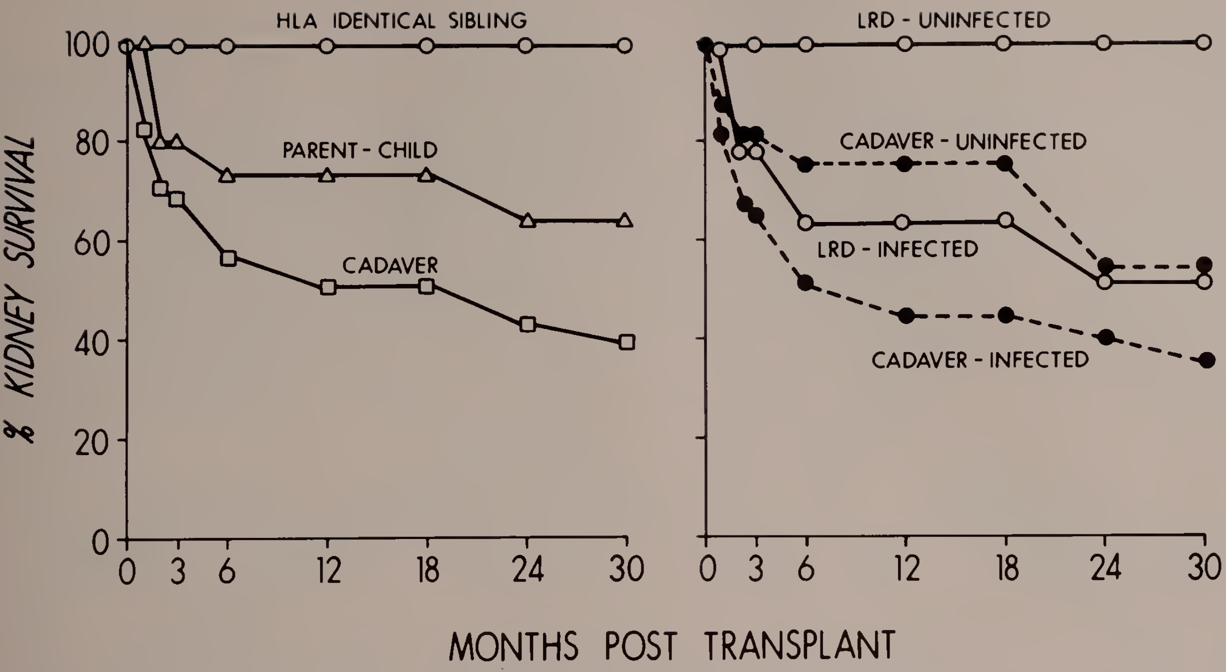

FIGURE 11. Allograft survival curves of 85 patients grouped according to genetic relationship (left graph) or CMV status (right graph).

and yet who receive live-related donor kidneys. The uninfected live-related donor group, regardless of HLA match, had 100% survival. Infected cadaveric transplants had the poorest rate of survival.

The exact mechanism by which the virus influences the outcome of renal transplantation has not yet been defined. One mechanism by which it does diminish the survival rate of renal allografts is by attenuation of the beneficial effect of pretransplantation blood transfusions.[10] The fact that erythrocyte type O individuals are relatively resistant to CMV infection explains the observations of others that recipients who are of erythrocyte type O have a better allograft survival than do non-O recipients, and that the beneficial effects of blood transfusion are restricted to type O recipients.

Primary CMV infection characteristically, although not invariably, occurs in parent-to-child transplants because of the differential incidence of the carrier state in the young recipient and in the older donor. Reactivation infection is characteristic of cadaveric transplantation inasmuch as the recipients are usually older and therefore already carriers of cytomegalovirus. Primary CMV infection in transplant patients often is a clinically apparent disease, whereas reactivation infection may be subtle and easily overlooked. Both, however, appear to have equally deleterious effects on allograft survival. The differing opinions regarding the significance of CMV on the outcome of transplantation may arise from the subtlety of reactivation infection, which can pass unrecognized, and on the striking clinical picture of the primary infection, which is more obvious.

In transplantation CMV is a risk factor that can be controlled to a degree. Potential recipients who are free of CMV should receive kidneys from donors who are also free of CMV. An excellent marker for the carrier state is the presence of antibody to CMV. Whether or not a potential donor has CMV antibody can be determined in less time than that required for a comprehensive lymphocyte cross-match. Because 88% of recipients of cadaveric kidneys have latent CMV before transplantation, it should not be difficult to find appropriate recipients for cadaveric kidneys from latent carriers of the virus.

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"Not tonight, dear I'll get a headache"

Headaches brought on by sexual intercourse and orgasm could be due to exertion and an increase in blood pressure, says a physician writing in the April 2 *Journal of the American Medical Association.*

An otherwise healthy 51-year-old woman, who complains of excruciating pain at the time of sexual climax, probably suffers from benign exertional headaches, according to Seymour Diamond, MD, of the Chicago Medical School. To prevent further occurrences, Diamond recommends simple muscle-relaxing exercises and 25 milligrams of the anti-inflammatory drug indomethacin before bedtime or before contemplating sexual intercourse.

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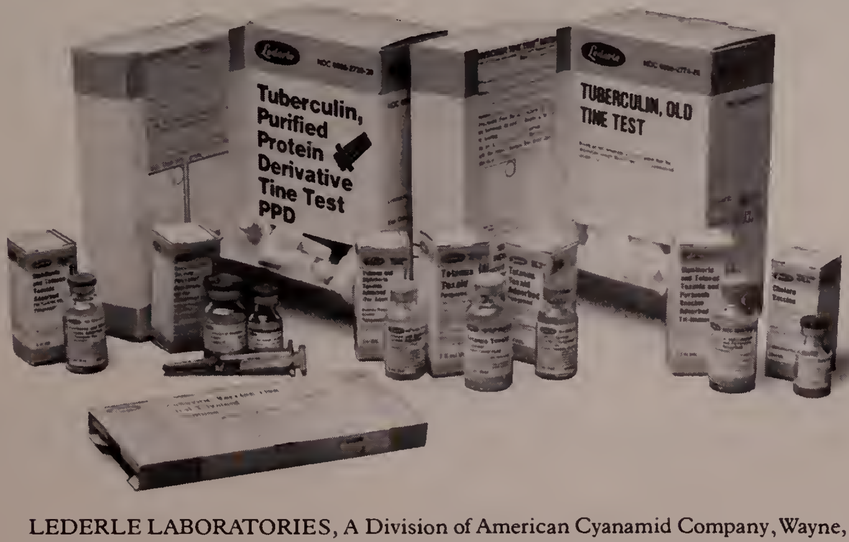
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Decreasing Perinatal Mortality in a Large Urban Center

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The perinatal mortality rate at an inner city hospital over a six-year study period (1974 to 1979) significantly decreased from 34.2 to 9.5 despite continued economic deterioration of the surrounding community and an unchanged proportion of high risk mothers, and low birth weight (less than 2,501 g) infants. The decrease in perinatal mortality reflected declines in both fetal and neonatal deaths. Decreased fetal deaths were associated with improvements in the monitoring program and a decreased proportion of forceps deliveries and oxytocin inductions. The number of primary cesarean sections increased in only one year (1978) of the study period. The significant decrease in neonatal mortality was temporally associated with major construction changes in the neonatal intensive care unit, new equipment, and increasing number of staff (nurses, housestaff, and attendings). Decreased mortality due to idiopathic respiratory distress syndrome (IRDS) was significant. Immaturity emerged as the major cause of death in the last two years. Indeed, a major remaining unsolved problem is the nearly uniform mortality among infants with birth weights of less than 750 g.

Decreased perinatal mortality recently reported has been attributed to improved facilities,[1,2] regionalized perinatal care,[1,2] changes in distribution of birth weights,[2-4] and changes in the abortion rate.[5] The following report describes a marked decrease in perinatal mortality at a tertiary center in an economically deprived urban area.

Material and methods

The Jewish Hospital and Medical Center of Brooklyn (JHMCB) is located in the Bedford-Stuyvesant section, an area with socioeconomic problems characteristic of poor inner city communities. Over the six-year period of this study (1974 to 1979, inclusive), the obstetric population has included a large, unchanged proportion of high-risk patients, characterized in Table I.

Fetal deaths included all intrauterine deaths after the 20th week of gestation or greater than 500 g (definition II, National Center for Health Statistics[6]). The fetal death rate was defined as intrauterine deaths of fetuses over 500 g or greater than the 20th week of gestation/live births + fetal deaths × 1,000. All live-born patients delivered at JHMCB regardless of birth weight were included in the calculation of neonatal mortality. Neonatal mortality included all deaths within the first 28 days of life.[6] The neonatal death rate was defined as deaths in patients 28 days or younger/live births × 1,000. Perinatal deaths were the total of fetal and neonatal death consistent with the standards of the National Center of Health Statistics.[6] The perinatal death rate was defined as fetal + neonatal deaths/live births + fetal deaths × 1,000. Immaturity was defined as patients under 26 weeks gestation by Dubowitz scoring.[7]

Data were gathered from several sources including the Bureau of Maternity Services and Family Planning of the City of New York Department of Health, hospital and nursery records, and the collaborative program of the Downstate Medical Center of the State University of New York.

Chi-square analysis was used for statistical evaluation of death rates and obstetric practices; 1974 was the standard used for comparison unless otherwise indicated. Statistical analysis of changes in prevalence of abortions was not possible since this procedure is performed on a large number of patients from outside the catchment area served by JHMCB (approximately 30% to 40% of all abortions). Age distribution of women undergoing abortion is not available. Similarly, changes in birth rates could not be analyzed due to the unknown number of women of childbearing age in the JHMCB catchment area.

Data for determination of infant mortality (deaths from one month to one year) were incomplete even though many severely ill patients remained hospitalized for many months and approximately 70% of all patients in the NICU are followed in our clinic up to one year of age.

Results

The decline in perinatal mortality in 1977, 1978, and 1979 was significant compared with 1974. Perinatal mortality, 34.2 in 1974, fell to 20.7 in 1977

TABLE I. Comparison of Characteristics and Complications of Obstetric Population of the Jewish Hospital and Medical Center of Brooklyn

	1974	1978	1979
Characteristics			
No. births	2,649	2,564	2,108
Private patients	46%	22%	30%
Race			
White	24%	13%	12%
Nonwhite	76%	87%	88%
Age			
< 20*	18%	19%	21%
> 35	7%	6%	7%
Prenatal visits			
0	3%	9%	6%
1–2	10%	14%	13%
Admitted to NICU†	14%	25%	29%
Obstetric complications			
Anemia (Hgb < 10)	5%	5%	4%
Hemorrhage	2%	2%	2%
Toxemia	8%	10%	11%
Diabetes	4%	5%	2%
Premature labor (by dates)	8%	9%	12%
Low birth weight	12%	13%	14%
Post dates	8%	5%	5%
Multiple pregnancies	1.1%	1.0%	1.1%
Meconium stained (Non breech)	9%	12%	12%
Fetal distress (Monitor)**	1%	5%	8%

* The number of patients $\leq$ 15 years of age constant throughout study (0.03%–0.05%).
† Criteria for NICU admission unchanged throughout study.
** All tracings reviewed by C.C.

($P <.01$), 14.3 in 1978 ($P <.001$), and 9.5 in 1979 ($P <.001$) (Table II). Fetal and neonatal mortality fell similarly in 1978 and 1979 and the proportion of fetal deaths during the intrapartum period fell in 1975, 1977, and 1978 ($P <.02$).

Deaths were rare in patients with birth weights exceeding 2,500 g (Table III). Their neonatal mortality fell from 3.0 in 1974 to 0.4 in 1978 and 1.1 in 1979. In patients with birth weights of 2,500 g or less, neonatal mortality decreased from 105 in 1974 to 73, 60, and 35 in 1977, 1978 ($P <.05$), and 1979 ($P <.01$).

Nearly all patients with birth weights less than 751 g died (58 out of 64) (Table III). Two to three times the number of such patients were born in 1975 (21 infants) than in other years (7 to 11 infants). The death of all 21 led to increased neonatal mortality in 1975. However, that year fetal mortality was decreased and therefore perinatal mortality in 1975 was similar to 1974 and 1976 (Table II). There was no apparent increase in infant mortality during 1977 to 1979 compared with 1974 in the approximately 70% of patients who were followed by us for one year.

The relative prevalence of different causes of death (Table IV) has changed during the six-year interval. Idiopathic respiratory distress syndrome (IRDS) accounted for 47% of deaths in 1974 but 29% in 1978 and 16% in 1979. The proportion of premature

TABLE II. Comparison of Mortality Rates Jewish Hospital and Medical Center of Brooklyn 1974–1979

	1974	1975	1976	1977	1978	1979
Total live births	2,649	2,783	2,695	2,857	2,564	2,108
Fetal deaths	52	31†	41	31†	16*	8*
(Rate)	(19.2)	(11.0)	(14.9)	(10.7)	(6.2)	(3.8)
Intrapartum fetal deaths	25	4†	20	6†	2†	4
(% of total fetal deaths)	(29)	(13)	(27)	(20)	(12)	(50)
Neonatal deaths	40	53	39	39	21††	12**
(Rate)	(15)	(19)	(14)	(10)	(8)	(5.7)
Perinatal deaths	92	84	80	60**	37*	20*
(Rate)	(34.0)	(29.8)	(29.2)	(20.7)	(14.3)	(9.5)

* $P < .001$
** $P < .01$
† $P < .02$
†† $P < .05$
All P values calculated by comparison to 1974.

TABLE III. Neonatal Mortality Rates by Birthweight Jewish Hospital and Medical Center 1974–1979

Birthweight, g	1974	1975	1976	1977	1978	1979
≤ 500	2/2 (1,000)	7/7 (1,000)	0 (0)	2/2 (1,000)	2/2 (1,000)	3/3 (1,000)
501–750	6/7 (860)	14/14 (830)	8/9 (890)	5/6 (830)	8/11 (730)	4/5 (800)
751–1,000	6/8 (750)	2/7 (290)	10/16 (630)	7/16 (440)	5/15 (330)	2/11 (182)
1,001–1,250	11/15 (730)	9/23 (390)	3/17 (180)	5/17 (290)	2/13 (150)	1/16 (62)
1,251–1,500	1/24 (42)	3/12 (250)	3/25 (120)	0/23 (0)	2/27 (74)	0/22 (0)
1,501–2,000	1/57 (18)	5/66 (76)	3/77 (39)	2/87 (23)	1/59 (17)	0/70 (0)
2,001–2,500	6/202 (30)	4/208 (20)	4/193 (21)	2/203 (10)	0/208 (0)	0/149 (0)
Over 2,500	7/2,334 (3)	9/2,446 (4)	8/2,358 (3)	5/2,503 (2)	1/2,229 (0.4)	2/1,823 (1)
TOTALS	40/2,649 (15)	53/2,783 (19)	39/2,695 (14)	29/2,857 (10)	21/2,564 (8)	12/2,108 (6)

Neonatal mortality = all deaths in first 28 days of life/live births × 1,000.

neonates and of IRDS cases has remained constant. During the study period, mothers in premature labor have not been treated with steroids. Similarly, alcohol was the only tocolytic agent used in our hospital through 1979. Immaturity was a major factor in 20% of deaths in 1974 but increased to over 50% in 1978 and 1979. While the percentage of deaths due to immaturity increased, the absolute number of immature patients was relatively constant during this interval. Although immaturity and IRDS were the primary causes of death, intraventricular hemorrhage was the most common terminal event in both groups. Deaths due to congenital anomalies were infrequent during this interval and declined from eight in 1974 to none in 1978 and two in 1979.

Changes in obstetric procedures from 1974 to 1979 are shown in Table V. The number of births was stable during the five years 1974 to 1978 and decreased in 1979. The number of spontaneous vaginal deliveries increased in 1976 through 1979. The total cesarean section rate did not increase significantly in consecutive years but did comparing 1974 (17%) with 1978 (22%) ($P < .001$), and 1977 (19%) and 1979 (20%) ($P < .05$). The primary section rate in 1978 increased significantly ($P < .05$) compared with 1974, but there were no significant increases in other years. In 1976 there was a decrease in the number of primary cesarean sections ($P < .05$).

The proportion of oxytocin-induced labors significantly decreased from 1974 to 1976 through 1979 ($P < .001$). The proportion of newborns delivered by forceps (both low and mid) decreased yearly and significantly compared with 1974. The number of mid forceps deliveries decreased significantly in 1976 through 1979 ($P < .05$). There were no high forceps deliveries during the study period. The proportion of breech patients delivered by cesarean section has been approximately the same (50%) except in 1978 when there was a significant increase ($P < .05$) compared with 1974.

TABLE IV. Primary Cause of Neonatal Deaths, The Jewish Hospital and Medical Center of Brooklyn

	Year					
	1974 (40 deaths)		1978 (21 deaths)		1979 (12 deaths)	
Cause	No.	%	No.	%	No.	%
Immaturity ≤ 26 wk	7	18%	11	52%	6	52%
IRDS	19	47%	6	29%	2	16%
Sepsis	4	10%	3	14%	1	8%
Major anomalies	8	20%	0	0%	2	16%
Asphyxia	2	5%	1	5%	1	8%
TOTALS	40	100%	21	100%	12	100%

TABLE V. Comparison of Obstetric Practices
Jewish Hospital and Medical Center of Brooklyn 1974–1979

		1974	1975	1976	1977	1978	1979
Total live births		2,649	2,783	2,683	2,857	2,564	2,108
% NSVD		66	68	70*	71**	69*	75**
Cesarean section (%)	Total	17	17	17	19*	22**	20*
	Primary	12	12	10*	13	14*	13
Forceps (%)	Total	16	13**	11**	9**	6**	6**
	Mid	1.5	1.2	0.4*	0.5*	0.5*	0.7*
Breech	% Total deliveries	2.8	2.8	3.4	3.1	2.6	2.2
	% Breeches delivered by C/S	47	48	53	58	79*	57
Monitored (%)	Antepartum	4	7**	12**	15**	20**	31**
	Intrapartum	25	40**	50**	56**	65**	70**
Oxytocin induction (%)	Total	23	22	19**	11**	6**	5**
	Elective	22	21	17**	10**	5**	4**
No. abortions†		1,429	1,618	1,607	1,507	2,667	2,898

* $P < .05$
** $P < .001$
† Significance could not be evaluated because of the marked but unknown changes in population from which this data was drawn (see text).

The proportion of obstetric patients receiving antenatal and intrapartum monitoring has increased significantly over the study period as new equipment and staff were added. An eightfold increase in the proportion of patients receiving antenatal monitoring (from 4% to 31%) and a nearly threefold increase (25% to 70%) in the proportion of intrapartum patients evaluated was observed from 1974 to 1979.

The number of abortions at JHMCB has increased over the study period due mainly to a marked increase in the number of patients referred from outside the JHMCB catchment area.

Comment

Reduction in perinatal mortality at JHMCB in 1977, 1978, and 1979 occurred despite the large proportion of high-risk obstetric patients reflecting poverty, inadequate antenatal care, and medical complications. The continuing trend toward decreased perinatal, fetal, and neonatal mortality is consistent with recent reports from different medical centers.[1–4] However, neonatal mortality in our urban center during 1978 and 1979 was less than overall neonatal mortality for the United States (9.4 and 8.8 per 1,000 live births),[8,9] suggesting that adverse socioeconomic circumstances can be partially overcome and improved perinatal mortality may be possible. This improvement did not appear to be at the expense of increased infant mortality. Over the last three years of the study, infant deaths accounted for 30% to 40% of all deaths in the first year of life, a proportion consistent with national trends.[9]

Identification of the basis for improvement in perinatal and neonatal survival is hazardous, since many factors cannot be controlled and are difficult to measure quantitatively. The problems of inner city life have continued during the six-year interval making changes in nutrition, education, antenatal care, and economic status unlikely.

Several medical changes in the delivery of perinatal care did occur during 1976 and 1977, coinciding with the first observation of improved survival. Improvements in obstetric care included establishment of an organized antenatal monitoring programs (contraction stress test, nonstress test, sonography) with additional facilities and staff in 1977 which led to increased proportions of cases monitored. The effectiveness of these modalities was questioned in a recent controversial National Center for Health Services Research (NCHSR) report.[10] Our experience, based on a large proportion of high-risk obstetric patients, suggests that perinatal monitoring, as part of a total program, can have a beneficial effect and supports the rebuttal of the NCHSR report by Hobbins et al.[11]

The effects of the marked increase in abortions at JHMCB in 1978 are difficult to interpret since many of them were referred from outside this area and would not have delivered at our hospital. Prior studies of the effect of abortion suggest it contributes to a decrease in perinatal mortality by reduction in the prevalence of premature deliveries. During 1974 to 1979 our population exhibited both an increased abortion rate and a slightly increased rate of prematurity. The latter at JHMCB is twice the national average.[2] Hence improved survival was attained even though the proportion of premature deliveries remained constant or even increased slightly.

The primary cesarean section rate has also remained stable with the exception of 1978. Since mortality rates declined in each year when the cesarean section rate did not change, as well as in the one year when it did increase, this procedure appears not to have affected mortality.

The total number of forceps deliveries (both low and mid) has decreased steadily. The decrease in mid forceps from 40 to 4 has added slightly to the number of cesarean sections. Since the rate of breech deliveries has remained stable and 50% of breeches have been delivered by cesarean section since 1974, except in 1978, this would not appear to be a factor in decreased mortality with the possible exception in 1978.

The use of oxytocin for induction of labor has decreased markedly and correlates with decreased perinatal mortality. Elective induction of labor and the use of oxytocin have both been associated with increased neonatal risk[12,13] and the decrease in mortality at JHMCB may be at least partially attributable to their infrequent use.

Other obstetric changes cited in recent years as reasons for decreased perinatal mortality have been constant at JHMCB during this study period including rate of natural childbirth, availability of qualified obstetric anesthetists, and proportion of post date deliveries. Changes in the neonatal program included: major renovation and expansion of the NICU completed in October 1976; recruitment of additional neonatal attending staff, housestaff, and skilled nurses; and additional equipment including radiant heaters, new neonatal ventilators, and a pneumatic tube system which permits rapid analysis and reporting of blood gas determinations. There was a temporal association between these improvements (1977 to 1978) and the marked decrease in mortality.

The decreased neonatal mortality in our patients of 1,000 to 1,500 g birth weight differs from Jones et al[12] who found no significant improvement in this group over 15 years (1961 to 1975) despite increasing sophistication and technology in neonatal care. In our institution such technical changes, in an integrated perinatal program, apparently have had beneficial effects.

Our data suggest that significant problems remain for infants with birth weight less than 751 g, nearly all of whom died, and in the 751 to 1,000 g group whose mortality remains approximately 50%. Prevention of such deliveries may be the only realistic approach since the intrinsic problems of these neonates cannot be managed satisfactorily with present techniques. These cases represent a significant obstetric challenge. Recent progress in understanding the mechanisms of labor[13] and development of medications to prevent premature labor[14] may improve their outlook. The problems presented by this group of patients are also apparent when one examines the causes of death.

Significant improvement in the treatment of idiopathic respiratory distress syndrome has resulted in a decrease in mortality from this disease. A decreased proportion of patients with life-threatening congenital anomalies, especially cyanotic congenital heart disease, has also contributed to the decreased neonatal mortality although the small number of patient makes analysis difficult. In contrast, immature patients, who die mainly from respiratory insufficiency, have not yet benefited from the therapeutic advances that have improved survival in patients over 26 weeks.

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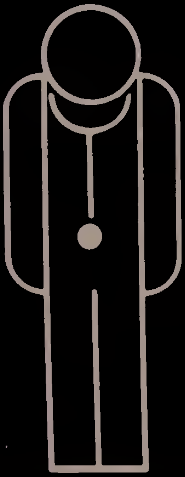

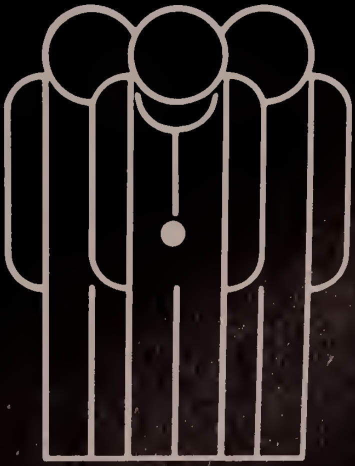

SYMPOSIUM

Fetal Alcohol Syndrome

Introduction

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The subject of our symposium, Fetal Alcohol Syndrome, is important at this time for three reasons. It stands nearly alone in modern medicine as an observation made hundreds of years ago which somehow was lost along the way. Medical interest and awareness that birth defects could be related to maternal alcohol use have just been "relearned" within the last several years. Second, we now know that this represents one of the largest groups of birth defects. Third, and most important of all, is that it is entirely preventable!

For these reasons the MSSNY at its 1981 Scientific Session assembled a panel of experts to report on this issue. That symposium is presented here under four headings: Fetal Alcohol Syndrome and Alcohol-Related Birth Defects; Drinking and Pregnancy—Review of Current Research; Alcohol Problems in Women; and Fetal Alcohol Syndrome—Other Effects of Alcohol in Pregnancy.

Fetal Alcohol Syndrome and Alcohol-Related Birth Defects

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Although the deleterious effects of maternal alcoholism have been suspected since antiquity, the concept of the fetal alcohol syndrome (FAS) had its origins only within the last decade, beginning with the work of Lemoine et al[1] and coming to the attention of most physicians in this country with the work of Ulleland[2] and of Jones and associates.[3]

A characteristic cluster of features constitutes the symptom complex termed FAS. Core components of the syndrome include (1) pre- and postnatal growth deficiency, (2) facial dysmorphic features, and (3) central nervous system dysfunction presenting as mental deficiency of varying degrees of severity. Of these, mental retardation is considered the most disabling and consistent sequela of prenatal exposure to alcohol, and FAS is considered the third most frequent disorder in which retardation is a component.[4]

In addition to clinical and epidemiologic studies during the past decade, prospective human studies and research with experimental animals have clearly implicated alcohol as a teratogen.[5] This is a particularly important association because of the widespread use and frequent abuse of alcohol in our society, and also because of the developing body of knowledge indicating a broad range of adverse biologic effects on the human fetus exposed to alcohol in utero. These include malformations of various organ systems,[4] intrauterine death and pregnancy wastage,[6] an apparent enhanced risk for neoplasia in postnatal life,[7] and abnormalities of the central nervous system not necessarily manifest as overt mental retardation but rather as behavioral deficits and learning disabilities.[8]

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* *By invitation.*

TABLE I. Principal Features of FAS Observed in 245 Affected Persons*

Feature	Manifestation
Central nervous system dysfunction	
Intellectual	Mild to moderate mental retardation
Neurologic	Microcephaly; poor coordination and hypotonia
Behavioral	Irritability in infancy; hyperactivity in childhood
Growth deficiency	
Prenatal	<2 SD for length and weight
Postnatal	<2 SD for length and weight
Facial characteristics	
Eyes	Short palpebral fissures
Nose	Short, upturned; hypoplastic philtrum
Maxilla	Hypoplastic
Mouth	Thinned upper vermilion; retrognathia or micrognathia

* Modified from Clarren and Smith.[4]

Features of FAS

The principal features of FAS are summarized in Table I. In addition to short palpebral fissures, other eye anomalies include ptosis, strabismus, and epicanthal folds. The low nasal bridge, anteverted nose, flat philtrum, narrow upper lip, and retro- and micrognathia may also be accompanied by prominent lateral palatine ridges and by small teeth with enamel dysplasia. Malformations affecting virtually every organ system have been described including cardiac defects, renal anomalies, and skeletal and joint abnormalities (Table II). Some of the more prevalent congenital malformations, such as cleft lip and/or palate and neural tube defects, apparently occur with higher incidence in children with FAS.

The growth deficiency in FAS is of prenatal onset,[9] and although postnatal catch-up growth has been described as infrequent, in a substantial percentage (25%) of children we have followed, acceleration of growth can be seen during childhood. This may be more dramatic with regard to weight, and less so with height and head circumference.

The central nervous system effects include retarded psychomotor development, tremulousness, hyperactivity, and poor attention span. These abnormalities, as well as the abnormal electroencephalogram patterns in newborns and children with FAS, may reflect the abnormal brain size and development that have been noted at autopsy.[10] Although studies have not yet revealed a uniform or characteristic aberrant behavioral pattern in newborn infants with FAS, a variety of functional deficits has been observed, including tremulousness, hypotonia, hyperactivity, and hyperacusis.[11]

Alternative presentations of alcohol teratogenicity

Although FAS has attracted much interest because of its unique and easily recognizable constellation of features, it is becoming increasingly evident that maternal alcoholism is related to a whole spectrum of effects. Even in the absence of typical FAS, a variety of other adverse effects of alcohol has been reported. Several investigators have described cognitive or intellectual deficits in children born to alcoholic mothers but lacking the characteristic features of FAS. This is not surprising since it is well known that teratogenic agents can produce behavioral deficits in experimental animals, in the apparent absence of structural defects. In a group of 87 children referred to a learning disorder unit, 15 were found to have a history of maternal heavy drinking during pregnancy.[8] Although, on the average, all growth measurements were affected, with 60% of the children showing height and head circumference less than the tenth percentile and 74% showing weight less than the 25th percentile, a significant proportion had no growth deficiency. These children had a continuum of dysmorphic features of FAS, and an inverse relationship was noted between the age of presentation and the intensity of the dysmorphic features. Although all had intelligence in the normal range, they nevertheless experienced persistent academic failure. In addition, all shared problems of activity and attention regulation. Similarly, Olegard et al[12] described infants born to alcoholic mothers who had abnormal evoked-response encephalograms

TABLE II. Associated Features of FAS Observed in 245 Affected Persons*

Area	Frequent	Occasional
Eyes	Ptosis; strabismus; epicanthal folds	Myopia; clinical microphthalmia; blepharophimosis
Ears	Posterior rotation	Poorly formed concha
Mouth	Prominent lateral palatine ridges	Cleft lip or cleft palate; faulty tooth enamel
Cardiac	Murmurs, usually a result of atrial septal defect	Ventricular septal defect; great vessel anomalies; tetralogy of Fallot
Renogenital	Labial hypoplasia	Hypospadias; small rotated kidneys; hydronephrosis
Cutaneous	Hemangiomas	Hirsutism in infancy
Skeletal	Aberrant palmar creases; pectus excavatum	Limited joint movements, especially fingers and elbows; radioulnar synostosis; pectus carinatum; bifid xiphoid; Klippel-Feil anomaly; scoliosis
Muscular	. . .	Hernias of diaphragm, umbilicus, or groin; diastasis recti

* Modified from Clarren and Smith.[4]

in the absence of other FAS characteristics, and in the absence of low birth weight. Other investigators have shown that children born to alcoholic mothers showed significantly lower IQ scores compared with control children matched on a variety of relevant variables even though most of the children of the alcoholic women did not have a diagnosis of FAS.[13] Similarly, maternal alcohol use during pregnancy has been related to small but significant decrements in mental and motor development in 8-month-old infants,[14] and to decreased attentiveness in 4-year-old children.[15] In these studies, statistical adjustments were made for several other variables, such as gestational age, birth order, and maternal smoking.

Intrauterine growth is negatively associated with maternal alcohol intake, even after adjustment is made for other variables such as smoking, caffeine, parity, and gestational age. Kaminski et al[16] reported that greater alcohol use is related to lower infant birth weight and placental weight. Little[17] reported that women drinking the equivalent of 1 oz or more of absolute ethanol per day during the eighth month of gestation delivered babies averaging 160 g less than the offspring of lighter drinkers. Similar observations have been made in a prospective study in which increased alcohol use was significantly related to decreased weight, length, and head circumference at birth after adjusting for other relevant variables.[18] Thus, although the central nervous system appears to represent a very vulnerable organ with respect to adverse effects of ethanol during development, slowing of somatic growth may be another sensitive parameter of this effect.

Pregnancy wastage

The prospective studies of Kaminski et al[16] revealed a significant relationship between maternal alcohol intake and stillbirth rates. The unadjusted stillbirth rates of 9.9 per 1,000 for light drinkers and 25.5 per 1,000 for heavy drinkers were significantly different. Certain risk factors when combined with heavy alcohol use resulted in even higher stillbirth rates. These included greater maternal age, higher parity, lower social class, and smoking. In nonsmokers, heavy alcohol intake more than doubled the risk of stillbirths, while women who both drank heavily and smoked had the highest rate (50.5 per 1,000).

Late fetal death in some instances appears to be part of a biologic continuum that is represented in early gestation by spontaneous abortion. It is of interest in this respect that recent studies have shown an increased risk for spontaneous abortion prior to the 28th week of gestation among women who are moderate or heavy drinkers.[6,19] This increased risk could not be explained by age, parity, race, marital status, smoking, or the number of previous spontaneous or induced abortions, since control for these confounding variables did not alter the association between drinking during pregnancy and spontaneous abortion.

Prevalence of FAS and alcohol-related birth defects

There are no data that permit an accurate estimate of the prevalence of FAS among children of alcoholic mothers or the prevalence of FAS and related birth defects in the general population. Prospective studies in the United States[18] and other countries have provided reasonable estimates of incidence and prevalence. A prospective study, reported from Sweden, described a 33% prevalence rate for the full syndrome and a 76% rate for partial effects among progeny of alcoholic women.[12] In northern France, the birth incidence of FAS was reported to be one in 1,000 live births when only the typical FAS infants were counted, but one in 400 if milder cases were included.[20] These figures are comparable to those reported from a prospective study in Seattle (1 in 750).[18] Attempts to evaluate fetal risks by retrospective analyses have yielded more variable results. This is not surprising since it is likely that the prevalence of FAS reported in studies of alcoholic mothers is influenced by sample selection and demographic factors as well as by the varying definitions for alcoholism and FAS that have been used.

Although chronic maternal alcoholism with heavy drinking during pregnancy has been a consistent factor in reported cases of FAS, other factors exist that may enhance or diminish the risk that a given woman will produce affected offspring. These factors modifying risk warrant further study. The apparent higher prevalence of affected children born to women in the lower socioeconomic classes suggests that some factors related to social class, such as poor nutrition, smoking, and additional drug use may increase the risk of FAS.[5] On the other hand, the birth of unaffected progeny to chronic alcoholic women suggests that genetic factors may contribute significantly to interindividual differences in susceptibility. This is supported by the few reports of differentially affected dizygotic twins,[21] and the accumulating evidence for genetically determined individual differences in the metabolism and biologic concomitants of alcoholism.[22]

Role of prospective studies

Although clinical studies, largely retrospective in nature, have focused on the consequences of chronic maternal alcoholism, there is inadequate information about the possible adverse effects of lower alcohol intake, including social drinking. Thus the lower limits of the teratogenic effects of alcohol are unknown.

The several prospective studies on maternal alcohol use and pregnancy outcome in this country and abroad may help resolve this issue. Although these studies differ widely with respect to sample size, population selection, and measures of pregnancy outcome, virtually all rely on measures of average alcohol use derived from self-reports, questionnaires, and interviews. Since the reliability of this type of information to quantitatively assess alcohol use may be questioned, particularly among chronic alcohol users, the identification of heavy, moderate, or light drinkers may be subject to error. By the same token, correlations with pregnancy outcome may be difficult to interpret.

Implications

The available evidence gathered from clinical, epidemiologic, and experimental animal studies clearly indicates that alcohol is a teratogen. However, the mechanisms through which the effects are produced remain unclear. The question of whether it is a direct effect of alcohol on morphogenesis or the effect of acetaldehyde or some other metabolite requires further study. Similarly, risk factors that may potentiate the effect of alcohol, such as poor nutrition, exposure to other drugs, smoking, or individual differences in alcohol metabolism are poorly understood.

There appears to be a dose-response relationship between intrauterine alcohol exposure and adverse pregnancy outcome. The effects on offspring range from decreased birth weight and functional deficits at lower levels of alcohol intake to FAS and early or late fetal death at higher doses. A safe level of alcohol use during pregnancy has not been established, and birth weight decrements have been found at levels of alcohol intake corresponding to about two drinks per day on the average.

These findings have important implications for public health policy. If FAS, including more subtle manifestations of alcohol embryopathy, is third among the identifiable single causes of mental retardation in the population, its importance is highlighted by virtue of the likelihood that it is more amenable to prevention and eradication. The responsibility of various health agencies, both governmental and voluntary, as well as other groups to implement programs of education and heighten public awareness of the problem is clear. An "educated consumer" should help mitigate this form of acquired mental retardation and learning disability in our society. This is not to minimize the accompanying need to inform and educate health professionals at all levels about the teratogenicity of alcohol.

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Drinking and Pregnancy

Review of current research

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In the few short years since the description of the fetal alcohol syndrome (FAS), research on the fetal effects of drinking during pregnancy has been very active. A number of animal models have been developed and large-scale epidemiologic studies have been initiated. To bring researchers together to discuss their results and brainstorm new approaches to the many methodologic problems that arise in research of this type, FAS workshops have been held on a regular basis. Publications coming out of the most recent of these meetings are the source of much of the current research to be discussed in this review,[1–3] and they will provide much additional information for the interested reader. Another excellent data source is the three-volume series *The Fetal Alcohol Syndrome* edited by Ernest L. Abel, of the New York State Research Institute on Alcoholism.[4]

Epidemiologic research

Among other important questions, current epidemiologic research is concerned with defining the spectrum of alcohol-related birth defects (Table I). Dr. Nitowsky has described the discovery of the fetal alcohol syndrome, a distinctive constellation which led to the realization that alcohol is a teratogen. More severely affected fetuses may be aborted or stillborn. Less severely affected infants may be born with only one of the defects associated with the syndrome, or with learning disabilities that do not manifest themselves until later in life when the child enters school. The latter, less distinctive, fetal alcohol effects can only be studied by comparing the incidence of these conditions in populations of infants born to heavy-drinking mothers to the incidence in populations born to comparable mothers who do not drink during pregnancy.

The National Institute on Alcoholism and Alcohol Abuse has funded several prospective studies of alcohol-related birth defects in the United States. One of the first was begun in Seattle, Washington, in 1973.[5] In this study 1,529 primarily white, middle-class women were questioned about their alcohol use in the month prior to pregnancy and in the fifth month of pregnancy. Seventeen percent (9 of 70) of the offspring of women who drank heavily in the month prior to pregnancy had features associated with the fetal alcohol syndrome, compared with only 2% (2 of 93) of those reporting lower alcohol intakes.[6] Two cases of FAS were diagnosed, both in nonwhite alcoholics. Despite the fact that there was no active intervention, by the fifth month of pregnancy most patients had reduced their drinking, and alcohol intake measured at this time was not related to fetal abnormalities.

These findings illustrate several important points to bear in mind in interpreting reports of alcohol consumption during pregnancy. Heavier drinking in the Seattle study was defined as an average intake of 1 oz of absolute alcohol, or about two drinks per day. Others have reported a decreased birth weight[7] and an increased abortion rate[8,9] associated with two or more drinks per day during pregnancy. In New York, where consumption levels are higher on the average than in many other states,[10] this level of alcohol use may not seem like very much. However, so far, all the epidemiologic studies done on alcohol consumption during pregnancy have depended on the patients' self-reports of their drinking patterns. Given that there is a tendency for alcohol consumption to be underestimated, especially by heavier drinkers, some obstetric patients who report having one or two drinks a day may, in fact, drink more than this.

Studies that report alcohol intake in terms of ounces of absolute intake per day may underestimate fetal alcohol exposure in women who drink heavily, but not on a daily basis. As part of the longitudinal studies on FAS being conducted at Cleveland Metropolitan Hospital, Sokol et al[11] recorded alcohol intake in obstetric patients for the 14 days prior to interview. They found that 4% of their population reported very high intakes, nine or more drinks on several days during the period, but that few women drank every day. Averaging in the days with no alcohol gave them low absolute alcohol scores. This observation prompted the recommendation that al-

TABLE I. Spectrum of Alcohol-Related Birth Defects

Stages of Reproduction	Alcohol Effect Observed
Prior to conception	Lowered fertility
During pregnancy	Spontaneous abortion Prematurity
At birth	Stillbirth Fetal alcohol effects Fetal alcohol syndrome
Post partum	Feeding and sleeping abnormalities Hyperactivity Learning disabilities

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* *By invitation.*

cohol intake per drinking day be taken into consideration as well as alcohol per day. The Michigan Alcohol Screening Test (MAST) was administered to this population, and 12% scored positively, a much higher rate of unsuspected alcoholism than has previously been reported in a US obstetric population.

Another factor influencing the report of alcohol consumption is the spontaneous tendency of women to reduce drinking during pregnancy. Women who are found to be drinking one or two drinks a day at a prenatal visit may have been drinking far more at conception. This phenomenon was noted prior to publicity on FAS and cannot be necessarily attributed to the woman's desire to protect the fetus. Pregnant women reported that they simply did not have the desire to drink; alcohol did not taste good to them. Ernest Hook[12] of the State of New York Department of Health's Institute of Birth Defects postulates that this aversion for alcohol during pregnancy may represent an adaptation to protect the fetus from a fetotoxin. A tendency toward spontaneous reduction has been reported in heavy and alcoholic drinkers as well as light and moderate drinkers.[13] However, if a women is drinking a fifth of vodka a day, she can cut down quite a bit and still be classified as a heavy drinker. Also, not all women cut down; a few maintain a high intake, and some increase it in response to the stress of pregnancy.

The fact that reduction in alcohol intake usually lags behind conception means that heavy drinking patterns established before pregnancy probably continue during the first weeks of pregnancy during which organogenesis and early brain development are initiated. This may explain why the Seattle Prospective Study found that drinking patterns prior to learning of pregnancy were more highly correlated with adverse pregnancy outcome than drinking during the fifth month of pregnancy. There have been attempts to correlate heavy alcohol consumption during a given period of pregnancy with malformations in the organ systems that develop during that period. For example, abnormal palmar creases, which develop between the eighth and tenth week of pregnancy, are associated with FAS, providing evidence of vulnerability to fetal alcohol effects fairly early in pregnancy.[14]

Although organogenesis takes place in the first trimester, most growth occurs during the second and third trimester, and the central nervous system develops throughout pregnancy. Henry Rosett, M.D., at Boston City Hospital has interpreted data from a Boston prospective study to suggest that it is still worthwhile for physicians to convince their patients to stop drinking even if its already fairly far along in their pregnancy.[15] They were able to persuade patients who had been drinking quite heavily to abstain during the last two trimesters of pregnancy. Their children had almost normal growth and fewer malformations than the children born to women who drank heavily throughout the pregnancy. One problem with this study is that the women who quit may have been drinking less early in pregnancy and had a better pregnancy outcome regardless of intervention. One would expect the incidence of first trimester malformations to be similar if both groups were equally alcoholic and/or drinking similar quantities of alcohol. Similar results were found by Olegard[16] in Sweden, who attempted to correlate the duration of drinking with pregnancy outcome. The women who stopped drinking during pregnancy had babies with almost normal birth weights. However, these same babies did have abnormal electroencephalograms which suggests that some brain damage or abnormalities may have occurred prior to intervention. It is worth pointing out that the fact that women often develop an aversion to alcohol during pregnancy may assist physicians in helping their patients to overcome their drinking problems.

At the Research Institute on Alcoholism and Alcohol Abuse (Buffalo, NY), which is part of the New York State Division of Alcoholism and Alcohol Abuse, we are doing surveys of drinking in obstetrics and gynecologic patients. From this research, we have developed methods of screening for alcohol-related problems in women. Self-administered questionnaires were employed because we found in our pilot studies that women are reluctant to talk about their alcohol-related problems with the physician.[17] They are less likely to deny alcohol-related problems if they can be written down privately on paper, and we had very good cooperation with these surveys in over 2,500 obstetric-gynecologic patients.[18]

These surveys included systematic samples of women in five different sites, including inner-city clinic patients as well as suburban private patients; so, we have a broad range of socioeconomic classes represented in our population. Women reported how much wine, beer, and liquor they drank, the frequency of their drinking, and whether or not they planned to have a baby within the next two years. We asked obstetric patients to tell us what they were drinking before they learned that they were pregnant. We did not find large differences in womens' drinking according to education, income, race, or urban-rural residence.

Table II indicates the extent of heavy drinking among obstetric-gynecologic patients in western New York compared with females from a western New York household sample. Controlling for age, the obstetric patients report drinking at almost the same levels as the household population. Prevention does not appear to be a motivating force for decreasing consumption; women are not preparing themselves for conception by reducing their drinking. A substantial proportion of women are drinking quite high levels in the month prior to learning of their pregnancy: 10% had two or more drinks per day and 3% had six or more. Approximately 25% of gynecologic patients in their 40s are heavier drinkers. While they are beyond the childbearing age, this group repre-

TABLE II. Drinking Patterns According to Pregnancy Status Among Obstetric and Gynecologic Outpatients in Western New York State, Compared to a Household Population (Percent)

Drinking Patterns	Obstetric-Gynecologic Outpatients Pregnant (N = 554)	Planning Pregnancy (N = 391)	Not Planning Pregnancy (N = 1,583)	Household Population (N = 558)
Astainers/infrequent drinkers	39	35	33	36
Light drinkers	27	25	24	24
Moderate drinkers	25	25	30	31
Heavier drinkers	9	15	14	9

sents a high-risk population and should receive physician attention.

In a subsample of drinkers, we conducted a 45-minute face-to-face interview and abstracted information on possible alcohol-related problems from their medical records. We pooled these three data sources, and, using variables that relate to the National Council on Alcoholism (NCA) criteria for the diagnosis of alcoholism, we diagnosed alcoholism in these patients.

A multiple discriminate function analysis was employed to define characteristics other than the NCA criteria that were associated with alcoholism in these patients. Thus, nonobvious correlates of alcoholism in women, which could be used by the physician to screen for alcohol-related problems in his or her patient population, were obtained.[19] Among nonobvious factors found to be associated with alcohol-related problems in women are menstrual problems much as irregularity, pain, nausea, depression, and premenstrual tension; periods of depression; failure to eat three meals a day, especially if related to lack of food or money; and using alcohol to forget worries, to feel better when unwell, when angry or when depressed or nervous. Obvious alcohol-related factors found to be significant in this population include diseases etiologically linked to excessive alcohol use such as anemia, hypertension, liver disease, gastritis, pancreatitis, and infertility, and social, economic, or legal problems related to excessive drinking.

We are now replicating the study in another population and validating the resultant questions in a diagnosed alcoholic population. From our testing we intend to develop a one-page questionnaire which women can fill out in their physicians' waiting rooms. This will assist the physician in recognizing alcohol-related problems and provide information to help the physician overcome patient denial, which is often a problem in direct confrontation. Also, the questionnaire is a time-saving device for the physician, since information helpful in determining whether or not the patient may have an alcohol-related problem can be accumulated without the physician's presence.

As Dr. Nitowsky discussed previously, the incidence of FAS in live births has been frequently used to determine the extent of the problem. This is probably not a terribly useful way to talk about the incidence of the fetal alcohol syndrome, however. Rather, it's more useful to consider the number of fetal alcohol syndrome births per number of heavier drinkers or per number of alcoholics. Obviously the incidence depends on the rates of heavy drinking and alcoholism in the population under study. There is great variability in the number of fetal alcohol births estimated from the different studies. For example, at a recent workshop held in Seattle, Washington, researchers working in American Indian populations reported one FAS for every 50 live births.[20] This may be related to the severity of alcoholism among this population. Or, there may be some kind of genetic predisposition, perhaps a difference in the way alcohol is metabolized, which puts these populations at higher risk.

A study of black teenagers in Baltimore, Maryland, reports that one of the correlates of drinking in girls was pregnancy; the black teenagers who were heavy drinkers were much more likely to report having a previous pregnancy.[21] Among girls between the ages of 11 to 14, 8% of the heavier drinkers reported a previous pregnancy compared with only 2% of the nondrinkers in the same age group. Among girls 15 and 16 years old, 36% of the heavier drinkers and only 8% of the nondrinkers had been pregnant. What may be happening in these teenagers is that they are using the alcohol to cope with pregnancy during a time in their lives when they are not equipped to deal with it. The implications with respect to fetal alcohol effects are obvious. Prenatal alcohol exposure also makes a child very difficult to care for, as well as adversely affecting the growth and development. Alcohol affects the suckling reflex and feeding in children. Sleep abnormalities among infants exposed to high doses of alcohol during fetal development further complicate care for newborns. Finally, if the mother is having trouble coping with her own alcohol intake, having a child very difficult to care for will compound her problems.

A question often asked concerns the effect of maternal drinking on lactation. When a lactating woman drinks, the alcohol distributes itself throughout the body water component, including her breast milk. The alcohol also stimulates the production of oxytocin, which tends to inhibit the letting down of her milk. This may serve to protect the baby from the toxic effects of alcohol, although it may have a negative effect on nutritional status if continued on a regular basis in the absence of food supplements. There is anecdotal evidence, however, that this protection is not foolproof; pediatricians report receiving calls on New Year's Day from frantic mothers whose breast-fed infants are sleepy and unresponsive, suggesting that they consumed enough of the "spiked" milk to join in the celebration. Moreover, there is at least one case in the literature of a breast-fed infant who developed pseudo-Cushing's disease while his mother consumed a daily ration of eight beers.[22]

Animal research

No review of current research on the fetal alcohol syndrome would be complete without at least a brief mention of the studies being done with animal models. The development of an animal model for FAS has been complicated by the fact that about the only animal besides humans that will voluntarily consume large amounts of alcohol is the miniature swine—not an association that is very flattering! Monkeys can be taught to drink, but, interestingly enough, the first evidence that a monkey is pregnant is often that she stops drinking.

Researchers have attempted to control for alcohol effects on nutrition using animal models. In fact, it is very difficult to do this, because even though alcohol is added to the diet itself, often the animals will refuse to eat as much of that particular diet, and even pair-fed controls will gain less weight and show growth deficiencies compaired with controls fed ad libitum.

Another interesting issue that has been studied in animals but not in humans is the degree to which paternal alcohol consumption affects the fetus. This work has recently been summarized by Anderson.[23] Offspring of alcohol-treated sires tended to have behavioral deficits, higher perinatal mortality, lower birth weights, smaller litter sizes (due to resorptions, similar to abortions in the human), more heritable defects, an increased incidence of stillbirths, and a decreased viability of females compared to males.

Summary

To summarize, it should be clear from this brief review that, despite the methodologic difficulties involved in studying fetal alcohol effects, this is an active and significant area of research. I have concentrated on the results of epidemiologic studies, particularly as they relate to clinical practice, recognizing that much of the ongoing basic research on metabolism, biochemistry, and behavioral teratology could not be described. Hopefully, future reviews will be able to report breakthroughs in some of these areas that will clarify the nature of alcohol's effect on the fetus. Meanwhile, the available evidence indicates that heavy drinking during pregnancy is a significant risk factor during pregnancy, particularly in alcoholic women.

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Alcohol Problems in Women

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During the early days of ancient Rome, the law forbade any drinking of alcoholic beverages by women. History records instances of death by stoning or starvation for this crime.[1] It is of interest to note that the prohibitions against drinking and adultery by women were linked in that law. Both strongly negative feelings toward women's drinking and the feeling that such behavior is somehow related to lewdness persist in Western society today in the form of the triple stigma endured by alcoholic women: they are "drunks," they are "drunken women" (worse than drunken men), and they are unjustly thought to be "fallen women."

In spite of the strong feelings engendered by women's drinking in American society, relatively little clinical or research attention was focused on alcoholism in women until the mid-1970s. Nearly all of the early research on the physiology of alcohol and the disease alcoholism was done on male subjects, with the general assumption that such findings applied to women as well.

Recent research and clinical findings cast doubt on that assumption, pointing to differences that have important implications for prevention and treatment of alcohol-related problems among women. I will review a few of these findings today in the hope that this presentation will deepen your awareness of the special problems of your female patients and perhaps inspire some new studies or rethought treatment approaches.

Factors causing or exacerbating alcohol problems

Physiologic factors. Recent work by Jones and Jones[2] has shown that women given a standard dose of alcohol per body weight under standard conditions reach higher and more variable peak blood alcohol levels than matched male controls. These peaks tend to be higher in the premenstrual phase. Women taking exogenous hormones, such as birth control preparations, tend to clear alcohol more slowly from the blood. These factors, together with the fact that the average woman weighs many pounds less than the average man, should tell us that many alcoholic women will drink far less than the quantities we are used to seeing in the average middle-aged alcoholic male. For example, the Rand Corporation study of 11,536 male and 2,598 female patients admitted to federally funded alcoholism treatment units found an average daily intake of 8.2 oz of absolute alcohol for men and 4.5 oz for women.[3] A 1978 study of treatment outcome in 17 inpatient alcoholism rehabilitation units in New York State found average preadmission intakes of 10.8 oz (men) and 8.6 oz (women) of absolute alcohol.[4] Many diagnostic schemes and epidemiologic studies, however, do not acknowledge this difference, but rather use the same cutoff points for male and female drinking.[5]

Much attention has been given to evidence for a genetic predisposition for alcoholism (alcohol dependence) based on the carefully conducted studies of adoptees in Denmark of Goodwin and his colleagues.[6,7] It is seldom pointed out, however, that his positive findings were in males. The parallel study in females led to inconclusive results, due perhaps to the low rate of female alcoholism in Denmark which led to small numbers of subjects, or perhaps to a greater influence of environmental factors in women's alcoholism.[8]

Psychologic factors. Some of the many psychologic factors postulated to play a role in the development of alcoholism are the same for both sexes, for example: unmet dependency, tension relief, and low self-esteem. Others, such as the role of alcohol in increasing fantasies of power, are limited to the male.[9] This power theory originated in the finding that both alcoholic and nonalcoholic men tended to produce increasingly power-oriented responses to the Thematic Aperception Test (TAT) as they consumed alcohol. Similar studies in women showed the emergence of increasingly nurturing and "womanly" themes rather than power.[10] These findings led to the formulation of a theory of sex role conflict as a factor in female alcoholism. This theory was recently reviewed by Beckman[11] who studied sex role conflict in 120 alcoholic women compared with control groups of normal women and women in treatment for other nonpsychotic psychiatric disorders. She concluded that the pattern of conscious femininity combined with unconscious masculine tendencies might play a role in some cases of female alcoholism. (The pattern was found in 23% of these women in contrast with 15% of normal and 16% of treatment controls.) On the other hand, 66% of the alcoholic women, 71% of the normal women, and 72% of the treatment controls scored in the feminine ranges at both conscious and unconscious levels.

I personally doubt that any single psychologic conflict will be found to underlie all alcoholism, just as no single "alcoholic personality" type can be shown

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* *By invitation.*

to exist. The few longitudinal studies available in the literature that report psychologic measurements or drinking patterns of subjects before the onset of drinking problems and follow them for many years deal mainly with all-male groups. Those that include both men and women show marked sex differences.[12–14] Although it is difficult to summarize these results simply, it would seem that women who have generally low self-esteem in adolescence and/or drink to enhance their social competence are a higher-risk group.

Social factors. It seems an obvious truth from general experience that men and women drink differently in American society. Although drinking patterns of boys and girls at the junior high and high school levels are becoming more similar,[15] there are still important differences. Boys, for example, drink both in all-male and mixed-sex groups, while girls tend to drink predominantly in mixed-sex groups.

Societal factors which increase stress on women, such as limited job opportunity and lower pay, the role of single parent, dual responsibility for job and household (even when both spouses are present in a household), sex discrimination in renting, borrowing, and other financial transactions, and general undervaluation of "women's work" must also be understood as important considerations in the rehabilitation of alcoholic women.[16]

Factors important in diagnosis and treatment

Diagnosis. Although diagnostic schemes such as the National Council on Alcoholism criteria[17] and DSM III[18] are meant to apply to both sexes, as mentioned earlier, criteria based on quantity of alcohol ingested must differ for men and women. For example, DSM III mentions "occasional consumption of a quart of spirits." This is less likely to be valid for a woman.

Outreach. The most effective intervention programs now available for alcohol problems, such as drinking-driver programs, public intoxicant services, and employee assistance programs, are, with few exceptions, far more effective in reaching the male than the female problem drinker.[5] Male patients in treatment most often report their presenting problems as those on the job or with the law, while women cite problems with health and family. Thus the physician is in a key position for diagnosis and intervention with this group, as are other health and family-service professionals, including attorneys.

Clinical characteristics. Various reviews of the literature (eg, Beckman[19] and Gomberg[20]) have shown that:

1. The alcoholic woman starts both drinking and alcohol abuse later than the man but enters treatment at the same average age and stage of disease. Therefore the disease develops more rapidly, or is "telescoped."
2. Women more often date the onset of their alcohol abuse to reaction to a specific life event.
3. Women more often report psychiatric symptoms, particularly depression, previous psychiatric treatment, and previous suicide attempts. Classification of alcoholics into primary (no antecedent psychiatric diagnosis) and secondary (diagnosable psychiatric illness before the onset of alcohol abuse or during a prolonged period of abstinence) types reveals a marked gender difference. Although primary alcoholism is the most common type in both sexes, the predominant secondary type in men is associated with sociopathy while in women it is associated with depressive illness.[21]
4. Women entering treatment more often report use and abuse of sedatives, minor tranquillizers, and amphetamines, mostly iatrogenic in origin.
5. Alcoholic women are often involved in marriages or relationships with alcoholic men.
6. Alcoholic women are often the victims of domestic violence.
7. Alcoholic women are more likely to drink alone than are men.
8. Families often "protect" the alcoholic woman, thereby preventing appropriate intervention.
9. Of course, the fetal alcohol syndrome and other alcohol-related birth defects are a special problem for alcoholic women. However other emotional problems, child abuse, and child neglect may be seen as often in their offspring as among the children of alcoholic fathers.
10. Lesbian women may be at especially high risk for alcohol problems.

Factors in treatment. Considering the foregoing, it is important to pay attention to several factors in treating alcoholic women:

1. Many women will need help with child care in order to enter treatment at all.
2. In all cases, try to involve the family in as much as possible. Evaluate the patient's children for alcohol-related birth defects and other problems. Husbands of alcoholic women often need a great deal of help as well. Refer family members to Al-Anon and Alateen.
3. Look carefully for prescription drug abuse. Educate the patient and family about the dangers of such drugs.
4. To improve self esteem and improve awareness of society, such auxilliary treatment modalities as assertiveness training and women's discussion groups may be helpful. Vocational rehabilitation, legal aid, help in budgeting, and other forms of assistance may also be required.
5. Recovered alcoholic women make excellent role models for the woman in treatment. Most specialized alcoholism treatment programs and the self-help groups (Alcoholics Anonymous and Women for Sobriety) offer opportunities for the recovering woman to have meaningful interaction with such role models. There is a difference of opinion about whether or not all-female therapy groups and community residences are more effective than mixed-gender groups and facilities in the treatment of alcoholic women. In either type of setting, it is important that all staff members be sensitive to the special needs of women, and that female recovering-alcoholic role models be available.

With appropriate treatment the prognosis for recovery is as good in the alcoholic woman as in the man.[22] Certainly the satisfaction for the physician who participates in the recovery of such women and their families is one of the greatest rewards in medicine.

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Fetal Alcohol Syndrome

Other effects of alcohol on pregnancy

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FAS (fetal alcohol syndrome) is now a well-recognized syndrome, and the following criteria have been suggested by the Fetal Alcohol Syndrome Study Group of the Research Society on Alcoholism.[1]

1. Prenatal and/or postnatal growth retardation (weight, length, and/or head circumference below the tenth percentile when corrected for gestational age).
2. Central nervous system involvement (signs of neurologic abnormality, developmental delay, or intellectual impairment).
3. Characteristic facial dysmorphology with at least two of these three signs:
   a. Microcephaly—head circumference below third percentile.
   b. Microphthalmia and/or short palpebral fissures.
   c. Poorly developed philtrum, thin upper lip, and/or flattening of maxillary area.

It is estimated that for every infant born with diagnosed FAS, there is one infant with partial manifestations of FAS. In spite of identification of these abnormalities because of maternal ingestion of alcohol, we know little about the mechanism of action of ingested alcohol resulting in fetal abnormalities or about the degree of pregnancy wastage because of maternal alcohol intake.

Alcohol may act as a teratogen, abortificient, or fetotoxin. Alcohol does not seem to be a direct abortificient since the time of abortion is not directly related to the alcohol ingestion or intoxication. It does not seem to be a specific teratogen because a widespread use of alcohol has not resulted in a significant increase in fetal abnormalities, and the abnormalities are variable. Alcohol seems to be a fetotoxin and shows cumulative effects because of chronic use. It is not known whether alcohol itself is cytotoxic or its metabolites, such as acetaldehyde, are responsible for the damage done. Other substances and chemicals found in alcoholic beverages may also have effects on the growing cells.

It has been shown that alcohol ingestion increased excretion of zinc in the urine resulting in a fall in the plasma level of zinc.[2] Zinc is an essential constituent of many enzymes and this relative deficiency of zinc may be responsible for some of the fetal effects. In the Middle Eastern region, zinc deficiency syndromes involving short stature, limb deformities, anemia, hypogonadism, and central nervous system defects have been identified.[3] Effects of alcoholism on the fetus do not appear to be directly related to nutrition deficiency. In chronic malnutrition, linear growth and brain growth are spared whereas in FAS, reduction of linear growth as well as microcephaly are present in 80% of affected infants.

Risk of spontaneous abortion

FAS is manifested as an effect of maternal alcohol abuse at the terminal end of the spectrum of pregnancy. Increased fetal wastage earlier in pregnancy is another manifestation of fetotoxins such as alcohol. Although no significant increase in first trimester spontaneous abortions is noted, studies by Kline et al[4] and Harlap and Shiono[5] have shown a significant increase in second trimester abortions in women consuming alcohol regularly. Harlap and Shiono[5] studied 32,019 patients and found that the relative risk figures of first trimester abortion were 1.12 in occasional drinkers, 1.15 in women drinking one to two drinks a day, and 1.16 in women drinking over three drinks a day.

In occasional drinkers, the relative risk of spontaneous abortion in the second trimester (as expected) was lower than in the first trimester, the risk figure being 1.03. The risk increased in regular drinkers having one to two drinks per day to 1.98, and in women having over three drinks per day to 3.53. Alcohol, when consumed in moderation, may damage the human fetus, the risk factor being significantly higher in moderate-to-heavy drinkers as compared with nondrinkers or occasional drinkers.

Kline et al[4] studied incidence of alcohol consumption in 616 patients who spontaneously aborted. They used 632 patients who continued pregnancy beyond 28 weeks as control patients. Drinking histories of these patients revealed that 62% of the study group and 35% of the control group continued their preconception drinking pattern during pregnancy. Of the spontaneous-abortion group, 17% reported drinking twice or more per week whereas 8% of the control group reported such drinking patterns. The adjusted-odds ratio for abortion in women drinking two to six days per week and women drinking daily was 2.33 and 2.58, respectively. They also found that the adjusted-odds ratio for abortion for wine consumption, independent of beer and liquor, was higher—3.15. Similar figures for beer and liquor were 1.58 and 2.26, respectively. In the study group, the beer drinkers consumed more absolute

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alcohol than the control-group beer drinkers. No such difference was found in the wine and liquor drinkers in these two groups of patients. The patients who aborted were exposed to at least 1 oz of absolute alcohol per exposure.

Kline et al[4] thought that women drinking twice or more per day had a 25% chance of undergoing spontaneous abortion. Chromosomal analysis of the abortuses showed that drinking during pregnancy increased the risk of aborting euploid fetuses and not aneuploid fetuses. Their conclusion was that the reproductive process is highly sensitive to alcohol, and spontaneous abortion is the most frequent manifestation of this sensitivity. The infants with FAS may then be the rare survivors among conceptions exposed to alcohol during pregnancy.

Other associated factors that increased the risk of second trimester spontaneous abortion were increasing maternal age, increasing parity, previous history of spontaneous abortions, and a history of induced abortions in nulliparous patients. The risk was also found to be higher in black patients compared with white patients. Harlap and Shiono[5] also found that when effects of smoking and drinking alcohol were considered, either factor increased the risk of spontaneous abortion independent of the other factor. If the relative risk of abortion in women who did not smoke or drink was 1, the risk factor is increased to 3.18 in nonsmoking women who had more than one drink per day. The relative risk figures for women who smoked less than 1.5 packs of cigarettes per day and had no drinks and women smoking 1.5 packs per day and consuming more than one drink per day were 1.05 and 2.24, respectively. The risk factor rose to 3.29 in women who smoked more than 1.5 packs per day and consumed more than one drink per day. The risk factors were found to be significantly higher in women having more than one drink per day.

Reducing risks

During interviews of prenatal patients, a significant number of patients gave a history of completely avoiding alcoholic drinks or significantly cutting down alcohol consumption after diagnosis of pregnancy was made. Most women do not realize they may be pregnant until two to three weeks after the missed period, and the embryo is already five to six weeks of gestational age at that point. The later the pregnancy is diagnosed, the higher the chances of exposure of the embryo to various toxins during the critical period of organogenesis. Hanson et al[6] studied 163 infants born to mothers who were exposed to at least 1 oz of alcohol per day or reported intoxication during pregnancy; 11 of these infants showed signs of prenatal exposure to alcohol. Only two of these 11 infants were born to chronic alcohol abusers. Seven infants (with lesser alterations of growth) were born to women who reported drinking an average of 1 oz or more alcohol per day in the month prior to recognition of pregnancy. The period immediately prior to and after conception seems to be the time when the conceptus is the most susceptible to effects of alcohol.

In addition to FAS, alcohol is associated with some other complications of pregnancy. Ouellette et al[7] reported a much higher incidence of prematurity—17% in heavy drinkers compared with 5% in moderate and 3% in nondrinkers. Incidence of postmaturity was found to be higher in heavy drinkers—20% as compared with 8% to 9% in the other population in the study. Intrauterine growth retardation was found in 27% of heavy drinkers compared with 7% to 8% in nondrinkers. Congenital anomalies were present in 32% of heavy drinkers compared with 9% and 14% in nondrinkers and moderate drinkers respectively. Sokol et al[8] have reported higher risks of premature rupture of membranes, infections, tetanic uterine contractions, abruptio placenta, meconium staining, and precipitate delivery.

History taking is extremely important in female patients, not only during pregnancy but during the entire reproductive period of life. Simple introductory statements such as "I need information regarding your medical problems as well as your life-style to plan the care for your pregnancy (or your gynecologic problem)," suffice to assure the patient that the interviewer is not asking questions regarding her private life without reason. The interviewer must refrain from making any judgmental remarks regarding the patient's life-style during the interview, because then the patient will withhold information. Rosett et al[9] developed a ten-question drinking-history format and this questionnaire can be very easily incorporated in the patient's medicosocial history. The questions are as follows:

Beer: How many times per week?_____
How many cans each time?_____
Ever drink more?_____
Wine: How many times per week?_____
How many glasses each time?_____
Ever drink more?_____
Liquor: How many times per week?_____
How many drinks each time:_____
Ever drink more?_____
Has your drinking changed during the past year?

The problem of alcoholism or drug abuse should be discussed at the end of the complete interview and physical examination. The discussion should be supported by facts and figures available from literature. The problem of alcoholism and its effects on pregnancy can be cured only by proper counseling and changing behavior patterns of the patients since disulfiram is not advisable for treatment of alcoholism during pregnancy. The use of disulfiram during pregnancy has been reported to be associated with spontaneous abortion[10] and fetal abnormalities[11] such as club feet, reduction limb deformity, and VACTERL syndrome, with radial aplasia, vertebral fusion, and tracheoesophageal fistula.

Accurate history-taking, adequate counseling, thorough follow-up of the patient accompanied by the use of newer fetal monitoring techniques such as serial ultrasound examinations for fetal growth assessment, are essential to reduce pregnancy wastage and the ill effects of alcohol on the unborn fetus.

Questions and answers

Q: Have there been any instances of identifying fetal alcohol syndrome in utero, especially early enough to perform an abortion?

A: We have capabilities of identifying a fetus with conditions that are incompatible with life (eg, anencephalus or Potter's syndrome) early enough to perform an elective termination of pregnancy, but I am not aware of any patient in our region in whom such fetal defects were caused by maternal alcoholism. Neural tube defects can be associated with maternal alcoholism, and these can be identified between 16 and 18 weeks' gestation, when the patient is well within legal limits for obtaining termination of pregnancy.

Q: Comment on use of intravenous alcohol drip to prevent premature labor.

A: Premature labor is defined as onset of labor prior to 37 weeks of gestation. Intravenous alcohol drip has been the most commonly used medication to stop premature labor. The drip is used for 10 to 12 hours to stop uterine contractions. When problems of prematurity such as severe respiratory distress which can lead to permanent deficiencies in the baby are considered, it seems reasonable to expose the mother and the fetus in utero to alcohol for short periods of time to prevent premature birth. Other medications such as ritodrine hydrochloride and terbutaline sulfate are available now for preventing premature delivery. These medications also have side reactions and rare complications such as maternal heart failure and must be used with careful maternal and fetal monitoring. These medications have not been shown to have detrimental effects on the fetus which could result in permanent damage. A 9% ethanol solution is used for the intravenous alcohol drip. Rapid infusion is undertaken in the first two hours after adjusting the dose to the patient's weight. The rate of infusion is reduced after two hours to one-tenth the initial loading dose and the intravenous drip is continued for 10 to 12 hours. Fetal organogenesis is already completed in late second and early third trimester of pregnancy so such limited exposure to the alcohol should not cause fetal alcohol syndrome.

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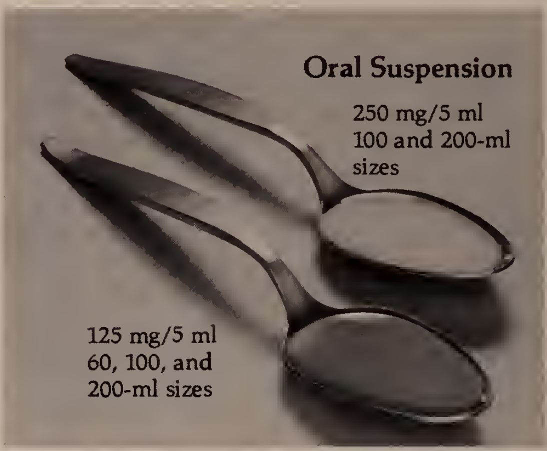

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Electrocardiograms of the Month

Montefiore Hospital and Medical Center
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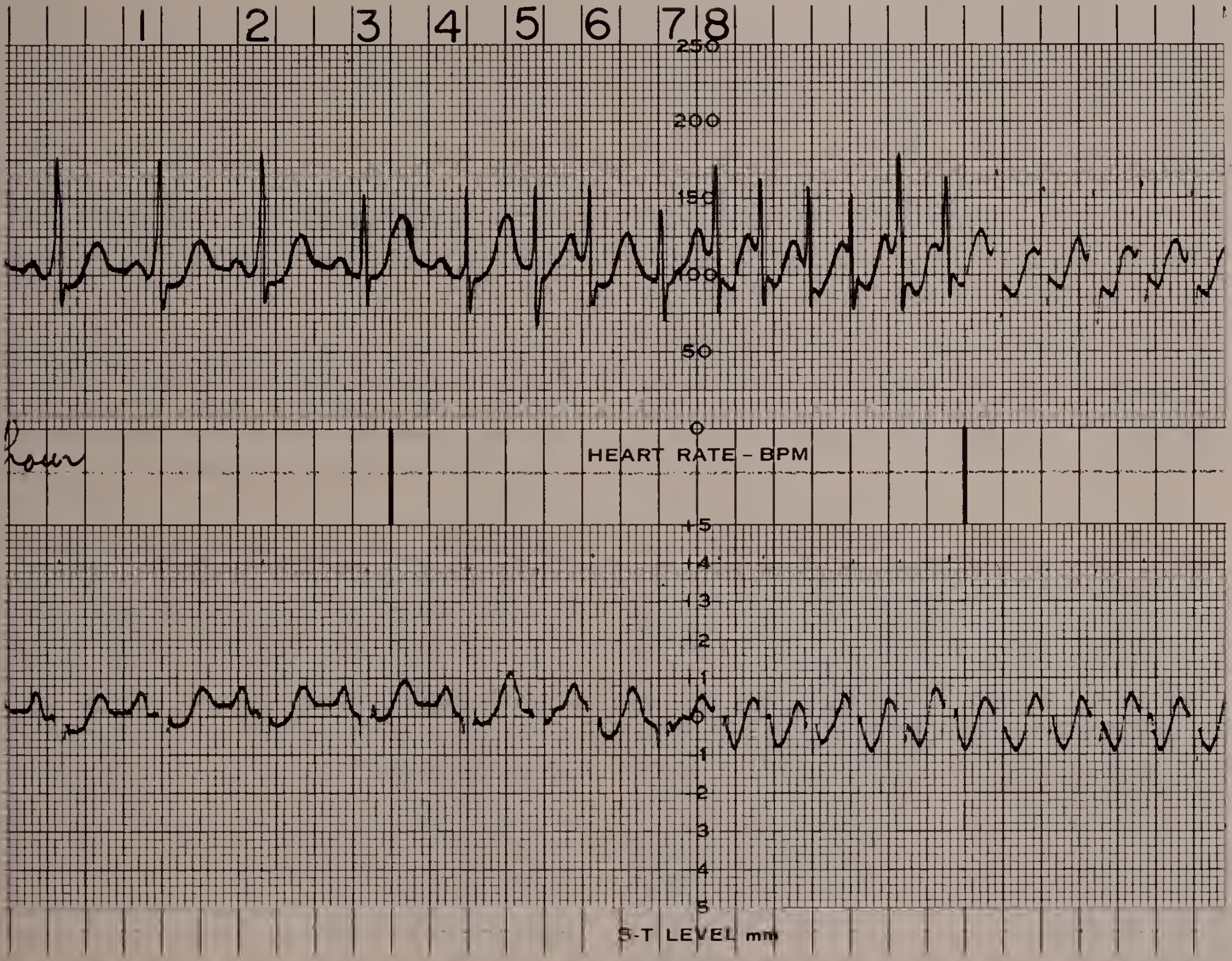
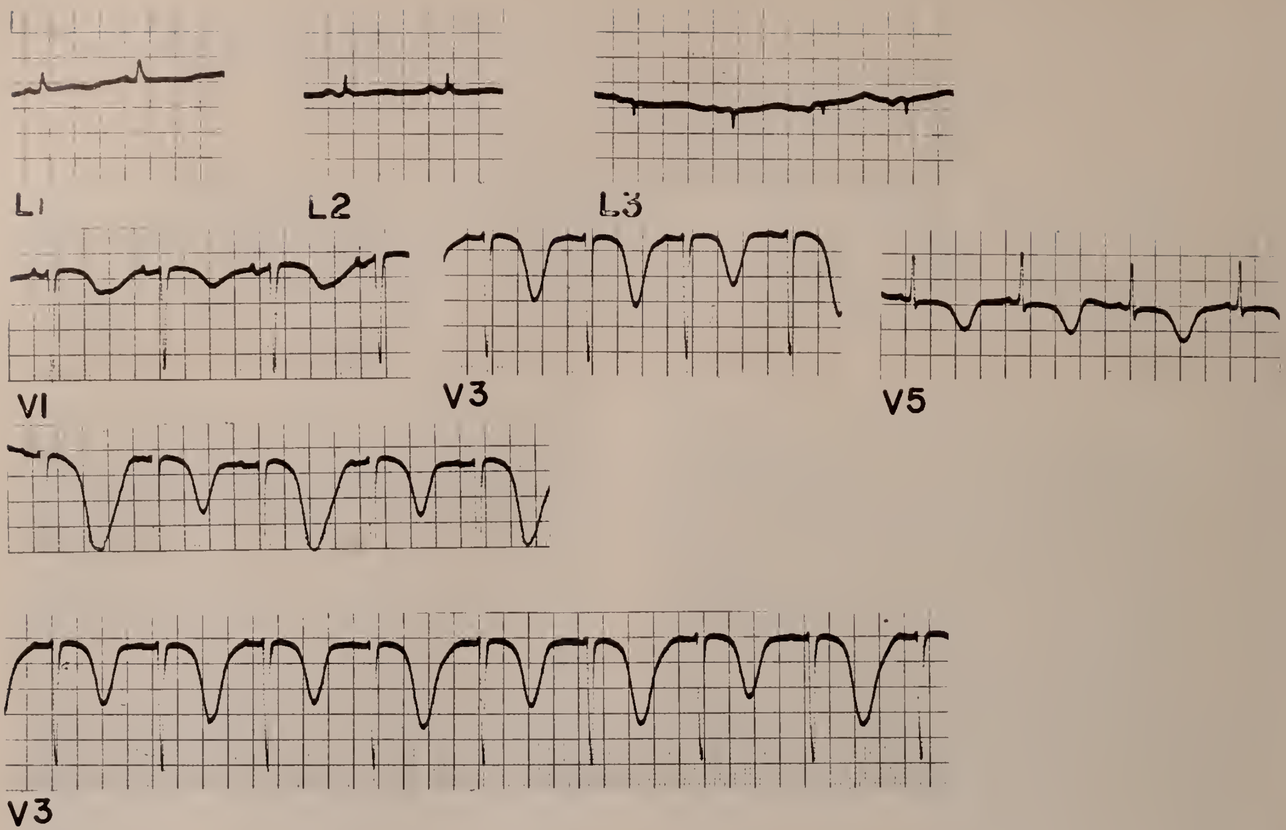


QUESTION 341. A Holter monitor recording was obtained from a 37-year-old man who complained of palpitations. A representative strip is shown. What is the rhythm?



QUESTION 342. A 74-year-old man was admitted in acute pulmonary edema. He shortly thereafter developed marked ventricular irritability with multiple and multifocal ventricular premature depolarizations. Intravenous procainamide was administered. Several moments later this electrocardiogram was obtained. What is the interpretation?

Electro-
cardiograms
of the Month

ELUCIDATION

Answer 341. The first four beats are sinus tachycardia at a rate of 112/min. There is slight variation in the QRS configuration. Beat 5 is an atrial premature depolarization followed by an atrial tachycardia, slightly irregular, at a rate of approximately 180/min. Following QRS 8 the rate speeds up to a rate of 240 to 250/min. It is slightly irregular. The ST segment is depressed. The QRS complexes are unchanged. Atrial activity is not clearly seen but the baseline appears to undulate. The rhythm is supraventricular tachycardia.

A supraventricular tachycardia at this rate is unusual. Paroxysmal atrial tachycardia usually has a maximum rate of 180 to 200/min. Atrial flutter usually has a ventricular rate of 125 to 175/min with 2 : 1 block; the atrial rate is 250 to 350.

In this case the rhythm is probably atrial flutter with 1 : 1 conduction, usually seen in patients with a bypass tract as in Wolff-Parkinson-White syndrome.

Answer 342. The rhythm is regular sinus. There is a negative T wave in lead I. The T wave is deeply inverted in V_1 to V_5. The shape of the T wave alternates in every other beat, particularly prominent in V_1 to V_3. The QT interval measures 0.58 sec and 0.36 sec in alternate beats.

These T wave and QT segment changes are probably a toxic reaction to procainamide. Shortly after the tracing, the patient developed ventricular fibrillation from which he was successfully defibrillated. On return to sinus rhythm, the T and ST segment changes disappeared.

Isolated T wave alternans has also been described in patients with severe myocardial disease especially during tachycardia.

Subcutaneous Injection of Mercury Mimicking Nodular Melanoma

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Self-administration of metallic mercury by parenteral routes has been described in a variety of circumstances often involving psychiatrically disturbed patients.[1,2] We wish to describe a case in which the subcutaneous injection of metallic mercury appeared as a cutaneous lesion mimicking nodular melanoma in a patient not suspected of any psychiatric disorder.

Case report

A 24-year-old white male laborer in previously good health noted a small swelling in the antecubital fossa of his left arm two months prior to admission. He disregarded this but discovered one month later that the lesion bled easily and failed to heal. He, therefore, sought medical care from his primary physician. He had no history of toxin exposure, animal or insect bites, or recent illnesses. Findings on his medical history were reported as negative. He worked regularly in a warehouse at a manual job.

Findings on physical examination revealed a well-developed young adult male in no distress. Findings on head, eyes, ears, nose, throat, and neck examinations were normal. The chest and cardiac examination results were unremarkable as was the abdominal examination findings. There was no cervical, supraclavicular, or axillary lymphadenopathy. On the left arm was a 2 cm × 3 cm black, ulcerated, tender lesion 5 cm below the antecubital fossa. In addition, there were several small, firm subcutaneous nodules palpable in the epitrochlear area of the left medial forearm. Findings on neurologic examination were completely normal; hemoglobin was 16.2; BUN was 18; and the serum creatinine was 1.0. Urinalysis, electrocardiogram and serum chemistry profile results were all within normal limits.

The patient's primary physician had referred him to an oncologist who concurred with the preliminary diagnosis of nodular melanoma, stage III, probably Clark's level V. The patient was then referred for surgical evaluation, to include tissue diagnosis and staging. Findings on a chest roentgenogram revealed the presence of innumerable punctate metallic densities in the lung fields initially thought to be artifactual (Fig 1).

Incisional biopsy of the primary lesion was conducted under local anesthetic. A frozen section of the specimen revealed granulomata with metallic mercury foreign bodies. This was followed by excision of the entire primary lesion with incontinuity dissection of the subcutaneous node-bearing tissue of the epitrochlear fossa. Shiny white matter resembling metallic mercury could be seen in the specimen (Fig 2). Pathologic examination (Fig 3) revealed acute and chronic inflammation with granuloma formation in response to metallic mercury foreign bodies. No tumor was found.

Postoperative radiographs of the pelvis and left arm (Fig 4) showed evidence of systemic embolization. A review of the chest roentgenogram demonstrated fine metallic pulmonary emboli as well as a metallic right venticulogram. In addition, a psychiatric consultation was obtained. Although the patient adamantly denied auto-injection of any foreign substance, further questioning revealed a depressed, paranoid individual with a suspicion of su-

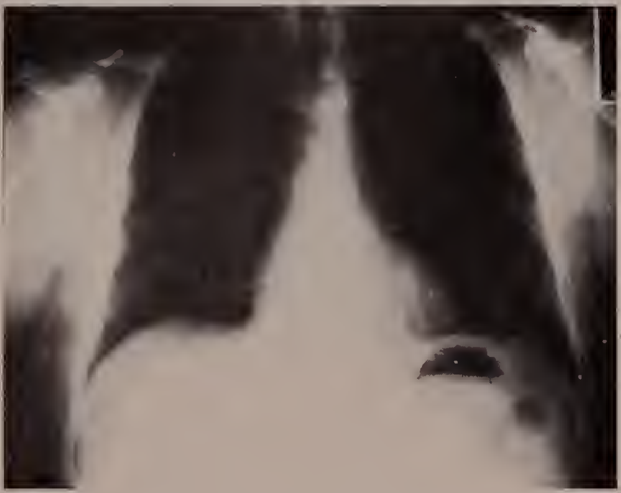

FIGURE 1. Chest roentgenogram depicting fine pulmonary emboli of mercury with metallic right ventriculogram.

icidal tendencies manifested. He admitted to a suicide attempt by pill ingestion several years earlier. In addition, he gained access to syringes from his father, an insulin-dependent diabetic. The patient is currently undergoing inpatient psychiatric counseling and therapy after an uneventful surgical recovery.

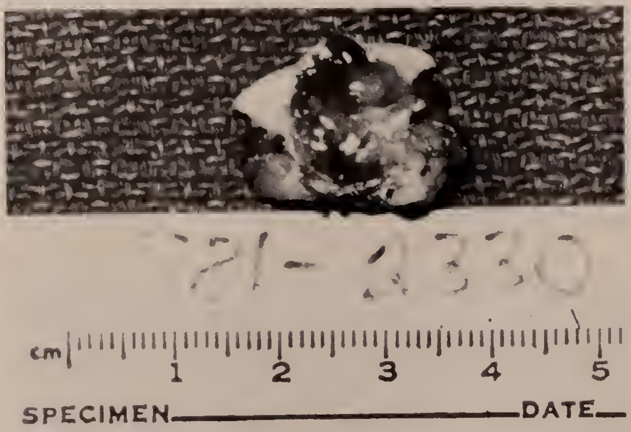

FIGURE 2. Gross specimen, left antecubital fossa skin, and subcutaneous tissue. Note central ulceration.

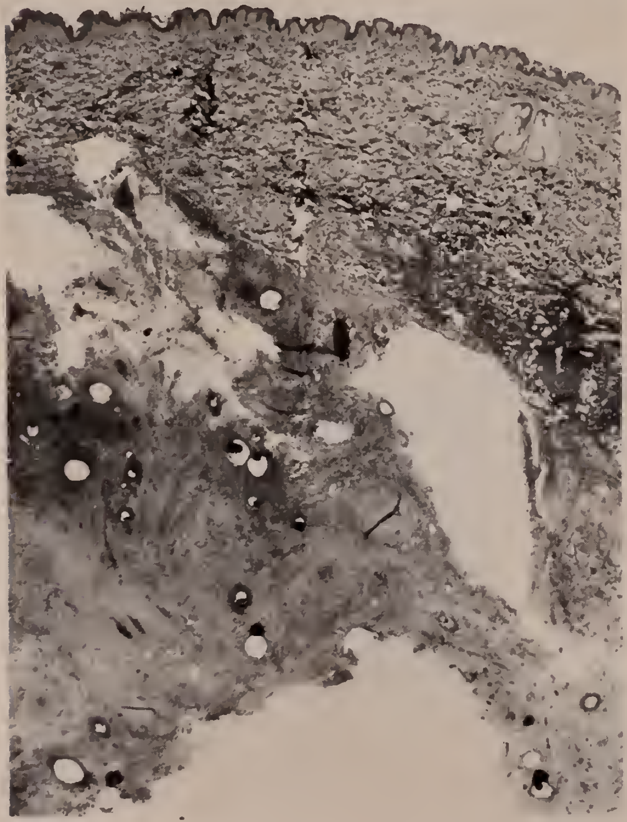

FIGURE 3. Microscopic section of primary lesion shows granulomata with giant cells and mercury droplets (Hematoxylinan eosin stain, original magnification X25).

Comment

Although preoperative evaluation showed no evidence to suggest systemic toxicity from mercury poisoning radiographs, clearly depicted the embolization of fine mercury droplets to distant organs, including lung, heart, and pelvic viscera. It has been frequently demonstrated that parenterally administered metallic mercury migrates from the site of

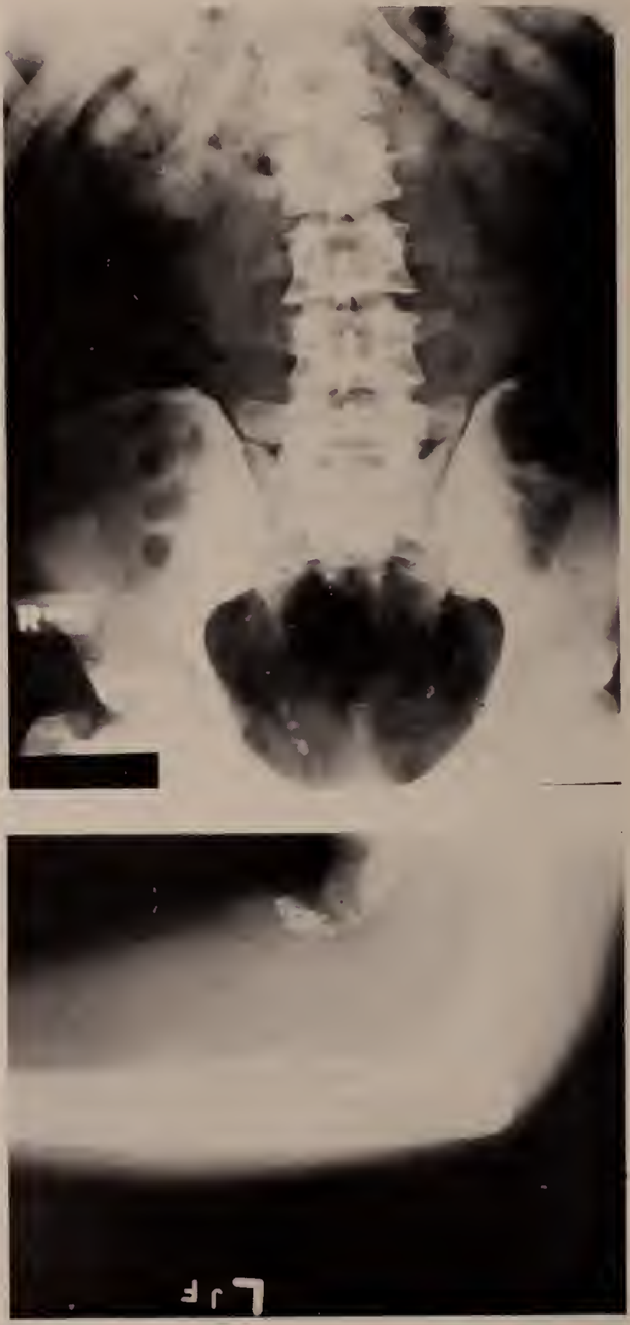

FIGURE 4. Roentgenograms. (Top) Pelvic view showing fine mercury emboli in pelvic viscera. (Bottom) Lateral view of left elbow shows subcutaneous deposits of metallic mercury in fine droplets.

subcutaneous injection.[1–3] However, this is not always associated with mercury intoxication[4,5] as this case illustrates.

The typical lesion of subcutaneously injected metallic mercury involves the formation of granulomata in response to the metallic foreign body. Varying degrees of acute and chronic inflammation are found locally, and these can be suppurative,[3,4] lymphangitic,[2] or necrotic, as in this case. The differential diagnosis of lesions having features resembling these includes the following list of benign and malignant lesions[6]: junctional nevus, compound nevus, intradermal nevus, Spitz nevus (benign juvenile melanoma), halo nevus (Sulton's nevus), blue nevus, seborrheic keratosis, senile hemangioma, dermatofibroma, pyogenic granuloma, pigmented basal cell carcinoma and malignant melanoma.

Where anatomy and cosmetic considerations allow, it is generally agreed that complete surgical excision of the primary lesion and the affected subcutaneous tissue containing mercury is indicated. Often, metallic mercury can be seen on cut section of the excised tissue; emboli to local lymph nodes may be evident on microscopic or gross section.

No specific therapy, other than frequent follow-up examination, is indicated for systemic emboli. It is believed that these are very slowly converted to the metallic oxides and organic compounds of mercury and are then excreted by the kidneys. Determination of 24-hour urinary excretion of mercury (normal adult level up to 10 μg/day) may be performed if systemic toxicity is suspected. Urinary levels of mercury were undetectable in our patient.

Mercury poisoning takes two forms, acute and chronic.[7] In the acute form, absorption of soluble salts, chiefly the bichlorides, or organic mercurials, precipitates local inflammation, abdominal cramps with nausea and vomiting, and is followed by tenesmus and bloody diarrhea, a manifestation of intense enteritis. Mercury produces a diuresis initially, followed by progressive tubular damage leading to anuria and uremia. Chronic mercury poisoning is manifested by sialorrhea, stomatitis, and diarrhea; primary neurologic signs such as tremors of the lips, tongue, and extremities; ataxia and dysarthria; irritability, apprehension, and depression.

Treatment of subacute or chronic mercury poisoning includes the use of N-acetyl-dl-penicillamine, a chelator which facilitates the excretion of mercury ions. British antilewisite (BAL), when administered immediately after acute poisoning, is useful together with adequate intravenous hydration to prevent oliguric renal failure.

Conclusion

Whereas self-administration of metallic mercury by subcutaneous injection is a clinical problem rarely seen, this case represents an atypical manner of presentation. Suspicion of mercury injection can be confirmed by incisional biopsy and by radiographic demonstration of systemic emboli to distant organs. Since autoinjection of mercury nearly always accompanies severe psychiatric disturbance except in a few cases of accidental mercury instillation,[8–11] consultation for psychiatric evaluation is highly recommended.

Summary

Self-administration of metallic mercury usually is seen as inflammatory lesions in psychiatrically disturbed patients or in other bizarre circumstances. We describe an atypical presentation of a patient felt to have a nodular melanoma, based on gross appearance and presence of regional lymphadenopathy. Subsequent surgical pathology and radiographic and psychiatric investigation revealed the source of the patient's lesion to be autoinjection of metallic mercury without signs of systemic toxicity. Radiographic evidence of systemic embolization is depicted and therapeutic measures are described.

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Accidental Pregnancies in Teen-age Children on Dialysis

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In patients with chronic renal failure, both sexual desire and activity are inversely proportional to the severity of uremia. With progressive azotemia, the woman ceases ovulation, menstruation also stops, libido diminishes, and she may be actually repulsed by sex.[1]

However, within four to six months of dialysis treatment a resurgence of sexual desire and reestablishment of ovulation occurs.[1] Without proper counseling this resurgence of sexual desire and ability may lead to unwanted pregnancies, as happened with two of our patients in the last year.

Case reports

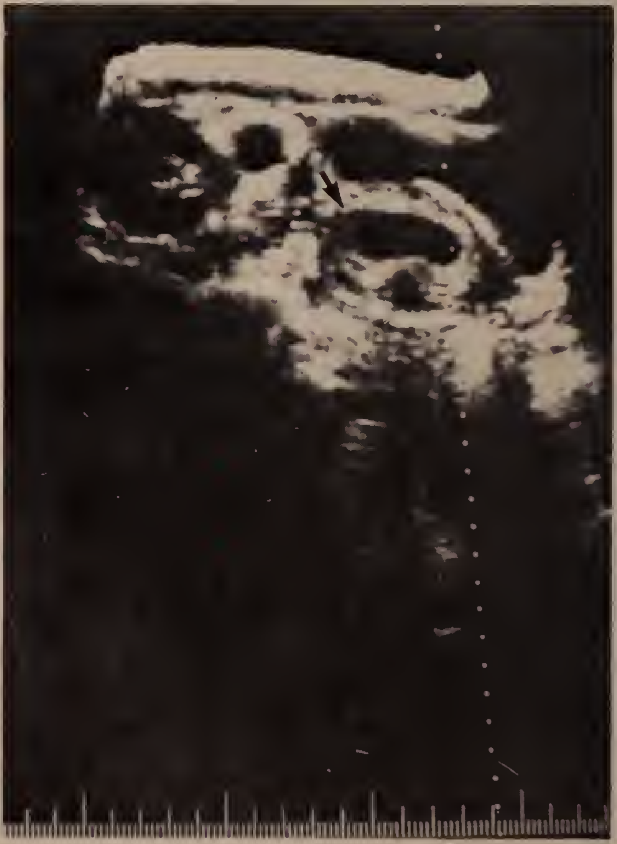
Case 1. A 17-year-old patient was diagnosed as having diffuse proliferative lupus nephritis at age 13, and reached end-stage renal failure at 15 years of age. She began hemodialysis at age 15, and received a cadaver transplant three months later. Six months posttransplant she was noted to be ten weeks pregnant, and elected to have an abortion. She lost her transplant to chronic rejection a year later and went back to hemodialysis. Four months into dialysis she had a miscarriage of an eight-week pregnancy, which was confirmed on curettage.

Case 2. A 16-year-old patient was diagnosed as having nephrotic syndrome with focal segmental sclerosis at age 12. She began hemodialysis at age 15½. After six months on dialysis she received a live, related donor kidney from her mother. One week after transplant a sonogram revealed a ten-week pregnancy (see fig). Prior to the discovery of her pregnancy, she had received 850 mg of prednisone and 900 mg of azathioprine (Immuran). In addition, she had received 6 mrad of total body irradiation, 4 mrad of gonadal irradiation, 200 mrad of radiation to the transplanted kidney, and 2 rads of radiation to the bladder during an iodohippurate sodium I 131 (Hippuran) scan. Because of the uncertainty of the teratogenic effects of the radiation, together with the further radiation hazard likely to accrue from subsequent renal scans, a therapeutic abortion was advised and carried out on the 12th posttransplant day.

Comment

Teen-age pregnancies account for a significant number of the total pregnancies in the United States.[2] However, scant attention has been paid to the problem of pregnancies occurring in teen-age children on dialysis. Two textbooks on pediatric nephrology[3,4] make no reference to the problem of the potential for becoming pregnant while on dialysis.

The extreme rarity of successful pregnancies in persons on dialysis may partly account for the scant reference to this problem in pediatric renal literature. The 1978 report from the European Dialysis and Transplant Association registry records 16 live births among women on dialysis; in four of these conception had occurred before dialysis became necessary.[5] Patients on dialysis often have irregular periods, as



Sonogram showing gestational sac with 10-week fetus (arrow) observed in both our cases and as reported elsewhere.[6] Also, false positive results of urine tests of pregnancy in the presence of albumin have been noted.[7] In addition, the incidence of sterility in dialysis patients is extremely high.[8] Nevertheless, our two cases, occurring within a short period of each other, show that when good control of the uremic state is achieved in relatively healthy teen-agers, a potential for unwanted pregnancy does exist.

Our experience prompted us to institute a regular gynecologic counseling service and surveillance in all our dialysis and transplant adolescent females, and we feel that pediatricians caring for end-stage renal disease patients in hemodialysis centers should be aware of the possibility of an accidental pregnancy in their adolescent females.

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Medical evaluation of sexually abused children

The sexual abuse of children is a growing pediatric concern. The determination and management of sexually abused children requires a heightened awareness of the problem as well as the development of a thorough medicolegal protocol. To make a recommendation in the area of childhood sexual abuse, Rimsza and Niggemann (Maricopa County General Hosp, Phoenix) conducted a retrospective chart review of the records of children and adolescents who had been evaluated for sexual abuse from 1977 to 1980.

The case records of 311 patients <18 years of age were assessed. The patients' ages ranged from 2 months to 17 years (mean age of 9.2 years); 268 (86%) were girls and 43 (14%) were boys. Nearly 80% (234) of the children were assaulted by someone they knew. Of the 131 known assailants, all were male relatives, usually the child's father. In 33 cases when the child confided in a trusted adult—physician, teacher, relative, or minister—about the occasion of sexual assault, appropriate intervention was not forthcoming.

Of the 18% of the children who were assaulted by strangers, the mean age at the time of the assault was 12.2 years. The mean age of victims who knew their assailant was 9.1 years. Multiple sexual assault, which occurred over a time span of 1 week to 9 years, was reported in 93 (30%) of the cases reviewed. Further, in 36 cases, the known sexual assailant was suspected of abusing more than one child. Medical examinations indicated that 21 patients contracted gonorrhea and 7 patients >11 years of age became pregnant as a result of the assault. There was no evidence of physical abnormality in only 23% of the total study population.

When sexual assault is suspected, Rimsza and Niggemann stress that physical trauma, venereal disease, and pregnancy be investigated thoroughly and appropriate medicolegal specimens collected. Because of the number of assailants in this study suspected of sexually abusing more than one child, the authors urge health professionals to try to identify other family members or friends who also may have been victims of sexual abuse. Although many children are afraid to talk about an encounter of sexual abuse, the authors believe it is the health care professional's responsibility to pursue the matter, including obtaining the child's sexual history and types of sexual activities.

Rimsza ME, Niggemann EH: Medical evaluation of sexually abused children: A review of 311 cases. *Pediatrics* 1982; 69: 8–14.

Salmonella Colitis

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Infection with *Salmonella* in humans usually results in one of five clinical manifestations: gastroenteritis, enteric fever, bacteremia, focal infection, or the asymptomatic carrier state. Intestinal infection is concentrated in the lower small bowel, and widespread colitis is rare. Saphra and Winter[1] reviewed 7,779 cases of *Salmonella* infection and found no patients with colitis. In the report of 2,625 patients with salmonellosis by MacCready et al[2] there were no instances of colitis, and Black et al[3] did not mention colitis in their review of unusual aspects of salmonellosis. Case reports have described patients with idiopathic ulcerative colitis complicated by *Salmonella* infection, and a few patients with colitis due to *Salmonella* have been recorded.[4–7] Two recent reports from Great Britain[10] and Yugoslavia[11] provide evidence that colitis in salmonellosis may be more common than previously believed.

The purpose of this report is to describe two patients with *Salmonella* colitis and to compile all reported cases to characterize the presentation and course of this condition.

Case reports

Case 1. A 48-year-old man was previously healthy until he experienced the abrupt onset of crampy lower abdominal pain and bloody diarrhea. After three days of these symptoms he was admitted to the hospital. There was no prior history of gastrointestinal disease. His temperature was 100.4°F, orally, and his pulse rate was 90 and regular. Examination of his abdomen showed active bowel sounds and mild left lower quadrant and left midabdominal tenderness. The remainder of the physical examination was normal. The hematocrit was 56.4% and the white blood cell count was 9,000/mm^3 with a differential count of 33% polymorphonuclear leukocytes, 33% band forms, 26% lymphocytes, 6% atypical lymphocytes, 5% monocytes, and 3% eosinophils. Sigmoidoscopy revealed a hemorrhagic rectal mucosa, particularly severe proximal to 10 cm. There were no ulcerations. Two stool cultures obtained at the time of admission grew *Salmonella enteritidis* serotype *typhimurium.*

The diarrhea and abdominal cramps gradually subsided over the next five days. He received a total of four doses of ampicillin on the third and fourth hospital days. Sigmoidoscopy performed on the third hospital day showed inflamed but improved mucosa. A biopsy taken at 15 cm revealed infiltration of the mucosa with polymorphonuclear leukocytes and plasma cells. Five stool cultures were positive during the first nine days following admission. Subsequent stool cultures were negative. A barium enema with air contrast two weeks after the onset of the illness was normal. His illness lasted eight days, and he has remained entirely well since then.

Case 2. This 40-year-old woman was admitted to the hospital with four days of crampy, lower abdominal pain, fever, and bloody diarrhea. She had no history of gastrointestinal disease. Her temperature was 99.6°F, orally, and her pulse rate was 100 and regular. Physical examination revealed mild lower abdominal tenderness. Sigmoidoscopy showed granular, friable mucosa with multiple bleeding points. Rectal biopsy showed crypt abscesses and infiltration of the mucosa with inflammatory cells. A barium enema disclosed narrowing of the bowel lumen and irregular mucosal spiculations involving the rectum and sigmoid colon. The bowel proximal to the midsigmoid was normal.

Sulfasalazine was administered for presumed idiopathic ulcerative colitis. When stool cultures from admission grew *Salmonella enteritidis* serotype *newport* (resistant to ampicillin), intravenous chloramphenicol was begun and sulfasalazine was discontinued. Her diarrhea gradually subsided over the next week. Low grade fever to 100°F daily persisted for two weeks, then resolved. Repeat sigmoidoscopy on the 15th hospital day showed that the distal 7 cm of rectal mucosa was normal and the mucosa from 7 to 15 cm was granular, but not friable. She received 14 days of intravenous chloramphenicol. Sigmoidoscopies six months and 18 months later gave normal results. The patient has remained entirely well for eight years.

Literature review

In our review the diagnosis of colitis due to *Salmonella* was accepted when four criteria were met: (1) there was no prior history suggestive of inflammatory bowel disease; (2) *Salmonella* was cultured from the stool; (3) there was evidence of colitis by proctoscopy; and (4) the illness resolved completely or the patient has expired. Using these relatively strict criteria allowed us to exclude patients with chronic idiopathic ulcerative colitis whose illness was complicated by salmonellosis. It is possible, but unlikely, that patients fulfilling that criteria had salmonellosis coincident with an initial, acute episode of idiopathic ulcerative colitis which subsequently resolved.

TABLE I. Clinical Features of 17 Patients with *Salmonella* Colitis

Patient No.	Reference	Age	Sex	*S. enteritidis* Serotype or Group	Duration of Symptoms Before Diagnosis	Total Duration of Illness	Antimicrobial Therapy
1	4	54	F	*schottmülleri*	1 d	10 d	Oral paromomycin
2	4	28	F	*heidelberg*	3 wk	4 wk	None
3	4	24	M	Group B	2 wk	3 wk	None
4	4	67	M	Group D	2 d	1 wk	None
5	4	64	F	Group C_2	3 wk	4½ wk	Oral paromomycin
6	5	55	M	*typhimurium*	3 wk	9 wk, then died	Oral kanamycin, Cotrimoxasole, Chloramphenicol
7	5	18	M	*typhimurium*	2 wk	6 wk	Oral kanamycin, Ampicillin
8	6	24	F	*typhimurium*	1 wk	2 wk	Chloramphenicol
9	6	34	F	Group C	3 wk	3 wk	Chloramphenicol
10	7	19	M	*typhimurium*	1 wk	2 wk	Chloramphenicol
11	7	56	M	*enteritidis*	2 wk	3 wk	None
12	7	47	F	Group B	2 wk	3 wk	Chloramphenicol
13	8	39	F	*typhimurium*	4 d	9 d	None
14	9	23	M	Group C	5 d	2 wk	None
15	9	15	F	Group B	10 d	3 wk	None
16	Case 1	48	M	*typhimurium*	3 d	8 d	None
17	Case 2	40	F	*newport*	4 d	18 d	Chloramphenicol

To our knowledge, there are 79 reported cases of *Salmonella* colitis in adults[4–15]; 15 of these cases, plus our two, meet our criteria and are well described. We have excluded the studies by Mandal and Mani[10] and Radsel-Medvescek[11] since these brief reports of mild colitis do not contain enough information to fulfill our criteria; this may bias our description of *Salmonella* colitis toward patients with a more severe form of the disease. Tables I and II show the clinical features of 17 patients with *Salmonella* colitis.

Comment

Patients with *Salmonella* colitis typically appear with approximately 10 days of diarrhea. The duration of symptoms before diagnosis ranges from one day to three weeks (Tables I, II). By contrast, patients with *Salmonella* gastroenteritis are usually symptomatic for five days or less.[1] In the colitic form the bowel movements are grossly bloody in 53% of patients. Proctoscopic findings include hyperemia, granularity, friability, and ulcerations. Rectal biopsy reveals mucosal ulcerations, hemorrhage, and crypt abscesses. The barium enema shows ulceration. These findings are not specific for *Salmonella* colitis, being described in shigellosis and ulcerative colitis, as well. There is no reliable method to distinguish acute idiopathic ulcerative colitis complicated by salmonellosis from *Salmonella* colitis. However, a patient with acute colitis and *Salmonella* in the stool, who has no history of bowel disease and who has symptoms for three weeks or less, is more likely to have *Salmonella* colitis.

The course of the disease is variable. Patient 16 had a self-limited illness lasting one week and patient 6 had a nine-week illness terminating in overwhelming *Salmonella* septicemia and death. These two patients represent the extremes of the spectrum. With the exception of this death, all patients recovered and had no evidence of residual bowel disease. The average duration of illness is three weeks. Complications include toxic megacolon, bleeding, and overwhelming sepsis (Table II).

Salmonella colitis is underdiagnosed because it is not widely recognized and because many patients have mild disease which is self-limited. Mandal and Mani[10] prospectively performed proctoscopy on 23 patients with salmonellosis in Great Britain and found colitis in 21; this supports the observation that colitis is a more common manifestation of salmonellosis than is generally realized.

Immunocompromised patients are at increased risk for *Salmonella* bacteremia compared to the general population.[18,19] Gastric surgery and antibiotic therapy decrease the inoculum size required to produce gastroenteritis, thereby placing these

TABLE II. Selected Features of 17 Patients With *Salmonella* Colitis

Duration of symptoms before diagnosis	10.7 days average
Total duration of illness	3 weeks average
Symptoms	
Diarrhea	17 (100%)
Bloody diarrhea	9 (53%)
Fever	13 (76%)
Abdominal pain	13 (76%)
Complications	
Toxic megacolon	4
Bleeding requiring transfusion	2
Overwhelming *Salmonella* sepsis	1
Barium enema findings (N = 14)	
Normal	4
Signs of colitis involving only left colon	5
Signs of colitis involving entire colon	4
"Skip lesions" (right transverse colon)	1

patients at greater risk for gastroenteritis. However, there is no evidence that these conditions predispose patients to *Salmonella* colitis. Further study is needed to identify the factors that cause some patients to manifest their *Salmonella* infection as severe colitis.

Most patients with *Salmonella* gastroenteritis improve with no specific therapy. Indeed, antibiotics are contraindicated because they prolong fecal excretion of the organism and promote antibiotic resistance.[20,21] Antibiotic therapy may be indicated for gastroenteritis in patients who are immunocompromised[18,19] and in patients with vascular aneurysms.[22] *Salmonella* bacteremia, enteric fever, and focal infection also require antibiotic therapy. *Salmonella* colitis is another possible indication for antimicrobial therapy because of the potential life-threatening complications. Nine of the 17 patients received antibiotics. No prospective trial evaluating antibiotic therapy has been performed, so the role of antibiotics in the treatment of *Salmonella* colitis is unknown. A reasonable approach is to administer antibiotics to a patient with a severe form of colitis and to provide supportive measures without antibiotics for patients who are less ill.

Recognizing colitis as a manifestation of salmonellosis is important for several reasons. Patients with their first episode of apparent idiopathic ulcerative colitis should have multiple stool cultures to exclude *Salmonella* colitis. Dronfield et al[5] described a patient with *Salmonella* colitis who received corticosteroids for presumed ulcerative colitis and died of *Salmonella* septicemia several days later (patient 6). Distinguishing colitis from gastroenteritis in patients with an acute diarrheal illness with *Salmonella* in the stool may change the management of these patients because colitis results in complications that do not occur in gastroenteritis. Finally, patients can be reassured of the self-limited course of *Salmonella* colitis as opposed to the chronic, relapsing course of idiopathic ulcerative colitis.

Summary

Colitis is an unusual manifestation of human infection with *Salmonella.* We report two patients with colitis due to *Salmonella* and compiled all reported cases of this disorder. Typically, patients appear with approximately ten days of diarrhea, which is bloody in 50% of individuals. Results of proctoscopy, rectal biopsy, and barium enema are indistinguishable from those of shigellosis or idiopathic ulcerative colitis. The average duration of illness is three weeks, although the course is variable. Complications include toxic megacolon, bleeding, and overwhelming sepsis. The role of antimicrobial therapy is not well established, but therapy is probably indicated in those patients with life-threatening complications. Recent reports provide evidence that colitis is a more common manifestation of salmonellosis than is generally realized. Distinguishing *Salmonella* colitis from idiopathic ulcerative colitis and from *Salmonella* gastroenteritis is important because the management of these disorders is different.

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Retinal Findings in An Adolescent With Juvenile Pernicious Anemia

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Pernicious anemia is a chronic macrocytic hyperchromic anemia with megaloblastic hyperplasia of the bone marrow.[1-3] It is a rare disorder in childhood and up to 1965, only 25 documented cases were reported in the literature.[4] Megaloblastic anemia can lead to hemorrhagic retinopathy, impairment of visual acuity, and disturbance of color vision, all of which can be reversed by treating the anemia.[5]

Case report

A 19-year-old white woman was admitted to the hospital for progressive blurring of vision associated with generalized fatigue and dull headache. Fatigue has been present for two months and had become more severe during the two days prior to admission. Headaches, present for three weeks, were dull in character, frontal in location, and mild in severity. There had been a progressive loss of vision over a period of four days prior to admission, with a marked decrease on the fourth day to the point where she could no longer read. Similar symptoms had occurred one year before, with generalized malaise, which had subsided over a period of a few days, but with no loss of vision. The patient's father is Greek-Italian, her mother is Anglo-Saxon; a diagnosis of pernicious anemia of the paternal grandmother had been made at the age of 19. There was no history of allergy, drug sensitivity, bleeding from nose, throat, rectum, or skin. Dietary history included an adequate source of vitamins and minerals.

Physical examination disclosed a young female with marked pallor, without evidence of icterus, petechiae, or purpura. Normal sinus rhythm, with a grade II/VI Still's functional cardiac murmur, was heard. No focal neurologic signs were found, and stool guaiac was negative. Pupils were 4 mm, both eyes together (OU), and reacted to direct and consensual light. Vision in right eye (OD) was 20/200+1, and in left eye (OS) 20/400. The anterior segment and lens were normal. Intraocular pressure (IOP) (Schiøtz's tonomoter) was 14 mm Hg OU. Funduscopic examination revealed (1) mild bilateral papilledema with few superficial fiber layer hemorrhages (flame-shaped) at the posterior poles, (2) massive preretinal (subhyaloid) hemorrhages with whitish centers in front of both maculae and surrounded by edema, and (3) several deep round hemorrhages in both eyes (Fig. 1).

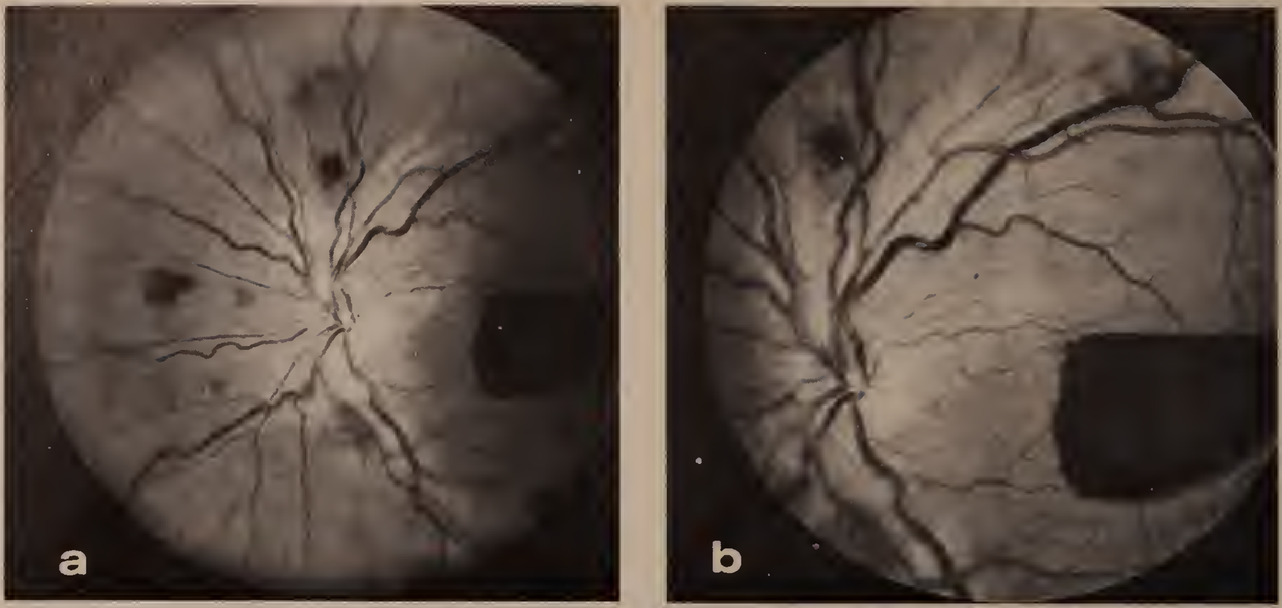
Hematologic studies revealed a hemoglobin of 4.0 g/dL, a red blood cell count of 0.86×10^6 per μL, and a hematocrit of 11.6%. Indexes were as follows: mean corpuscular volume, 129 μm^3; mean corpuscular hemoglobin, 47.7 pg; and mean corpuscular hemoglobin concentration, 32.7%. The white blood cell (WBC) count was $5.4 \times 10^3/\mu$L, with 44% neutrophils and 52% lymphocytes. Reticulocytes were 2.9%, and platelets numbered 31,000. Bone marrow examination revealed marked megaloblastic hyperplasia. Urinalysis showed a specific gravity of 1.012 with a trace of albumin, a pH of 5.0, and 12 to 15 WBC per high powered field. Blood chemistry revealed lactic dehydrogenase greater than 3,000, bilirubin 1.6 mg/dL, and uric acid 7.2 mg/dL, with the remainder of values within normal limits.

Serum iron was 100 μg/dL, with total iron binding capacity 300 μg/dL. Abnormal part I, normal part II of Schilling results were compatible with pernicious anemia, with zero levels of intrinsic factor. The diagnosis of juvenile pernicious anemia was made by Victor Herbert, M.D., Bronx, New York, Veterans Administration Hospital.

Comment

Two basic types of juvenile pernicious anemia exist. In the first type there is a selective lack of intrinsic factor, with preservation of normal acid secretion and normal gastric mucosa histologic evidence. No antibodies to intrinsic factor are present. In the second type, there is deficient intrinsic factor secretion, histamine-fast achlorhydria, associated endocrinopathy (hypoparathyroidism, hypothyroidism, or Addison's disease), and antibodies to gastric parietal cells or intrinsic factor. Other related disorders include Imerslund's syndrome,[3] a genetically determined defect of vitamin B_{12} absorption with persistent proteinuria, and congenital intrinsic factor deficiency, which is correctable with orally administered intrinsic factor.

Retinal hemorrhages and exudates were recognized and described in patients with blood diseases during the latter part of the 19th century. Before the days of modern hematology, Moore described the fundi of nearly 100 patients with blood loss anemia,



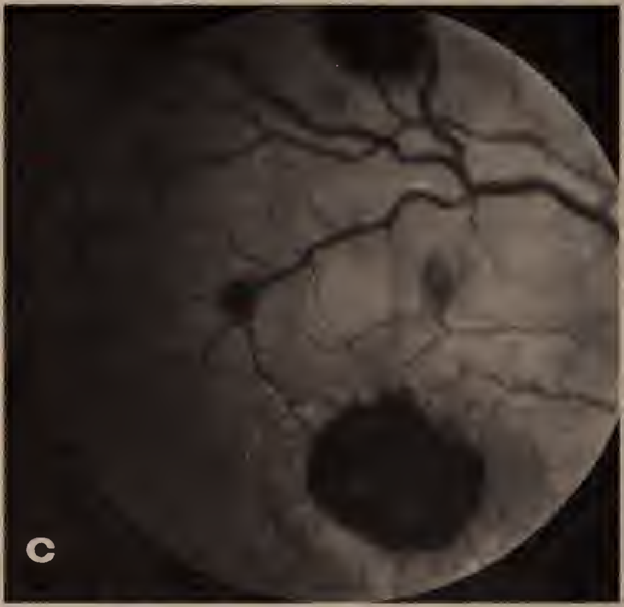


FIGURE 1. Pretreatment. (A and B) OS. Subhyaloid hemorrhage and surrounding edema, deep round hemorrhage (12 o'clock) with mild papilledema and a few flame-shaped hemorrhages in periphery. (C) OD. Note whitish center in lower hemorrhage. (Courtesy, Ozrim Testing, Garden City, New York)

leukemia, polycythemia and "pernicious anemia" (we cannot be sure of this diagnosis because at that time the Schilling test and antibody assays were not available).[6] The retinopathies of the various blood dyscrasias have no pathognomonic features, and identical abnormalities may be seen in leukemia, hemolytic anemia, aplastic anemia, myeloma, and pernicious anemia.[6] However, a characteristic of the hemorrhages seen in pernicious anemia and leukemia is the presence of a white spot in the center of the hemorrhage; this is thought to be due to an aggregation of leukocytes at this site.[7] Retinal changes occur in any of the anemias when the red blood cell concentration falls below 50% of normal.[8] The extent of the retinopathy increases in proportion to the severity of the anemia. The characteristic ophthalmic signs are dilation of retinal veins and hemorrhage. Less frequently, extraretinal hemorrhage, generalized pallor of the fundus and optic disk, retinal edema, retinal exudates, and subconjunctival hemorrhage are observed.[9] There seems to be no single cause of retinal hemorrhage in blood disease; its presence is related to the degree of anemia, but the association with thrombocytopenia is irregular.[5,6] The hemorrhages may be a reflection of vascular damage caused by anemic hypoxia.[6,7] The existence of hemorrhages may also be correlated with the rise in cerebral spinal fluid pressure that occurs in severe anemia.[10]

Studies by Holt and Gordon-Smith[6] on 13 patients with pernicious anemia revealed that seven had retinopathy, of which five had flame-shaped hemorrhages, five had discrete hemorrhages, four had hard exudates, and none had subhyaloid hemorrhages. Tassman[7] and Troncoso[11] both illustrated large round hemorrhages of the deeper layer of the retina and subhyaloid hemorrhages. Studies by McIntyre et al[4] and Spurling et al[12] reported no retinal changes at all in several documented cases of juvenile pernicious anemia.

This patient had progressive loss of vision due to massive subhyaloid macular hemorrhages, with whitish centers. She did not have a pale fundus, but mild papilledema and a few flame-shaped hemorrhages were present. The hemorrhages progressively shrank in size over a period of six months, after vitamin B_{12} therapy was initiated for pernicious anemia. Vision was restored to OD 20/40 + 2 and OS 20/40 + 2 (Fig. 2).

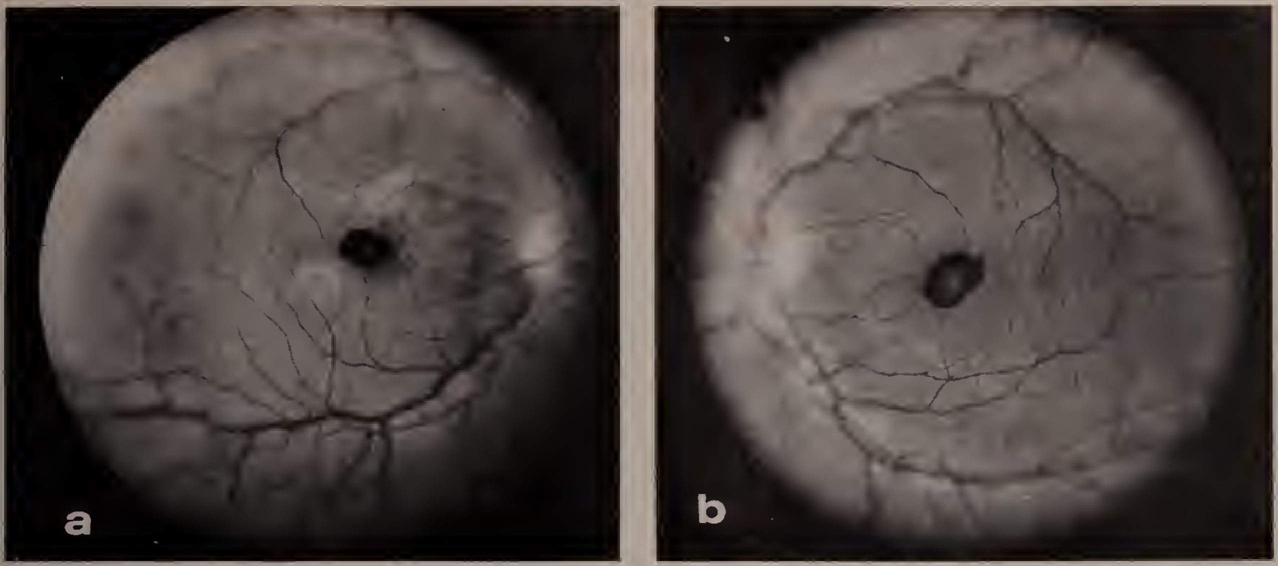


FIGURE 2. Posttreatment. (A) OD. (B) OS. After vitamin B_{12} therapy hemorrhage still located at maculae with surrounding edema. (Courtesy, Ozrim Testing, Garden City, New York)

Summary

A case of documented juvenile pernicious anemia, a relatively rare disease with atypical retinal pathology, has been presented. Current literature stresses the existence of flame-shaped hemorrhages and a pale retina in adult pernicious anemia. There is no mention of retinal pathology in the 25 cases of juvenile pernicious anemia that appear in the literature.[4,12,13] Pernicious anemia should be considered, along with the other blood diseases, in the differential diagnosis of patients who have subhyaloid hemorrhages in the pediatric age group. This case report illustrates that aggressive prompt treatment plays an important role in the regression of the disease process and in the restoration of vision.

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Acknowledgments. The authors wish to thank Victor Herbert, M.D., for his investigation of this case.

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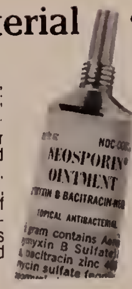

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Vocal Rehabilitation After Prolonged Subglottic Stenosis

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One of the most dreaded complications of cervical trauma is stenosis of the subglottic airway. With loss of the oronasal airway, there is a consequent loss of voice and the need for a permanent tracheostomy. The incidence of stenosis of the trachea is rising with the increasing frequency of high-speed vehicular accidents and the expanding use of tracheostomy or prolonged nasotracheal or orotracheal intubation with cuffed tubes for assisted ventilation.

Management of blunt trauma to the neck, larynx, and trachea should begin with (1) in the event of upper airway obstruction, securement of an airway by tracheostomy and/or careful intubation, (2) early, accurate assessment of the extent, and anatomic site, of injury, and (3) surgical intervention and/or exploration when necessary to determine the extent of injury, with repair of the defect. One must avoid unnecessary delay to avoid chronic functional impairment and stenosis. The best results will be obtained if surgical intervention is instituted in less than seven days after the injury.

The classic signs of laryngotracheal injury, very often depending on the anatomic site of injury, are: upper airway obstruction, distorted endolaryngeal anatomy, cervical emphysema, hoarseness, hemoptysis, mucosal lacerations and hematomas, and loss of normal laryngeal topical anatomy.

Assessment of the patient should commence after the airway is clinically evaluated and secured. Routine comprehensive examination of the head and neck should include indirect laryngoscopy, where possible. X-rays of the neck and chest, with polytomography, may be necessary, as well as laryngography with contrast, xeroradiography,[1] computed tomography,[2] direct laryngoscopy, bronchoscopy, and tracheoscopy.

Acute subglottic injuries will not be discussed here. Treatment consists of elevation of fractured segments with wire fixation and mucosal closure over a stent.

Chronic subglottic stenosis is often the result of delayed or ineffective primary treatment of the acute injury, but may occur even with the best of care. Chronic subglottic stenosis frequently occurs because the tracheal/cricoid injury is unrecognized due to the other associated head trauma and because, frequently, a tracheostomy has been done and the presenting airway problem is clinically bypassed. Oftentimes, the stenosis is due to disruption of the cricoid cartilage and/or the first tracheal ring. Bilateral abductor vocal cord paralysis is found often, but not always.

Mechanism of stenosis

Inflammation of the tracheal mucosa with loss of epithelium, or actual disruption of the mucosa, leads to secondary infection. Ischemia of the mucosa associated with infection leads to perichondritis and cartilage necrosis. Fibroblast ingrowth and proliferation of fibrous tissue and scar contracture cause extensive narrowing or total obliteration of the tracheal lumen.

At least four types of stenosis are found clinically, as described by Shumrick and Paparella[3]: (1) short annula stenosis at the level of the tracheostomy site, the easiest to repair, (2) subcricoid tubular stenosis, usually secondary to trauma, (3) tubular stenosis at the level of the thoracic inlet, frequently due to trauma from cuffed endotracheal tubes, and (4) collapse of the trachea.

Case report

A 34-year-old registered nurse from Jamacia, West Indies, entered the New York Eye and Ear Infirmary because of a cervical injury sustained in a motorcycle accident 15 years previously, which caused a massive and nearly complete subglottic stenosis and total aphonia. Several surgical attempts at repair, in Jamacia, had failed.

Initial examination demonstrated a well-functioning tracheostomy, virtually no voice, and normal-appearing nonmobile vocal cords. The subglottic area was almost totally obstructed by adhesions. Polytomography demonstrated a 3- to 4-cm long, narrowed section of trachea and severe stenosis with a lumen less than 2 ml in diameter (see Figure).

The patient underwent exploration of the neck, with resection of the stenotic segment of trachea, including the site of former tracheostomy, and reconstruction of the trachea by direct reanastomosis; a meticulous submucosal closure of cricoid cartilage to trachea with sutures (Dexon), and a secondary

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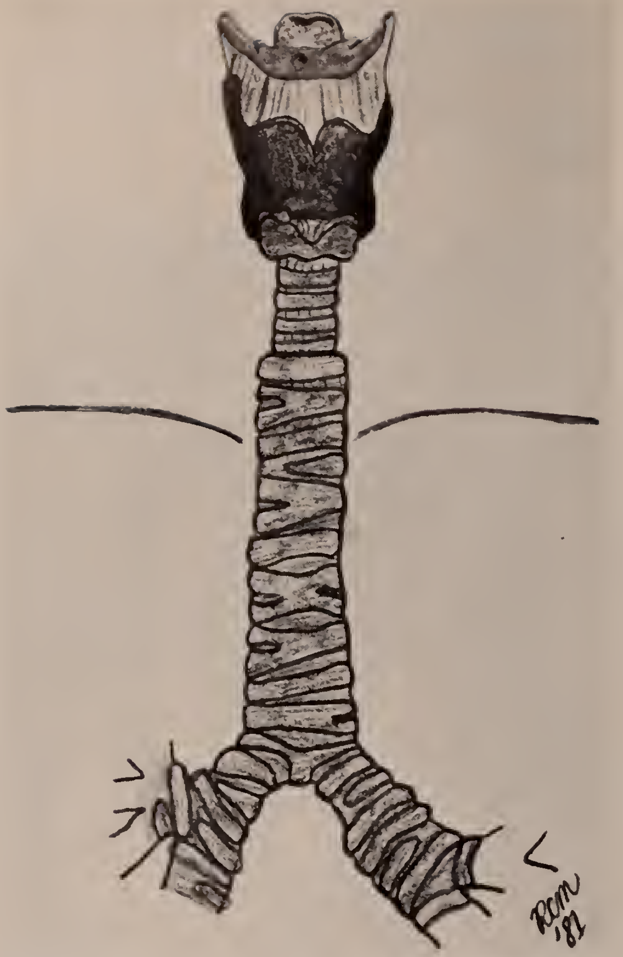
Presented at the Annual Meeting of the International College of Surgeons, San Diego, California, November 19, 1981



Subcricoid tubular stenosis, as noted on exploration of neck.

tracheostomy at what is now the fourth and fifth tracheal ring, was carried out. Decannulation was accomplished on the seventh postoperative day, with subsequent gradual strengthening and voice improvement and a normal oral airway. Postoperative indirect and direct laryngoscopy revealed a normal-appearing larynx with normal mobility of the vocal cords.

The finding of normal vocal cord motion suggests that there was no recurrent nerve injury at the time of trauma and that the apparent absence of motion at the time the patient came to New York was due to the fact that no air flowed through the larynx. This relative immobility is frequently seen when the larynx is totally bypassed.

Treatment

Treatment is difficult at best. Early forms of treatment consisted of bougienage under direct vision. In later years, split-thickness skin grafts were applied following resection of the stenotic region. More recently, various techniques of direct reanastomosis have been described, as well as laser surgery. Staged reconstruction using cervical skin flaps may be necessary for larger or more extensive defects. Recurrence of stenosis is common if there is either tension on the suture line or large mucosal defects.

Presently, the surgical management used most often to repair defects of up to 6 cm is resection of the area of stenosis, including the cricoid cartilage when necessary, with primary thyrotracheal or cricotracheal anastomosis using stainless steel sutures. To avoid tension on the suture lines, the larynx may be released by section of the strap muscles at the level of the thyrohyoid membrane, and the trachea should be adequately mobilized from below. Mobilization of the trachea can increase the length 2 cm, and dropping the larynx can add an additional 3 or 4 cm. Therefore, this technique can be utilized to repair defects as great as 6 cm. Closure may be accomplished over a T-tube stent, which is left in place for approximately six weeks, but may not always be necessary. This procedure may be combined with arytenoidectomy and/or exploration and decompression of the recurrent laryngeal nerve. Speech therapy is often utilized to refine vocal strength and quality.

Comment

The mechanism and pathophysiology of chronic subglottic stenosis and a case utilizing our current mode of therapy have been presented.

Adequate treatment must begin with early recognition of the problem and early assessment of the extent of laryngotracheal injury. Identification and preservation of the recurrent laryngeal nerve are critical for future adequate laryngeal function. Resection of the stenotic tracheal segment and direct reanatomosis without tension, and with meticulous mucosal closure, most commonly over an endolaryngeal and tracheal stent, will offer the patient the greatest opportunity for restoration of normal voice and oral airway.

Summary

Subglottic stenosis is frequently a sequela of blunt trauma to the neck and prolonged endotracheal intubation using cuffed tubes for assisted ventilation. With loss of this subglottic airway, there is a loss of voice as well as the need for a permanent tracheostomy. Significant stenosis can frequently be prevented following cervical trauma by early and accurate assessment of the extent of an anatomic site of injury and early surgical intervention.

Management of subglottic stenosis is difficult, at best, and may consist of bougienage, laser surgery, resection of the stenotic lumen with application of split-thickness skin grafts, or total resection with direct reanatomosis of the tracheal segment. This latter technique may be utilized with defects up to 6 cm, most often over a stent.

A 34-year-old woman with subglottic stenosis

following blunt cervical trauma 15 years prior has been presented and discussed. She was totally without voice, with a permanent tracheostomy. A total restoration of the voice and the return of normal orotracheal respiration was accomplished by resection of a 4-cm stenotic segment of trachea, direct reanastomosis, and closure of the tracheostomy.

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Face flambe

Dining out should not be hazardous to your health, says Bruce M. Achauer, MD, but it can be if you are burned by a flaming drink at a restaurant.

Writing in the April 23/30 *Journal of the American Medical Association*, Achauer and his colleagues at the University of California Medical Center in Irvine report on eight patients treated at the university's burn center for burns sustained from flaming deserts, entrees and drinks.

In one incident, a new item on the menu — cherries jubiliee — was being prepared in the kitchen by inexperienced waiters when flames shot out of the bottle and burned the legs of a waitress. In another incident a waiter, trying to impress his employer with a flamboyant flame as he was carrying an entree of beef brochette through the restaurant, suffered burns over five percent of his body. Of the four patients who were restaurant patrons, two were burned by a spilled flaming cocktail and two others were burned by cherries jubilee, which seems to hold the record for causing accidental burns, at least in this report.

Two of the burn accidents occurred in Newport Beach, Calif., prompting the city's fire department to require that restaurants serving flaming food and drinks have a special permit and that they take special precautions, such as limiting to a maximum of one ounce the amount of fuel used for flaming food and beverages.

The fire department also required that flaming foods and drinks be prepared at the table and that they not be transported while ignited; that there be a wet towel available at the preparation area; and that flames should reach no higher than 20 centimeters (about 8 inches).

Since the requirements have been in effect, Achauer says, there have been no reports of burns from flaming foods.

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IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during INDERAL therapy Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, INDERAL therapy should be immediately withdrawn b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS DURING ANESTHESIA with agents that require catecholamine release for maintenance of adequate cardiac function, beta blockade will impair the desired inotropic effect Therefore, INDERAL should be titrated carefully when administered for arrhythmias occurring during anesthesia

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, INDERAL should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery, since INDERAL is a competitive inhibitor of beta receptor agonists, its effects can be reversed by administration of such agents, *e g* , isoproterenol or levarterenol However, such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS EMPHYSEMA), INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity INDERAL may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

USE IN PREGNANCY The safe use of INDERAL in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if INDERAL is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of INDERAL may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type thrombocytopenic purpura

Central Nervous System lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics

Gastrointestinal nausea vomiting epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol

Clinical Laboratory Test Findings Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

DOSAGE AND ADMINISTRATION

ORAL

HYPERTENSION *Dosage must be individualized* The usual initial dosage is 40 mg INDERAL twice daily, whether used alone or added to a diuretic Dosage may be increased gradually until adequate blood pressure is achieved The usual dosage is 160 to 480 mg per day In some instances a dosage of 640 mg may be required The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks

While twice-daily dosing is effective and can maintain a reduction in blood pressure throughout the day, some patients, especially when lower doses are used, may experience a modest rise in blood pressure toward the end of the 12 hour dosing interval This can be evaluated by measuring blood pressure near the end of the dosing interval to determine whether satisfactory control is being maintained throughout the day If control is not adequate, a larger dose, or 3 times daily therapy may achieve better control

PEDIATRIC DOSAGE

At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use

INTRAVENOUS

The intravenous administration of INDERAL has not been evaluated adequately in the management of hypertensive emergencies

OVERDOSAGE OR EXAGGERATED RESPONSE

IN THE EVENT OF OVERDOSAGE OR EXAGGERATED RESPONSE, THE FOLLOWING MEASURES SHOULD BE EMPLOYED

BRADYCARDIA ADMINISTER ATROPINE (0 25 to 1 0 mg) IF THERE IS NO RESPONSE TO VAGAL BLOCKADE, ADMINISTER ISOPROTERENOL CAUTIOUSLY

CARDIAC FAILURE DIGITALIZATION AND DIURETICS

HYPOTENSION—VASOPRESSORS, *e g* , LEVARTERENOL OR EPINEPHRINE (THERE IS EVIDENCE THAT EPINEPHRINE IS THE DRUG OF CHOICE)

BRONCHOSPASM ADMINISTER ISOPROTERENOL AND AMINOPHYLLINE

HOW SUPPLIED

INDERAL (propranolol hydrochloride)

TABLETS

No 461—Each scored tablet contains 10 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 462 Each scored tablet contains 20 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 464 Each scored tablet contains 40 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

No 468 Each scored tablet contains 80 mg of propranolol hydrochloride, in bottles of 100 and 1,000 Also in unit dose package of 100

INJECTABLE

No 3265—Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10

Reference: 1 Freis, E D Hypertension (Suppl. II) 3 230 (Nov-Dec) 1981 **7997/482**

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New York, N Y 10017

Agenesis of Gallbladder Associated With Mitral Annulus Prolapse

A possibly unreported entity

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Agenesis of the gallbladder is a relatively rare congenital condition never diagnosed preoperatively and occasionally discovered at the operating table. Its approximate incidence is 0.13% in a series of 1,352,000 autopsies.[1] Associated anomalies include cardiac lesions, tracheoesophageal fistula, imperforate anus, polycystic kidney, microcephaly, quadrate lobe, choledocal cyst, and absent or transposed spleen. The most frequently reported cardiovascular anomalies are ventricular septal defect, pulmonary stenosis, and tricuspid atresia.[2,3]

Since the early 1970s, there have been many reports of mitral leaflet prolapse in the echocardiographic literature; to date there have been no reports of abnormal motion of the mitral annulus itself. A review of all the literature pertaining to both these subjects, since echocardiography became a clinical tool, does not disclose papillary muscle, mitral valve, or mitral annulus abnormalities in association with atresia of the gallbladder.

The gallbladder arises from a hepatic diverticulum at approximately the third week of embryologic life. Agenesis of the gallbladder is seen as a failure of this bud to develop.[4,5] In 36 to 64% of cases, symptoms have been present.[2,5–10] The average age of discovery of agenesis is 46.[11,12] There is a preponderance of females to males of approximately two to one.[2,12,13–15] The compilation of symptoms associated with this abnormality parallel those of equivocable gallbladder and biliary tract disease and includes dyspepsia, fatty food intolerance, right upper quadrant pain, bloating, nausea, and vomiting.

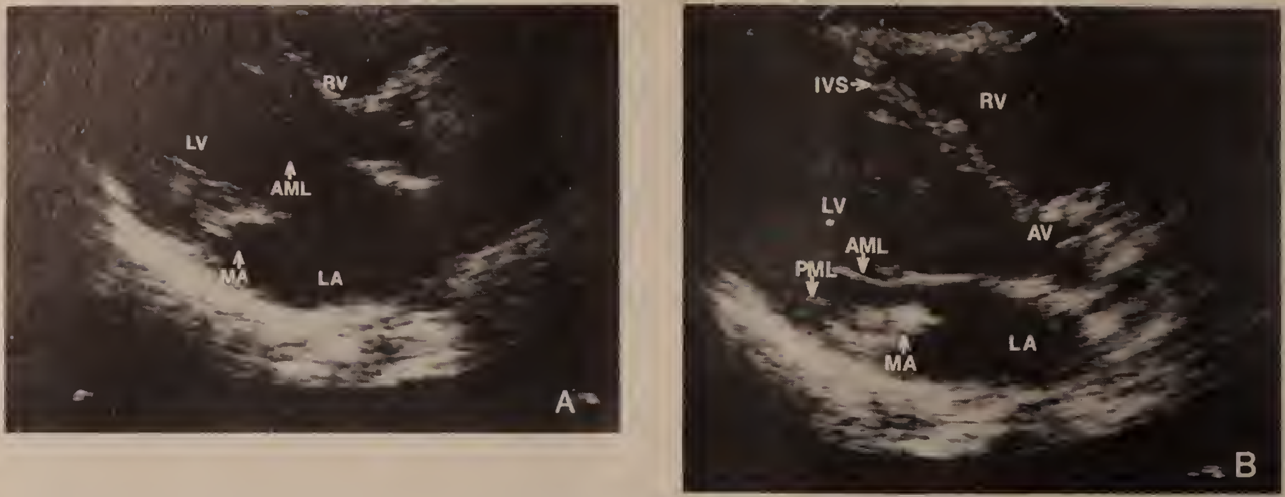
In the normal individual, the anterior cusp of the mitral valve is attached to a membranous septum lying between the aortic valve and the mitral leaflet. The posterior cusp is attached to the fibrous mitral annulus which lies deep in the atrioventricular sulcus. In the adult, the annulus is several millimeters thick. The mitral cusp is attached to the entire length of that part of the annulus which lies in the atrioventricular sulcus. The chordae tendinae prevent the cusps from being everted during ventricular systole.[16] Papillary muscle and mitral valve functional anomalies usually appear as atypical chest pain, often associated with a history of "murmur" discovered in childhood (prior to the advent of real-time echocardiography) and rhythm disturbances. The most common such anomaly, of course, is prolapsing mitral leaflet.

Case report

A 21-year-old woman had a history of repeated episodes of colicky right upper quadrant pain. In 1978 she had been hospitalized in Kentucky for a similar episode; during this hospital stay an oral cholecystogram was performed, which was reported with a reinforced study as nonvisualization of the gallbladder. Prior to her current hospitalization, oral cholecystograms with double dose were repeated on an outpatient basis; they revealed nonvisualization of the gallbladder with some echoing posterior to the right lobe of the liver beyond which there was acoustic shadowing. The findings were reported as suspicious of a diseased gallbladder. The patient was admitted to the hospital for elective surgical exploration of the abdomen.

Physical examination in the hospital prior to surgery disclosed nothing remarkable except for the presence of a midsystolic sound heard best in the area of the mitral valve; it varied in intensity and in time relationship to the first and second heart sounds with deep breathing and with squatting. Real-time echocardiography reported evidence of papillary muscle dysfunction. Because of this, the patient was placed on preoperative antibiotic coverage.

At surgery, the findings were total absence of the gallbladder and cystic duct. The cystic artery was found to arise from the right hepatic artery and was traced to the gallbladder fossa; only fatty tissue was present in the fossa. It was excised and submitted



Long axis view. (A) Early diastole: Anterior mitral leaflet has opened anteriorly. Posterior leaflet is not seen as it abuts posterior wall of left ventricle. Hypertrophied band of tissue at mitral annulus is seen posteriorly between ventricle and atrium. (B) Early systole: Mitral leaflets are almost exposed. Band of tissue at level of annulus has moved posteriorly, with upper beak projecting into left atrium. (RV: right ventricle, LV: left ventricle, LA: left atrium, IVS: interventricular septum, AML: anterior mitral leaflet, PML: posterior mitral leaflet, MA: mitral annulus, AV: aortic valve.)

for pathologic evaluation. Both frozen sections and subsequent examination showed no evidence of a rudimentary gallbladder. The common duct was exposed and traced upward to the right and left hepatic ducts. No cystic duct was evident. To insure that a malposition of the gallbladder was not being overlooked, a cholangiogram was attempted by needling the common duct. This was unsuccessful, and a choledochotomy was performed. The duct was found to be extremely narrow, only admitting a number 8 gauge T tube. Cholangiogram revealed a small caliber biliary tree with normal anatomic distribution except for the absence of cystic duct and gallbladder. There was free flow of dye into the duodenum. Postoperatively the patient had a benign course, with the T tube being left in place for four weeks. Repeat cholangiograms postoperatively disclosed nothing remarkable.

Subsequent to surgery a repeat real-time, two-dimensional echocardiographic evaluation of this patient was undertaken; it revealed a prominent band of tissue at the level of the mitral annulus (Fig 1). The posterior mitral leaflet is seen to insert into this band. The band is approximately 1.5 cm thick and is angled toward the left atrium in diastole. In systole, there is considerable downward movement into the left atrium. This prominent annulus, with its exaggerated movement, has not been noted previously in the echocardiographic literature. In previously described prolapse,[17] superior or posterior buckling of the mitral leaflets above the level of the mitral annulus was described. Buckling was not present in this patient. The proximal portion of the mitral valve was, however, carried to the left atrium by the hypertrophied annulus. In effect, the annulus itself was prolapsing.

Until the present time, no case of agenesis of the gallbladder has ever been correctly diagnosed preoperatively. The combination of nonvisualization of the gallbladder and of the common duct on cholecystography, sonography, and Technetium Tc 99m Iprofenin (PIPIDA) studies might be confused with diseased gallbladder or stones in the cystic duct. Endoscopic retrograde cholangeopancreatography (ERCP) might visualize the biliary tree; however, failure to identify the cystic duct and gallbladder could be misinterpreted as occlusion of the cystic duct. The possible clue to the existence of this condition might be the high coincidence of associated congenital anomalies present in this case. Such associated anomalies might raise an index of suspicion.

Summary

Agenesis of the gallbladder is a relatively rare condition. A review of the literature indicates that it has never been diagnosed preoperatively, nor has prolapsing mitral annulus been reviewed. A case with both prolapsing mitral annulus and agenesis of the gallbladder, and the appropriate literature, has been presented.

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Use propranolol for at least three years after heart attack NIH report recommends

National Institutes of Health researchers are recommending that propranolol hydrochloride (Inderal), found last year to reduce deaths after heart attack by 26%, be prescribed for at least three years to patients who have survived a heart attack and can tolerate the drug.

The National Heart, Lung and Blood Institute sponsored Beta-Blocker Heart Attack Trial (BHAT), conduced at more than 100 medical centers and hospitals from June 1978 to October 1981, was discontinued nine months ahead of schedule because results revealing the benefits of the drug were considered unequivocal. Mortality statistics from the final BHAT report and the investigators' recommendation appear in the March 26 issue of the *Journal of the American Medical Association.*

Propranolol hydrochloride is one of a class of drugs known as beta blockers that prevent certain nerve impulses from stimulating the heart, arteries, and lungs. As a result, the drug tends to reduce the heart rate and the force of heart muscle contraction, thereby decreasing the heart's work load and need for oxygen and reducing blood pressure. Because of these actions, propranolol hydrochloride has been found effective in certain patients in treating hypertension and in reducing the frequency and intensity of chest pains from angina pectoris. Side effects can include brochial spasm and reduced blood circulation in the extremities.

During the study period, 3,837 men and women, aged 30 to 69 years, who were hospitalized with a heart attack were randomly divided into two groups; one began receiving propranolol hydrochloride and the other a placebo. To prevent bias in the results, neither the physicians nor the patients knew which group received the active drug. The patients were monitored after discharge at regular intervals.

No serious side effects were associated with either propranolol hydrochloride or the placebo, although there were slightly more complaints of low blood pressure, gastrointestinal problems, tiredness, respiratory distress, and cold hands and feet among patients taking the drug. Rapid heart beat was more common among those taking the placebo.

After an average 25-month follow-up period, total mortality was 7.2% (138 patients) in the group receiving propranolol and 9.8% (188 patients) in the group receiving the placebo, an overall reduction in mortality of 26 percent for the group receiving the beta-blocker. "Regardless of whether the patients had had more than one MI [myocardial infarction, or heart attack], a single MI with complications. . ., or a single uncomplicated MI, propranolol was found to be efficacious," the report states. The beneficial effect of the drug seems more pronounced in the first 12 to 18 months following the heart attack, although the effect lasted throughout the time patients were followed, an average of 25 months and a maximum of 39 months.

Based on the BHAT results and findings of previously reported studies, the BHAT, investigators recommend the use of propranolol for at least three years in patients who have had a recent heart attack and who do not have any other medical conditions that would exclude use of the drug.

"It is certainly comforting to know that beta-blockade will not only. . .improve angina pectoris, slow the heart rate, and lower the blood pressure, but will also prolong life in this group of patients," comments cardiologist, Richard J. Jones, MD, Director of the AMA's Division of Scientific Policy. "This finding will make it all the more desirable to develop more highly selective beta blockers that might be even more effective while causing fewer side effects," Jones says.

THEO-DUR®

(anhydrous theophylline)

BECAUSE YOU DON'T HAVE TO TOLERATE ASTHMA ATTACKS.

Unlike beta agonists, Theo-Dur is indicated for asthma prophylaxis.[1]

Many bronchodilators can treat an acute attack of asthma. But not many can prevent an attack from starting.

Theo-Dur is unique. It is the only form of oral theophylline to demonstrate linear, therapeutic blood levels for a full 12 hours. This minimizes the problems of toxicity or therapeutic failure common to other oral theophyllines.

On a q12h dose of Theo-Dur, patients can enjoy a full day of normal activities and a night of uninterrupted sleep. In addition, prophylactic Theo-Dur therapy offers an increase in exercise tolerance, the likelihood of fewer emergency visits and a greatly reduced need for concomitant therapy.

AND YOU WON'T HAVE TO WORRY ABOUT TOLERANCE.

Unlike beta agonists, "no development of tolerance appears to occur with chronic use of theophylline."[1]

Beta agonists act by stimulating beta$_2$ receptors in bronchial smooth muscle. This stimulus results in increased levels of cyclic AMP, which triggers the series of biochemical events leading to bronchodilation.

Beta agonists may be difficult to control in chronic use.

There is concern that chronic use of beta agonists can lead to clinically important drug tolerance.[2] Repeated stimulation of receptors by beta agonists causes an eventual reduction in the number of receptor sites and a decreased ability to produce cyclic AMP. The result: a potential decline in both magnitude and duration of bronchodilator response.[3]

This may help account for the fact that more than half of all patients on beta agonists require concomitant therapy, usually a theophylline.[4]

Theophylline: no evidence of tolerance.

Unlike beta agonists, theophylline appears to act through the inhibition of phosphodiesterase, the enzyme which breaks down cyclic AMP. Theophylline has no effect on the number of beta$_2$ receptors and therefore has none of the potential for tolerance seen with beta agonists.

Conclusion: Current thinking strongly suggests that beta agonists should be reserved for use in acute attacks. Theo-Dur is indicated for both relief and prophylaxis of bronchospasm.

Today's most widely prescribed bronchodilator.

THEO-DUR®

(anhydrous theophylline)

Sustained Action Tablets

KEY PHARMACEUTICALS, INC.

Please see next page for a summary of prescribing information

THEO-DUR®
(anhydrous theophylline)
Sustained Action Tablets

Today's most widely prescribed bronchodilator.

Description: THEO-DUR Sustained Action Tablets contain anhydrous theophylline, with no color additives.
Pharmacologic Actions: The pharmacologic actions of theophylline are as a bronchodilator, pulmonary vasodilator and smooth muscle relaxant since the drug directly relaxes the smooth muscle of the bronchial airways and pulmonary blood vessels. Theophylline also possesses other actions typical of the xanthine derivatives: coronary vasodilator, diuretic, cardiac stimulant, cerebral stimulant and skeletal muscle stimulant. The actions of theophylline may be mediated through inhibition of phosphodiesterase and a resultant increase in intracellular cyclic AMP which could mediate smooth muscle relaxation.
Indications and Usage: Symptomatic relief and/or prevention of asthma and reversible bronchospasm associated with chronic bronchitis and emphysema.
Contraindications: THEO-DUR is contraindicated in individuals who have shown hypersensitivity to any of its components or xanthine derivatives.
Warnings: Excessive theophylline doses may be associated with toxicity; serum theophylline levels should be monitored to assure maximum benefit with minimum risk. Incidence of toxicity increases at serum levels greater than 20 mcg/ml. High blood levels of theophylline resulting from conventional doses are correlated with clinical manifestation of toxicity in: patients with lowered body plasma clearances, patients with liver dysfunction or chronic obstructive lung disease, and patients who are older than 55 years of age, particularly males. There are often no early signs of less serious theophylline toxicity such as nausea and restlessness, which may appear in up to 50% of patients prior to onset of convulsions. Ventricular arrhythmias or seizures may be the first signs of toxicity. Many patients who have higher theophylline serum levels exhibit a tachycardia. Theophylline products may worsen pre-existing arrhythmias.
Usage in Pregnancy: Safe use in pregnancy has not been established relative to possible adverse effects on fetal development, but neither have adverse effects on fetal development been established. This is, unfortunately, true for most anti-asthmatic medications. Therefore, use of theophylline in pregnant women should be balanced against the risk of uncontrolled asthma
Precautions: THEO-DUR TABLETS SHOULD NOT BE CHEWED OR CRUSHED. Theophyllines should not be administered concurrently with other xanthine medications. It should be used with caution in patients with severe cardiac disease, severe hypoxemia, hypertension, hyperthyroidism, acute myocardial injury, cor pulmonale, congestive heart failure, liver disease, and in the elderly, particularly males, and in neonates. Great caution should be used in giving theophylline to patients in congestive heart failure since these patients show markedly prolonged theophylline blood level curves. Use theophylline cautiously in patients with history of peptic ulcer. Theophylline may occasionally act as a local irritant to G.I. tract, although gastrointestinal symptoms are more commonly central and associated with high serum concentrations above 20 mcg/ml.
Adverse Reactions: The most consistent adverse reactions are usually due to overdose and are:
Gastrointestinal: Nausea, vomiting, epigastric pain, hematemesis, diarrhea.
Central Nervous System: Headaches, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions.
Cardiovascular: Palpitation, tachycardia, extrasystoles, flushing, hypotension, circulatory failure, life threatening ventricular arrhythmias.
Respiratory: Tachypnea
Renal: Albuminuria, increased excretion of renal tubular cells and red blood cells, potentiation of diuresis.
Others: Hyperglycemia and inappropriate ADH syndrome
How Supplied: THEO-DUR 100 mg, 200 mg and 300 mg Sustained Action Tablets are available in bottles of 100, 500, 1000, and 5000, and in unit dose packages of 100
Caution: FEDERAL LAW PROHIBITS DISPENSING WITHOUT A PRESCRIPTION
For full prescribing information, see package insert.
0881

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4 Data on file, Key Pharmaceuticals, Inc

KEY PHARMACEUTICALS, INC.
Miami, Florida 33169 (USA)
TD-1104

Medical News

Newly-created post

The Jewish Home and Hospital for the Aged announced the appointment of Leslie S. Libow, M.D. as Chief of Medical Services.

SUNY Downstate Medical Center appointments and promotions

M. Michael Eisenberg, M.D., has been appointed professor of surgery.
Vincent T. Pillari, M.D., has been appointed clinical associate professor of Obstetrics & Gynecology.
Florence Kavaler, M.D., has been promoted to professor of preventive medicine and community health.
Joseph Schluger, M.D., has been promoted to professor of clinical medicine.
Robert Carty, Ph.D., has been promoted to associate professor of biochemistry.
Brian J. Anziska, M.B. Ch. B., has been promoted to associate professor of neurology.
Emily Karp, M.D., has been promoted to clinical associate professor of ophthalmology.
Sheldon Frank, M.D., has been promoted to clinical associate professor of psychiatry.

Statewide perinatal center opens in Newark

A statewide perinatal center, designed to provide the most sophisticated care for high-risk maternity patients and critically-ill infants, has been established in Newark under the direction of the University of Medicine and Dentistry of New Jersey (UMD).

Created under a plan developed by the New Jersey Department of Health as the hub of a network linking all of New Jersey's perinatal facilities, the Statewide Perinatal Services and Research Center utilizes the combined resources of the UMD-College Hospital, the University's primary teaching facility in Newark; and Children's Hospital of New Jersey, a unit of United Hospitals Medical Center, a major affiliate of UMD in Newark.

New head for Brookhaven NSLS Division

John P. McTague, former professor of chemistry at the University of California at Los Angeles, has been named head of the recently organized National Synchrotron Light Source Division at Brookhaven National Laboratory.

St. Luke's-Roosevelt Hospital Center names new head

Robert S. Neuwirth, M.D. has been named director of Obstetrics and Gynecology at St. Luke's-Roosevelt Hos-

(continued on page 1270)

Brain Tumor Cells

Flow cytofluorometric analyses in cerebrospinal fluid

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The dynamics of antitumoral effects of drugs are difficult to quantitate in the cerebrospinal fluid (CSF). Present methods, that is, cell counts and morphologic examinations, are not accurate determinants of sublethal or physiologic changes in the tumor cell population. To better examine sublethal antineoplastic effects on malignant cells in the CSF following parenterally administered drugs, we documented changes in the growth kinetics of exfoliated tumor cells by the use of cytofluorometric techniques. We used this method to detect abnormal cells, as well as changes in cell kinetics of tumor cells in the spinal fluid of a patient prior to, during, and after administration of a combination of intravenous cyclophosphamide (CTX), intrathecal cytosine arabinoside, and oral hydroxyurea.

Case report

A nine-year-old girl had a two-month history of progressive nausea, vomiting, headache, and dysphasia. One month prior to admission she developed nuchal rigidity and was treated for a bacterial meningitis because of a CSF pleocytosis. Reexamination of the CSF revealed neoplastic cells. A computed tomography (CT) scan of the head disclosed a large left anterior temporal mass (Fig. 1A). A gross total resection of a primitive neuroectodermal tumor was accomplished (Fig. 1B). Histologic examination revealed an extremely pleomorphic, highly malignant tumor with areas of differentiation along several lines of neuroectodermal tissue. The predominant cell type was a glioblastoma multiforme, but areas of a small-cell primitive neuronal tissue were also observed. She had a mild right hemiparesis postoperatively. The extent of disease evaluation indicated widespread dissemination. A myelogram showed multiple intradural, extramedullary filling defects. The CSF cytologic findings were positive (Fig. 1C), and the bone-marrow examination was negative for tumor cells. Although the CSF cell study remained positive, she had no signs or symptoms of meningeal disease. Part of the tumor was placed into tissue culture medium (Eagle's minimal essential medium plus 15% fetal calf serum) for further study.

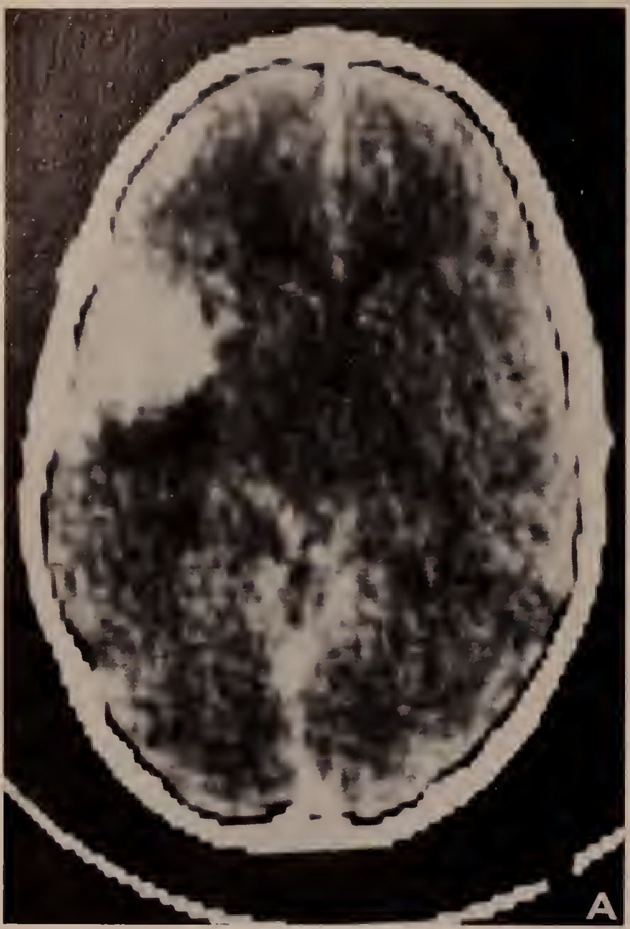
Over a five-day period, the child was treated with CTX (50 mg/kg, intravenously) on days 1 and 2, cytosine arabinoside (50 mg/m^2, 25 mg/m^2, 25 mg/m^2, intrathecally) on days 3, 4, and 5 respectively, and hydroxyurea (50 mg/kg) orally in the evenings of days 3, 4, and 5. CSF specimens obtained prior to therapy and from lumbar taps on days 3, 4, 5, and 11 were analyzed for changes in cell count, protein concentration, cytologic study, and cell cycle population using flow microfluorometric (FMF) methods. For the latter test, approximately 50,000 cells were collected by centrifugation in 5 ml of CSF. After treatment with trypsin and deoxyribonuclease (DNase) to exclude dead and dying cells, the cells were stained with acridine orange, and the relative distribution of deoxyribonucleic acid (DNA) and ribonucleic acid was established using previously described cytofluorometric methods.[1–3]

Results

The patient tolerated chemotherapy, with the major side-effect a brief period of bone marrow depression following administration of drugs (Fig. 2A). During this period she was treated with prophylactic antibiotics and irradiated platelets and packed red blood cells.

Her CSF protein decreased over the first five days of treatment and then increased on day 9. The cell counts also decreased during this treatment (Fig. 2B). Cytologic detail using Papanicolaou's stain revealed little differences between pre- and posttreatment samples. In contrast, the cell cytocentrifuge preparation disclosed an increased number of cells with vacuolations of their nucleus and cytoplasm (Fig. 2C).

FMF analysis of the CSF was more revealing. The pretreatment pattern consisted of diploid (2C) and aneuploid cells (Fig. 3), that is, having more than the normal complement of chromosomes. The majority of aneuploid cells, believed to be the G_0/G_1 tumor cell population, had a 2.96 mean DNA content. The aneuploid cells increased following intravenous CTX.



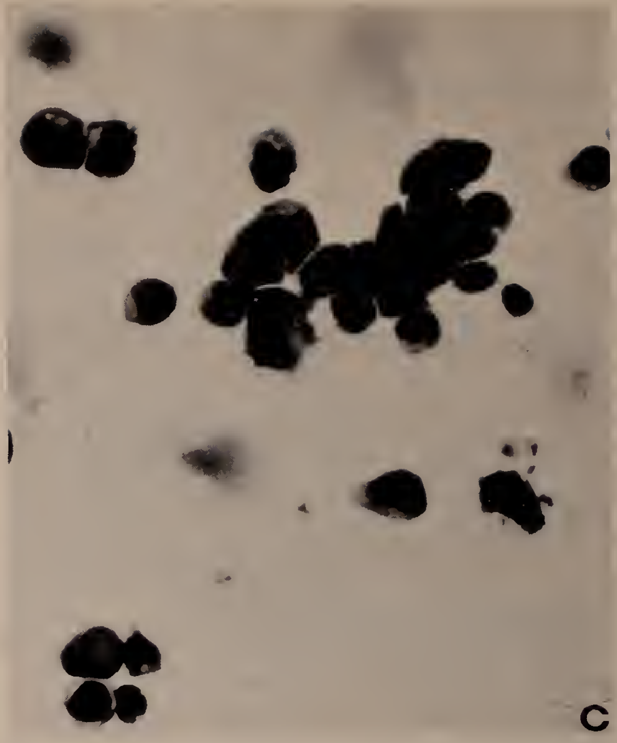
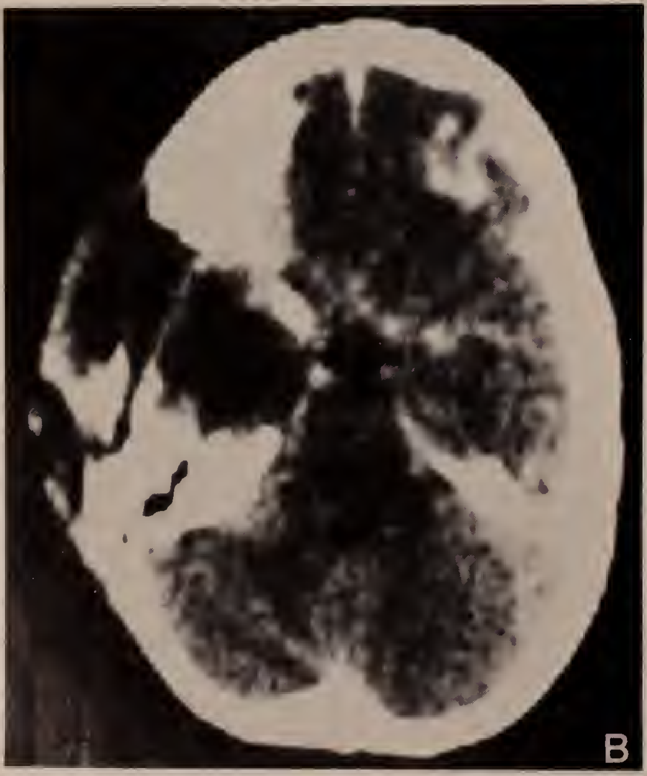


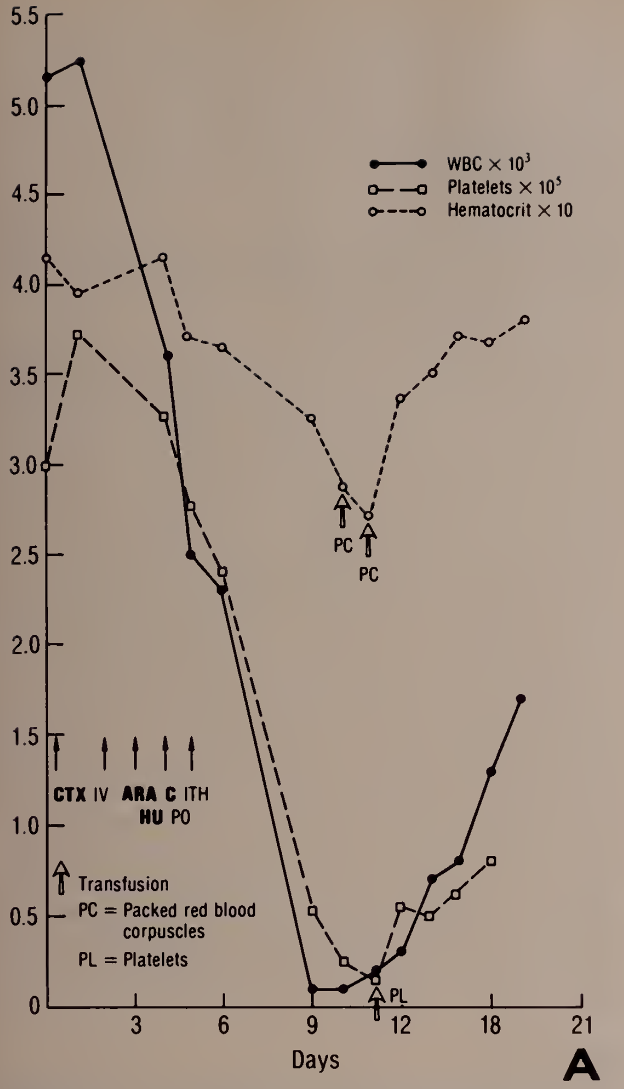
FIGURE 1. (A) Computerized tomographic scan of brain at time of diagnosis. Large contrast-enhanced region in mid-temporal lobe. (B) Postsurgical scan showing residual contrast-enhanced tissue surrounding cystic area. Craniotomy bone defect is apparent. (C) Cytocentrifuge preparation of cells in CSF prior to starting treatment. (Geimsa-Wright stain, original magnification X 350).

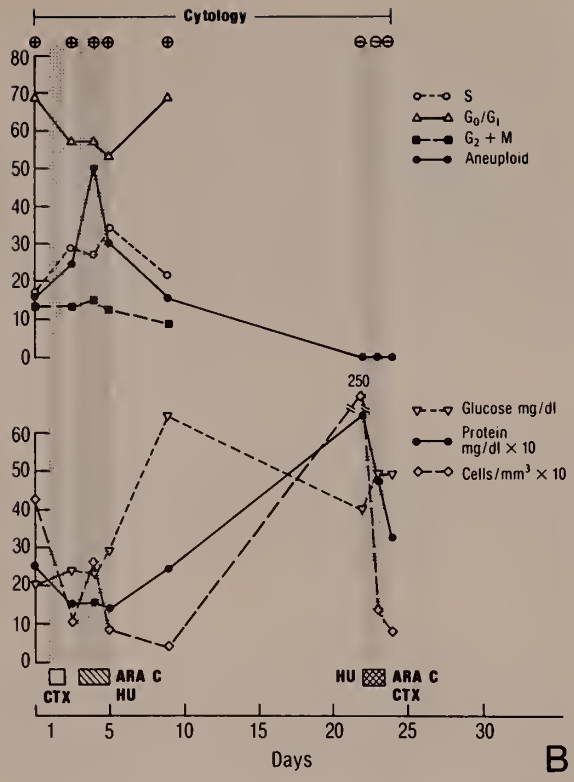


A relative increase in aneuploid cells was also observed following the first dose of cytosine arabinoside and hydroxyurea (ARA-C-HU) (Table I). In addition, there was an enrichment in S-phase cells following CTX which continued to increase during the three days of ARA-C-HU treatment. After another four days, the proportion of S-phase cells and the percentage of aneuploid cells decreased to pretreatment levels. The patient was severely leukopenic at this point.

The patient's CSF glucose was below normal during treatment and increased to normal by day 9. The CSF protein was high and did not appear to change significantly during treatment. The FMF pattern of cells obtained directly from the primary tumor and maintained in culture for 28 days was most similar to the CSF specimen analyzed following three days of treatment, and differed significantly from the patterns observed in the CSF on other days (Table I).

The postchemotherapy CT scan showed no significant change in the temporal lobe lesion, but new evidence of neoplastic meningitis was apparent at the base of the brain. The myelogram showed progressive enlargement of the tumor deposits, and the patient was subsequently treated with radiation to the





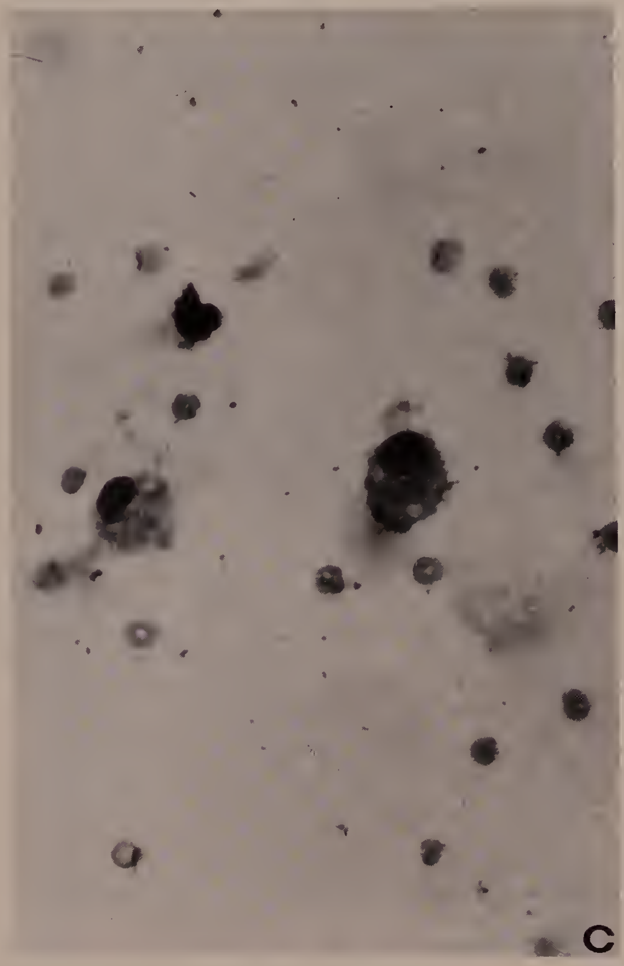


FIGURE 2. (A) Peripheral blood changes during chemotherapy. PC = packed red blood cell transfusion; PL = platelet transfusion; IV = intravenous; Ith = intrathecal. (B) Changes in various CSF constituents during the treatment period. Cytologic studies were done independently by pathology department using routine Papanicolaou's stains. For treatment doses, see text. (C) Cytocentrifuge preparation of cells in CSF following treatment. Increase in number of vacuolations and vacuolated cells was noted. (Geimsa-Wright stain, original magnification × 350).

brain, the entire CNS axis, and then observed at regular intervals. Six months later a CT scan indicated a recurrent contrast-enhancing tumor in the left temporal region. At lumbar puncture she had increased CSF pressure, abnormal cells (11/mm^3), elevated protein (260 mg/dL), and decreased sugar (22 mg/dL). She died two months later of an expanding temporal lobe lesion. No autopsy was performed.

Comment

Although meningeal gliomatosis associated with glioblastoma has been known since 1931,[4] no direct

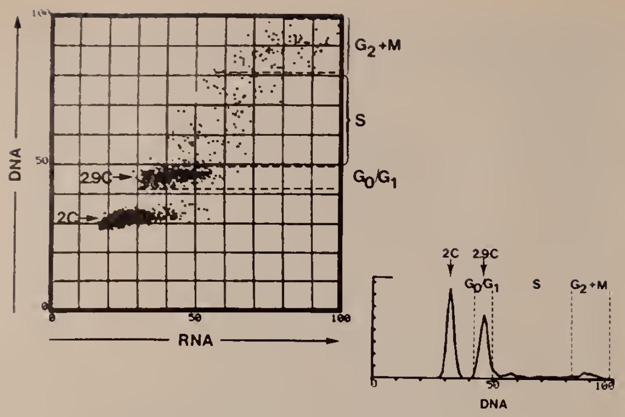


FIGURE 3. Scattergram demonstrating presence of two populations of cells with different stem lines based on their modal DNA control, and plotted histogram representing same populations. The 2C population of cells were normal human lymphocytes containing normal complement of chromosomes.

studies of tumor cell cycle, viability, or growth kinetics have been published. Cytologic examination is essential for the diagnosis of neoplastic meningitis. To this end the cytocentrifuge preparation was used to determine the morphologic state of the cells following drug treatment. In addition to routine Papanicolaou's stain confirming the presence or absence of tumor cells, the increased number of cells with cytoplasmic vacuolations in the posttreatment sample observed probably represents drug effect.

The pretreatment FMF analysis of CSF offered information concerning the character of the tumor cell population that could not be obtained using routine methods of cytologic factors or cell enumeration. The relatively high percentage of aneuploid cells did appear to coincide with the morphologic features seen on smear. FMF helped us to identify not only an aneuploid population, but also that 17% of these aneuploid cells that were in S phase, indicating that these cells were proliferating. These can be distinguished from normal lymphocyte populations that have a low proliferative compartment. Furthermore, these cells were not only viable but were probably actively cycling through S phase. These moderately elevated numbers of S-phase cells suggest that the cells represent a small, exfoliated fraction of the residual brain or metastatic tumor. Pretreatment CSF tumor cell FMF patterns were compared with additional CSF analyses following systemic treatment. An increase in S-phase cells at the expense of G_0/G_1 cells following systemic cyclophosphamide suggested recruitment, and such an increase in cells in the S-phase compartment following treatment of neuroblastoma tumors with surgery or cell monolayers with chemotherapy has been previously observed.[5]

FMF techniques offer evidence that intravenously administered CTX or its metabolites do reach the CSF and possibly tumor areas in the brain or spinal cord in contact with the CSF in amounts to effect changes in tumor cell growth patterns. It also permits identification of changes that may not be reflected in conventional CSF cell counts or morphologic patterns. The changes observed 24 hours after CTX administration suggested that S-phase specific agents, which penetrated the CSF or which could be applied directly into the CSF, might augment the net cytotoxic effect. As an experimental trial, intrathecal ARA-C and oral HU were administered to this patient following CTX. Following this, an increased number of exfoliated cells were observed. However, morphologic changes were not observed. FMF analysis revealed that changes in the cell population were relegated to alterations in the distribution of cells in the S phase. It may be concluded that inadequate amounts of cells actually entered or accumulated in S phase to be affected by the ARA-C or HU, or adequate concentrations of the drug were not achieved.

Conclusion

In view of the subsequent clinical history of this patient and the flow microfluorometric data, it was concluded that only a partial antitumor effect was induced by CTX, ARA-C, and HU. However, we would like to emphasize that the techniques described in this study may find application in monitoring other drug combinations of this protocol used for treatment of brain tumors with meningeal involvement. It is also possible that FMF analysis may serve as a more sensitive screening technique than

TABLE I. Relative Increase in Aneuploid Cells

Day	Drug	CSF Protein, mg/dl	Glucose, mg/dl	WBC/ mm³	% Aneuploid Cells	G_0/G_1	S Phase Cells	$G_2 + M$
−2	···	243	20	43	16.1	68.9	17.6	13.5
1,2	CTX,CTX	···	···	···	···	···	···	···
3	ARA-C-HU	150	24	10	24.5	57.7	29.0	13.3
4	ARA-C-HU	157	23	28	50.6	57.2	27.6	15.2
5	ARA-C-HU	140	29	8	30.1	53.7	34.1	12.2
9		242	65	4	16.1	68.4	22.4	9.2
22	CTX,ARAC-HU	650	40	250	0	···	···	···
23	CTX,ARAC-HU	480	49	14	0	···	···	···
24	···	330	49	8	0	···	···	···
Untreated primary tumor cultures 28 days	···	···	···	···	58.3	54.0	26.1	19.9

conventional cytologic methods for detecting neoplastic cells in CSF.

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Efficacy of electricity to heal bones confirmed

Weak electric currents delivered by external coils that can be plugged into household sockets have successfully promoted bone healing in 834 of 1,078 patients worldwide. These patients had suffered with fractures that failed to unite or, in a few cases, joints that did not fuse after surgery, according to a report in the February 5 issue of *The Journal of the American Medical Association.*

This group of patients, according to C. Andrew L. Bassett, MD, of Columbia-Presbyterian Medical Center in New York, represents all those with confirmed success or failure from more than 6,000 patients who have been treated or who are undergoing treatment with the pulsing electromagnetic field (PEMF) method, as it is called.

Although the majority of patients in the PEMF program are still undergoing treatment — most did not enter until after the method have been approved by the Food and Drug Administration in Nov. 1979 — the results to date on over 1,000 patients go a long way in proving that electric stimulation is, in the words of an accompanying editorial, a major advance in traumatic orthopedic surgery.

In the United States alone, 511 different orthopedic surgeons have been involved in the program, and many of them were described in the article as being "first time users" — an indication, Dr. Bassett said, that extensive experience with the method is not a major factor in achieving a satisfactory result.

The success rate for the 220 Columbia patients, who are reported on in the *JAMA* article, was 81% (178 healed, 43 failed). The success rate for the 233 international patients was 79% (183 healed, 50 failed). And the success rate for the 625 U.S. patients cared for outside the New York center was 76% (473 healed, 152 failed).

The overall success rate was 77%, which compares favorably with the success rate of bone grafting procedures, according to the editorial written by Clinton L. Compere, MD, of Northwestern University Medical School in Chicago.

Unlike these procedures, however, the PEMF method does not involve surgery and, according to Dr. Bassett, it's safe and it can be employed entirely on an outpatient basis.

Professional Advisors

Selecting a team

JOHN D. O'BRIEN
New York City

The demands of medical practice and the economic conditions of today's world have combined to make it increasingly difficult for physicians to handle the business side of their profession with maximum efficiency. Many physicians find they have neither the time nor the inclination to acquire the various skills necessary to handle all the management, tax, insurance, legal, and financial questions that arise almost daily in a medical practice.

Fortunately, there are many competent professionals available who can advise physicians on the business side of practice. These advisors and the services provided include the following:

Services

Management consultant. The wide variety of services offered by a practice management consultant includes evaluation of office financial procedures, collections, personnel policies, patient relations, appointment scheduling, office layout and design, and corporate affairs, plus consultation on any problem particular to an individual practice.

Accountant. The expertise of a qualified accountant is essential in many areas of a practice, from bookkeeping and financial analysis to the complex and frequently changing area of tax advice. An accountant should perform regular audits and keep a close eye on a practice's financial situation.

Attorney. The increasingly complicated legal problems of this day and age make it essential for a physician to retain an attorney who is well versed in the intricacies of the medicolegal field. A physician may want to consult an attorney about such technical areas as medical record keeping, malpractice liability, and partnership and corporate agreements, as well as the more basic areas of legal expertise, including writing a will, planning an estate, negotiating a lease, and signing a contract.

Insurance agent. An insurance agent should provide both sound advice and good service in handling a physician's diverse needs for life, casualty, and disability insurance. An agent should furnish up-to-date information on changes in the insurance field as well as timely assistance with any insurance claims filed by or against the physician.

Banker. A banker should be thoroughly familiar with the unique financial and credit needs that physicians experience during the various phases of their careers. A professional banker, one with whom you can establish a good rapport, should be able to provide solid counsel and advice on practice-related or personal loans, investments, tax considerations, estate planning, real estate, and on all types of depository accounts.

Selection

Finding good professional advisors can sometimes be a difficult task, but probably the best way to select a good one is to ask your colleagues for a recommendation. A satisfied physician could be your best source of reference. You can also ask around the hospital or check with your local medical society for a suggestion. Also, a professional advisor in one field can often recommend someone in another area of expertise.

Once you have the name of a particular advisor, you should interview that person to see if you can establish a strong working relationship. It is essential that good lines of communication exist between you and any advisor with whom you will be working. You will want to be sure you both agree on basic approaches to important matters affecting your practice.

To maintain a good working relationship with any professional advisor, you need to be assured that the person you are considering is readily available for both personal conferences and an occasional quick question on the phone. Having a knowledgeable and well-qualified advisor does not mean much if he or she is difficult to contact when a problem arises.

You should also check to be sure that any advisor you select is experienced in dealing with other physicians and understands the problems unique to the practice of medicine. Qualifications and experience are important points to cover in an interview with a potential advisor, and you should not hesitate to ask questions about these items. In addition, try to ascertain how an individual expert keeps current with recent developments in his or her field of specialty.

Once you have selected a professional team of advisors, be sure to consider their recommendations carefully. It will be up to you to recognize the value of the expert advice you are receiving and to utilize it to improve your practice. Physicians who properly select and wisely use the skills of professional advisors should achieve a more efficient practice and enjoy more time to pursue their own professional goals.

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Euthanasia and the Right to Die

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> *"It hath often been said, that it is not death, but dying which is terrible."*—**Henry Fielding**

Euthanasia means mercy killing, which is the deliberate taking of a human life to end suffering. To many, especially religious groups, it is considered pure murder.

In discussing euthanasia, we must accept the division of euthanasia into (1) active or positive euthanasia, and (2) passive or negative euthanasia. In defining active euthanasia, one means the deliberate killing of terminally ill patients. Passive euthanasia means allowing a patient who is in a terminal stage to die as comfortably and naturally as possible, by having the physician withhold heroic procedures and medications that would prolong the misery of dying, but not withhold personal support and medication that give comfort and relieve pain.

There have been many advocates of active euthanasia from the time of Plato (*Republic* 3:405) and Sir Thomas More (*Utopia* 2:7) to the present day. Active euthanasia was also common in ancient Greece. At present, Joseph Fletcher has urged the legalizing of euthanasia on the grounds that "suffering is purposeless, demoralizing and degrading, that the human personality is of greater worth than life per se, and that the phrase "blessed are the merciful for they shall obtain mercy" is as important as "you shall not murder." If euthanasia is legalized, one must then worry about its consequences: will active euthanasia be used on people who are not terminally ill but whose life is disintegrating in one way or another? In other words, it is logical to wonder to what point a principle, once established, will be extended.[1]

Religious groups believe that life and death are divine gifts and that man shall not usurp the will of God. Life ends when God decrees. Both Judaism and the Catholic religion believe that no human being is allowed to deliberately put an end to life—even the putting to an end prolonged suffering or hopeless sickness.

The Hippocratic Oath states rather explicitly that the physician will not give a deadly drug to any patient. In 1973, the Council of the Medical Society of the State of New York and the American Medical Association stated that "the use of euthanasia is not in the province of the physician."

Passive euthanasia

Relative to passive euthanasia, the Catholic Church distinguishes between ordinary and extraordinary measures and Pope Pius XII issued an encyclical not requiring physicians to use extraordinary measures for the preservation of life in circumstances where death might be desirable. In June, 1981, the Roman Catholic Church reaffirmed its condemnation of euthanasia or "mercy killing" but stated that individuals in certain circumstances had the right to renounce extraordinary and burdensome life-support systems available to dying patients, as long as normal care to the patient is not interrupted.

According to the Talmud, one cannot hasten death by even closing the eyes of a dying person since such an act is hastening death; one is performing the act of a murderer. However, the removal of life-support devices from patients whose condition is considered hopeless is entirely consistent with the Jewish law.

The great majority of theologians, clergy, laity, and members of the medical and legal professions consider passive euthanasia and active euthanasia to be distinctly different ethically, medically, and legally. During the past decade, both members of the medical profession and the public have come to recognize the fact that a dying person should not be subjected to unwarranted and unwanted life-support measures, but that he should be treated in the most humane way possible without the use of active euthanasia. "Prolonging the life of such a patient is cruelty. It indicates a lack of sensitivity to the needs of a dying patient."[3] This quotation in favor of passive euthanasia was made in a letter to a medical journal by a physician suffering from intractable pain and assaulted by needles and tubes while dying from a malignant sarcoma of the peritoneum.

"Right to die" and "do not resuscitate" orders

The patient's "Right to Die" has come to the surface in all discussions regarding the proper treatment of a terminally ill patient. This has also become obvious when one notes that new life-sustaining technology has stimulated attention to the process of dying, which has never been addressed openly before. Helen B. Taussig, M.D., in urging her state, Maryland, to pass a right-to-die law stated, "Many of us do not fear death, we fear being kept alive when life itself has lost all significance and society will not allow us to die." [4]

A natural setting for the use of passive euthanasia or the "Right to Die" is the home, where the patient is surrounded by family and friends, free of all artificial forms of support as well as free of all lies and deceit. The recent establishment of the hospice and its warm care given to the terminally ill patient is another method of avoiding the cold hospital, which is usually geared to attempting cures and controlling acute pain with no personnel assigned to deal with the special problem of dying.

We physicians have not the right to decide who shall live and who shall die—that is determined by God and God alone. However, it is the physician who should decide, with or without the approval of the patient or his family or guardian, or both, how much one must suffer the agony of the process of dying. Must one, who is terminally ill and is approaching death, be put through the "tortures of hell" by the use of life-sustaining machines or the nonuse of the "Do Not Resuscitate" principle?

"DNR" (Do Not Resuscitate) or "No Code" orders are usually written for terminally ill patients in the event of cardiac or respiratory arrest. Attempts to apply resuscitation in these cases, if successful, will do nothing to cure or relieve the illnesses which will have brought the patient to the threshold of death. When a decision not to resuscitate is made by the physician, it should then be discussed with the patient or the immediate family, or both. If agreement is reached, the "DNR" or "No Code" order should be clearly marked on the chart. In addition, the physician should document on the patient's chart his opinion that the patient meets the medical criteria for a "DNR" order and also the fact that the order had been discussed with the patient and the immediate family, or guardian in case of an incompetent patient. A verbal or telephone order for "DNR" cannot be justified as a sound medical or legal practice.

In support of a "DNR" or "No Code" order by a physician without the approval of the courts was the case entitled "*In the Matter of Shirley Dinnerstein*" heard in the Massachusetts Appeals Court in 1978. The court stated "that the decision to enter a "No Code" order presents a question peculiarly within the competence of the medical profession of what measures are appropriate to ease the imminent passing of an irreversibly, terminally ill patient in light of the patient's history and condition and the wishes of the family." This important decision is the first in the nation to uphold the validity of "No Code" orders.

Disconnecting the respirator

Disconnecting the respirator on a patient who has been declared dead would allow nature to take its course and should not be considered active euthanasia. To declare the patient dead, the physician must prove that there is irreversible loss of total brain function and that the heartbeat and respiration are both mechanically sustained by the machine. Not only is it morally and ethically wrong to maintain a dead person on life-support system for no reason but it also places an unnecessary financial burden both on the family and society as well as an additional emotional burden on the patient's family. Thus, from a moral and ethical perspective, persons who have lost all brain function and who are certainly dead should be treated accordingly.

The Brother Fox case of Nassau County, New York, is an example of a patient being kept on a respirator in spite of the fact that he had advised his friend, Father Eichner, before becoming ill, that at no time were extraordinary measures to be used to keep him alive. Father Eichner advised the hospital of this fact and, after reviewing the case with the medical staff, had asked the hospital to remove the respirator from Brother Fox; the hospital refused and Father Eichner applied to the court for permission to have the respirator removed. This occurred in October, 1979. The court agreed, but the district attorney appealed the case—during which time Brother Fox died (January, 1980). The intermediate Appellate Court approved the removal of the respirator and then stated that certain procedures had to be followed in the future when a similar case appeared. The district attorney appealed this case again since he claimed that the guidelines should apply statewide. In August, 1980, the Medical Society of the State of New York as *amicus curiae* in the *Matter of Eichner* before the New York State Court of Appeals, made the following statement: "A physician should have the right to exercise his own professional judgment in deciding whether to continue or terminate extraordinary life-supporting equipment for terminally ill patients and that the final decision, in all cases, be made by the family or guardian with the counseling and approval of the attending physician." Two Judges of the Court of Appeals agreed with the Society and stated: ". . .explicitly affirm the proposition that judicial approval is not required for discontinuance of life support procedures in situations such as those now before us and that neither civil nor criminal liability attaches simply by reason of the absence of a court order of authorization." The practical result of the *Eichner* (Brother Fox) decision is to give physicians significant latitude in making determination of treatment decisions for adult patients. It is clear that a physician will not be liable for damages as long as his decision to terminate treatment is reasonable and in good faith. However, if a physician is to be free from intimidation in making such a crucial decision, he should have the assurance of statutory protection from the threat of criminal prosecution.[5]

Brain death

The Orthodox Jewish position supports the concept of brain death because the destruction of the entire brain, and only that, is in agreement with biblical pronouncements on what constitutes an acceptable definition of death. In the Roman Catholic Church there is no definitive authoritative pronouncement, but Catholic theologians interested in moral questions associated with the definition of death issue have generally accepted a concept of death based on brain function. Leading spokesmen of Protestant theologians of widely divergent traditions accept brain-related criteria for pronouncing death. Thus, the complete and permanent absence of any brain-related vital bodily function is recognized as death by Jewish, Roman Catholic, and Protestant scholars even if they may disagree among themselves on the precise theoretical foundations of this judgment.[6]

In view of the preceding summary of the decision of the New York State Court of Appeals in the *Eichner* case, plus the fact that the definition of death on brain-related criteria is in accord with the secular philosophy and the principles of the three major Western religions, it is hoped that all of the states would enact a statutory definition of death law. In addition, the President's Commission on Ethics has agreed on a definition of death and has suggested that all states pass a law establishing a legal definition of death. The passage of such a bill would prevent needless cruelty and hardship and diminish the threat of civil or criminal liability which at present inhibits physicians from issuing a declaration of death in many cases of patients kept alive by a mechanical system only.

Conclusion

In taking the Hippocratic Oath, the physician is committed both to the treatment and cure of disease and to the relief of suffering, and his primary concern in the terminal stages of incurable illnesses should be the relief of suffering. Therefore, the only professional and moral obligation a physician can possibly have in attending this type of patient is to comfort the patient in his suffering and attempt to alleviate his pain.[7] Jewish medical ethics states that the physician cannot shorten his patient's life by one second. But, when the physician views the patient as no longer responsive to his ministrations, he should withdraw from any further activities.

The attending physician should have the latitude to exercise his own professional judgment in making his decision on the question of what treatment he should follow in the case of terminally ill patients. The final decision should then be made after a discussion with the patient's family. The patient should be treated in a humanistic manner to relieve fears of being abandoned, the feeling of loneliness, and the intractable pain, all of which are part of the process of dying. The care during the dying phase of life is an essential part of the complete care given to a patient by his physician.

Many cases of terminal care have been brought before the courts and many proposals have been introduced in state legislatures describing all types of right-to-die bills, including "living wills." However, such decision-making is a matter within the medical domain and also is a matter of privacy between patient and physician and, therefore, is not a judicial or legislative matter.[8]

The distinction between affirmative killing (active euthanasia) and allowing one to die according to nature's order without extraordinary effort to "stretch him out longer" (passive euthanasia) continues to be valid, viable, and meaningful.[9]

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S. Weir Mitchell, M.D. (1829 to 1914) and D. Hayes Agnew, M.D. (1818 to 1892)

Neuropsychiatrist's poetic tribute to a surgeon

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Distinguished medical men in Philadelphia, S. Weir Mitchell, M.D., (1829 to 1914) and D. Hayes Agnew, M.D., (1818 to 1892) earned reputations that extended far beyond the boundaries of their geographic areas and the institutions with which they were affiliated. Mitchell, the versatile neurologist and neuropsychiatrist, was also a famous novelist and short-story writer as well as a poet. Agnew was the brilliant surgeon whose person and professional work were immortalized in 1889 in the magnificent painting, *The Agnew Clinic*, by another Philadelphian, the renowned artist, Thomas Eakins.[1] Of the many poems published by Mitchell, one, little known now, is a beautiful tribute to the much-loved and respected Agnew, presented at the commemoration of the latter's fiftieth year in his profession.[2] It will be offered here in full after pertinent information is first given about both Mitchell and Agnew, two great representatives of American medicine.

D. Hayes Agnew, M.D.

David Hayes Agnew, the prominent and esteemed Philadelphia surgeon, was born in Lancaster County, Pennsylvania, on November 24, 1818, the son of Robert Agnew, M.D. He attended Moscow College in Chester County, Jefferson College in Canonsburg, Delaware College in Newark, Delaware, studied medicine with his father, and, eventually, in 1838, was graduated from the medical department of the University of Pennsylvania. In 1841 he married Margaret Irwin, daughter of Samuel Irwin, an ironfounder. Agnew started a general practice of medicine near Nobleville, Chester County, and continued it for five years before concluding that the gratification it afforded him was insufficient. He changed his career and established with his brothers-in-law the ironfounding firm of Irwin and Agnew, but the business failed in 1846.[3]

Two years after having resumed his medical practice in Chester and Lancaster counties, Agnew moved to Philadelphia where in 1852 he purchased and reactivated the Philadelphia School of Anatomy and worked extremely long hours lecturing and demonstrating to ever-growing classes of students from the University of Pennsylvania, Jefferson Medical College, and other institutions from more distant areas. The number of students in one class actually reached a peak of 267; they regarded their mentor highly and with great affection. He was a clear and practical lecturer and was viewed as a superb demonstrator of anatomy. Agnew himself obtained much of the material for dissections, and after conducting his classes for 10 years he finally developed them into a school of operative surgery.

Agnew became an assistant in 1854 to Henry H. Smith, M.D., professor of surgery at the University of Pennsylvania, and obtained an appointment as surgeon at The Philadelphia Hospital. By the time he was 42 years old he had a considerable reputation as an operator and consultant. During the Civil War he was surgeon in charge of Hestonville Hospital and consulting surgeon at Mower General Hospital. He was an expert in gunshot wounds. In 1863 he became surgeon at Wills Eye Hosptial, in 1865 at The Pennsylvania Hospital, and two years later at The Orthopaedic Hospital. He was appointed professor of clinical surgery at the University of Pennsylvania in 1870, professor of surgery in 1871, and retired as professor emeritus in 1889.

Increasingly renowned as a teacher and an operator, Agnew became chief consultant for James A. Garfield, president of the United States, when in 1881 Garfield was shot by Charles J. Guiteau, a psychologically disturbed attorney and disappointed office-seeker. The president was in the Washington railroad station on July 2, 1881, when wounded by the assassin who declared his act a political crime, having opposed Garfield's election. Garfield lingered, mortally wounded, for several weeks and died on September 19, 1881.

Agnew was given a complimentary banquet in 1888 at the Academy of Music with more than 200 physicians attending, including the very distinguished who paid tribute to him. One of the most famous, S. Weir Mitchell, M.D., read his own poem commemorating Agnew's brilliant surgical career.[2]

When D. Hayes Agnew was elected president of the Philadelphia College of Physicians in 1889 he had already at least 60 publications to his credit, including some of special merit and that were greatly admired. His *Practical Anatomy, A New Arrangement Of The London Dissector* appeared in 1856 and his *Anatomy In Its Relations To Medicine And Surgery* was published during the years 1859 through 1864. From 1859 through 1871 his *Clinical Reports* were issued. *Treatise On The Principles And Practice of Surgery* is often regarded as his *magnum opus* and was published in three volumes in 1878, 1881, and 1883. It reflected masterful experience, an achievement possible only for its time because, while revealing his enormous knowledge, it covered every area of surgery. In addition, however, it was cherished for its clarity, judicious and balanced diagnostic evaluations, and lucid descriptions of surgical anatomy in diseases and injuries. The volumes were of great assistance to students.

Agnew's personality in and out of the operating amphitheatre was most impressive and appealing to many who knew him. At work he appeared calm in routine activities and in emergencies. He had developed ambidexterity in his early years, which was most impressive for observers, as well as of practical assistance to him in his surgical manipulations. He was courteous to his colleagues during consultations and his keen mind focused rapidly on the essentials of difficult problems. Unlike many other surgeons, he was known to be neither irritable in the operating room nor elsewhere, and this pleasing balance was most welcome to his associates.

Agnew eventually developed angina pectoris, suffering much while maintaining equanimity in the midst of pain, and on March 22, 1892, at the age of 73 died of the effects of arteriosclerotic heart disease, kidney disease, and diabetes.[3,4]

It is not surprising that, with so many admiring friends and students, Agnew is mentioned in works written years after his death. Harvey Cushing, M.D., tells about William Osler, M.D., serving as a member of a committee formed to celebrate the fiftieth anniversary of D. Hayes Agnew's graduation in medicine, and participating in it with J. William White, M.D., who became a well-known Philadelphia surgeon. Osler's contact with Agnew was quite congenial.[5] Furthermore, on September 21, 1914, Osler, writing to White about his planned *Bibliotheca Osleriana*, said, "If you have any of the early papers of Hayes Agnew to spare, send them also. I am gradually getting a great collection, which if all goes well, will go to McGill."[5]

Even before Agnew had reached the zenith of his career, he was attracting outstanding students. J. Collins Warren, M.D., for example, studying in Philadelphia during the Civil War, wrote: "Private instruction was very thoroughly systematized in Philadelphia, and from among the great variety of courses offered I selected one on bandaging by Dr. Agnew as the one likely to be of special value to me if called back into the service again." [6]

When Howard A. Kelly, M.D., the gynecologist, one of the Johns Hopkins "Big Four" that included internist William Osler, pathologist William H. Welch, and surgeon William S. Halsted, entered the medical department of the University of Pennsylvania in 1877, he was impressed by D. Hayes Agnew in surgery as one of the "strong," the "exceptional faculty" at the school.[7]

S. Weir Mitchell, M.D.

Silas Weir Mitchell was a man of remarkable intellect and versatility who achieved fame as a neurologist, neuropsychiatrist, and writer of novels, short stories, and poems.[8–10] His fictional *The Case of George Dedlow*, published in 1866, an unusual account from a literary, neurologic, and psychiatric view of a young physician who lost all his limbs when serving as a combat officer during the Civil War, has already been published and discussed at length.[11,12] Mitchell's home was a gathering place for social calls and brilliant conversation by those with keen minds; this found representation in more than one of his novels, including a beloved favorite, *Dr. North And His Friends.*[13] His true life friendships included William Osler, William James, Walt Whitman, and Oliver Wendell Holmes.[8,9] An account focusing on the latter, including a poetic tribute, has also been published recently.[14] A well-known student of his work claimed that James Penhallow, the fictional character in *Westways*, the last novel put out in 1913 by Mitchell at the age of 84, suffered a head wound when serving as a colonel of artillery during the Civil War, and was "cured at last by a great surgeon who was probably drawn from Dr. Agnew." [15,16]

Mitchell was born on February 15, 1829. His father was John Kearsley Mitchell, M.D., a well-known Philadelphia physician. He entered Jefferson Medical College in 1848, was graduated in 1850, and studied with the famed physiologist Claude Bernard in France soon thereafter, by whom he was much influenced. He also traveled and studied elsewhere in Europe for one year. On his return he became an expert in the toxicology of snake venoms and was involved in this research with William A. Hammond, who established a reputation as a neuropsychiatrist, and W. W. Keen, who became a famous brain surgeon. Mitchell was a contract surgeon during the Civil War, and with Keen and George R. Morehouse studied nerve injuries. They published in 1864 their classic *Gunshot Wounds And Other Injuries Of The Nerves*, described later by the neurophysiologist and medical historian John F. Fulton, M.D., as one of the great milestones in the history of American neurology and clinical medicine.[8] Mitchell is identified with excellent descriptions of various ailments such as erythromelalgia which became known as "Weir Mitchell's disease," postparalytic chorea, reflex paralysis, causalgia, sleep paralysis, and with descriptions of the functions of the cerebellum.[8–10] Mitchell's *Injuries To The Nerves And Their Treatment* was published in 1872. "Weir Mitchell Rest Cure" for psychiatric patients gained for him, in addition to his other contributions, an international reputation at a time when neurologists in private practice in the United States were functioning also as noninstitutional psychiatrists in the expanding private sector of their specialty. The "rest cure" involved long periods of isolation for some patients from families and settings in which their psychologic problems began to develop, and also included massage, electrotherapy, and diet control in various degrees. He also received considerable professional and public attention when in 1894 he criticized psychiatrists at a meeting of the American Medico-Psychological Association (now the American Psychiatric Association) for what he felt were their limited or inadequate scientific investigations.[17,18]

Hugh Wynne, a novel set in the period of the Revolutionary War, was published by Mitchell in 1896 and became a best seller.[19] He was admired for other novels which included characters with a variety of excellently described psychoses, neuroses, and personality disorders based on his extensive clinical experience. Quinn,[16] in addition to his observation about Agnew when commenting on *Westways*,[15] felt *Hugh Wynne* was "unquestionably the best fiction dealing with the Revolution" and noted its "dramatic power, which is revealed in his poetry so often." As for Mitchell's[20] novel, *Constance Trescot*, beautifully written and much favored by Mitchell himself, Quinn said, "Those who think they invented 'sex appeal' should read the description of Constance." [16] Mitchell died on January 4, 1914, at the age of 84. He was regarded as the most versatile American since Benjamin Franklin.[10]

Mitchell's poetic tribute to Agnew

Mitchell published his poems in several volumes and believed he was usually able to assess their value less accurately than his novels, but he had very warm feelings for them. Charles Eliot Norton, the renowned Harvard University author and educator, and William Osler admired his productions as did Oliver Wendell Holmes. Some of his verses were poems of occasion but he also wrote long dramatic works and short miscellaneous poems. When Mitchell served as president of the College of Physicians of Philadelphia, he produced *A Doctor's Century* which was read in 1887 at the centennial dinner of the organization.[2] He wrote a warm tribute in April, 1892, published as *Verses Read on the Presentation by S. Weir Mitchell to the Philadelphia College of Physicians of Sarah W. Whitman's Portrait of Oliver Wendell Holmes, M.D."* [2] It was a respectful and sensitive work and was reproduced in full in an article dealing with the friendship of Holmes and Mitchell.[14] On April 6, 1888, a poem by Mitchell was read at the dinner commemorating the fiftieth year of the doctorate of D. Hayes Agnew, M.D. It was called *Minerva Medica* and revealed an admiring, affectionate, perceptive tribute to this distinguished friend and surgeon. The poem speaks for itself. It is both serious and humorous and has the ring of truth confirmed in the impressions gathered also by others of Agnew's work and personality.[2] The verses can be found in Mitchell's *The Collected Poems*, published in 1896, and are reproduced now, apparently for the first time in a professional journal.

Minerva Medica

Good Chairman, Brothers, Friends, And Guests, — all ye who come with praise
To honor for our ancient guild a life of blameless days,
If from the well-worn road of toil I step aside to find
A poet's roses for the wreath your kindly wishes bind,
Be certain that their fragrance types, amid your laurel leaves,
The gentle love a tender heart in duty's chaplet weaves.
I can't exactly set the date, — the Chairman he will know, —
But it was on a chilly night, some month or two ago.
Within, the back-log warmed my toes; without, the frozen rain,
Storm-driven by the angry wind, clashed on my window-pane.
I lit a pipe, stirred up the fire, and, dry with thirst for knowledge,
Plunged headlong in an essay by a Fellow of the College.
But, sir, I've often seen of late that this especial thirst
Is not of all its varied forms the keenest or the worst.
At all events, that gentleman — that pleasant College Fellow —
He must have been of all of us the juiciest and most mellow.
You ask his name, degree, and fame; you want to know that rare man?
It wasn't you, — nor you, — nor you, — no, sir, 't was not the Chairman!
For minutes ten I drank of him; quenched was my ardent thirst;
Another minute, and my veins with knowledge, sir, had burst;
A moment more, my head fell back, my lazy eyelids closed,
And on my lap that Fellow's book at equal peace reposed.
Then I remembered me the night that essay first was read,
And how we thought it couldn't all have come from one man's head.
At nine the College heard a snore and saw the Chairman start, —

A snore as of an actor shy rehearsing for his part.
At ten, a shameless chorous around the hall had run,
The Chairman dreamed a feeble joke, and said the noes had won.
At twelve the Treasurer fell asleep, the wakeful Censors slumbered,
The Secretary's minutes grew to hours quite unnumbered.
At six A.M. that Fellow paused, perchance a page to turn,
And up I got, and cried, "I move the College do adjourn!"
They didn't stir; they sat all day. It made my flesh to creep
All night they sat; — that couldn't be. Goodness! was I asleep?
Was I asleep? With less effect that Fellow might have tried
Codeia, Morphia, Urethan, Chloral, Paraldehyde.
In vain my servant called aloud, "Sir, here's a solemn letter
To say they want a song from you, for lack of some one better.
The Chairman says his man will wait, while you sit down and write;
He says he's not in any haste, — and make it something light;
He says you needn't vex yourself to try to be effulgent,
Because, he says, champagne enough will keep them all indulgent."
I slept — at least I think I slept — an hour by estimation,
But if I slept, I must have had unconscious cerebration,
For on my desk, the morrow morn, I found this ordered verse;
Pray take it as you take your wife, — "for better or for worse."

A golden wedding: fifty earnest years
This spring-tide day from that do sadly part,
When 'mid a learned throng, one shy, grave lad,
Half conscious, won the Mistress of our Art.
Still at his side the tranquil goddess stood,
Unseen of men, and claimed the student boy;
Touched with her cool, sweet lips his ruddy cheek,
And bade him follow her through grief and joy.
"Be mine," she whispered in his startled ear,
"Be mine, to-day, as Paré once was mine;
Like Hunter mine, and all who nobly won
The fadeless honors of that shining line.
"Be mine," she said, "The calm of honest eyes,
The steadfast forehead, and the constant soul;
Mine the firm heart on simple duty bent,
And mine the manly gift of self-control.
"Not in my service is the harvest won
That gilds the child of barter and of trade;
That steady hand, that ever-pitying touch,
Not in my helping shall be thus repaid.
"But I will take you where the great have gone,
And I will set your feet in honor's ways;
Friends I will give, and length of crowded years,
And crown your manhood with a nation's praise.
"These will I give, and more; the poor man's home,
The anguished sufferer in the clutch of pain,
The camp, the field, the long, sad, waiting ward,
Shall seek your kindly face, nor seek in vain;
"For, as the sculptor-years shall chisel deep
The lines of pity 'neath the brow of thought,
Below your whitening hair the hurt shall read
How well you learned what I my best have taught."
The busy footsteps of your toiling stand
Upon the noisy century's sharp divide,
And at your side, to-night, I see her still,
The gracious woman, strong and tender-eyed.
O stately Mistress of our sacred Art,
Changeless and beautiful and wise and brave,
Full fifty years have gone since first your lips
To noblest uses pledged that forehead grave.
As round the board our merry glasses rang,
His golden-wedding chimes I heard to-night;
We know its offspring; lo, from sea to sea
His pupil children bless his living light.
What be the marriage-gifts that we can give?
What lacks he that on well-used years attends?
All that we have to give are his to-day, —
Love, honor and obedience, troops of friends.

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Warm weather watch for the elderly

Hot weather is more than a topic of conversation — it is also an issue of vital concern to the elderly.

Most medical experts agree that as people age they do not adjust as well as younger people do to increases in temperature, in part because they sweat less. In addition, the elderly are more likely to have underlying diseases or take medicines which decrease their resistance to heat stress. As a result, during periods of very high temperature — especially if it is also humid — the elderly or those with certain medical problems, such as heart disease, stroke, or diabetes, may build up body heat which can lead to heat stroke or heat exhaustion.

Heat stroke is a failure of all body cooling mechanisms. It is a medical emergency requiring immediate attention and treatment by a doctor. The symptoms include: faintness, dizziness, headache, nausea, loss of consciousness, high body temperature (104°F/40°C or higher), rapid pulse, and flushed skin.

Heat exhaustion is the most common form of illness due to hot weather. It takes longer to develop and results from a loss of body fluids and salt. The symptoms of heat exhaustion are: weakness, heavy sweating, nausea, and lightheadedness. It is treated by resting in bed away from the heat, restoring body water by drinking cool fluids, and lowering body temperature by taking sponge baths or applying wet towels to the body.

Two other heat-related disorders usually result from exercising in the heat, especially at the start of hot weather before the body has had a chance to become adjusted to the higher temperatures. Heat syncope is marked by dizziness, fatigue, and sudden faintness. Heat cramps are sharp pains in the abdomen, arms, or legs caused by loss of salt from the body due to heavy sweating. Both conditions are treated by resting, cooling off, and drinking extra liquids, or, under a doctor's supervision, replacing the salt that was lost.

During hot weather, the best precaution is to remain indoors in a cool place. If your home is not air-conditioned, you might go to a library, movie theater, or store during the hottest hours of the day.

Other good ways to cool off include taking baths or showers and airing yourself dry, placing icebags or wet towels on the body, and using electric fans. In addition, it is wise to:

- Stay out of direct sunlight and avoid strenuous activity.
- Wear lightweight, light-colored, loose-fitting clothing that permits sweat to evaporate. Wear a hat if you go outdoors.
- Drink plenty of liquids such as water or fruit and vegetable juices to replace the fluids lost by sweating. People who are overweight, very large, or exercising may need especially large quantities. Try not to drink alcoholic beverages (including beer) or fluids that have too much salt, since salt can complicate existing medical problems, such as high blood pressure. Use salt tablets only with your doctor's approval.
- Above all, take the heat seriously, and don't ignore danger signs like nausea, dizziness, fatigue, and fever. Use caution and common sense, and get prompt medical attention if you find yourself becoming ill.

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Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Please see summary of product information on following page.

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

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(*continued from page 1254*)

pital Center in New York City, a major teaching hospital affiliated with Columbia University's College of Physicians and Surgeons.

National Academy of Sciences honors

Two Brookhaven National Laboratory scientists have been honored by election to the National Academy of Sciences, they are Director Nicholas P. Samios and Senior Chemist Raymond Davis, Jr.

Brookhaven Lab names director

Nicholas P. Samios M.D. has been appointed director of Brookhaven National Laboratory, effective immediately.

Nassau County Medical Society elects new president

Sidney Mishkin, M.D. a general and thoracic surgeon and inventor of life-saving surgical instruments, has been elected president of the 2,200-member Nassau County Medical Society.

Others elected at the annual membership meeting held last night (May 25) at the Society's headquarters in Garden City were: Paul C. Lehmuller, M.D., Levittown, president-elect; Alfred W. Marks, M.D., Rockville Centre, first vice-president; Morton Goldfarb, M.D., Massapequa Park, second vice-president; Edward C. Sinnott, M.D., East Meadow, secretary; and John A. Ostuni, M.D., Freeport, treasurer.

State Cardiological Society elects officers

Michael V. Herman, M.D., of Bronxville, N.Y., has been elected president of the New York Cardiological Society.

The other offices installed at the Annual Scientific Session were: Doris J. W. Escher, M.D., Scarsdale, N.Y., president-elect; James T. Mazzara, M.D., Douglaston, N.Y., vice president; Alan F. Lyon, M.D., Scarsdale, N.Y., secretary; and Mary Allen Engle, M.D., Pelham Monor, N.Y., treasurer.

The election of members to serve on the Board of Directors was also announced at the scientific session. They were: Randall B. Griepp, M.D., Brooklyn, N.Y.; Norman Krasnow, M.D., Brooklyn, N.Y.; Joseph Lauterstein, M.D., Monticello, N.Y.; Stephen Scheidt, M.D., New York, N.Y.; James Scheuer, M.D., Bronx, N.Y.; and Edmund H. Sonnenblick, M.D., Bronx, N.Y.

Muscular Dystrophy posts named

Howard A. Rusk, M.D., pioneer in the field of rehabilitation medicine, and Lawrence Z. Stern, M.D., noted neurologist, were elected to key posts of the Muscular Dystrophy Association (MDA). Dr. Rusk was named an MDA Vice president and Dr. Stern will serve as a Corporate Member of the Association.

(*continued on page 1277*)

Serendipity in our files

... the following originally appeared in the New York State Journal of Medicine, 1901, vol 1, pp 12, 13 and vol. 3, p 49.

In Memoriam.

EDWARD ROBINSON SQUIBB, M.D.*

BY JOHN D. RUSHMORE, M.D.
Brooklyn, N.Y.

DR. EDWARD R. SQUIBB was born in Wilmington, Delaware, July 4, 1819. His medical education was received in Philadelphia at the Jefferson Medical College, and from this institution he was graduated in 1845. He began his medical career as a surgeon in the United States Navy, and those who knew him well can recall with pleasure the relation of his experiences on shipboard. To the end of his life he loved the sea, and no form of relaxation was enjoyed more or was more beneficial to him than an ocean voyage. In 1853 he was acting as surgeon in charge of the Naval Hospital in Brooklyn. He had at that time reached in line of promotion the position of Passed Assistant-Surgeon. About 1863 he resigned from the Navy, and failing to receive from the Government sufficient funds to carry on the investigations and work necessary for the manufacture of pharmaceutical preparations, of which the Government was in need, he established a private laboratory and, to quote from the *Medical News*, "began what has been one of the most valuable life-works that this country has known in the history of medicine, for it was medicine itself of which he was master. A chemist and a physician he was, but with all the keen desire of the true scientist to discover remedies and of the doctor to apply them to human ills. Instead of practising at the bedside with the drugs the names of which he had learned in his medical books, he studied the drugs themselves chemically, physiologically, therapeutically, and sent them out to his brother practitioners in such form that the whole country, in fact, the profession of the round world accepted his dictum, and made his name the standard mark for purity and accuracy in pharmaceutical preparations."

It is fitting that the Kings County Medical Association should do all honor to his memory. He was one of its founders, and in the defense of the principles on which it is based he took a leading part nearly twenty years ago, when with many others he withdrew from the New York State Medical Society and subsequently formed the New York State Medical Association, of which this body is an integral part. He was a man of strong convictions; but no better evidence of his freedom from any strain of intolerance or prejudice can be furnished than his modest and temperate but firm defense of what at that time he thought was right; and his quiet accuracy of statement then, as always, was as far as possible from the blustering confidence that characterizes the support of a prejudice. The position which he took and maintained so sturdily alienated no man's affectionate regard for him, and some of those that differed from him then bore willing testimony to his worth by their presence at the funeral service which in its simplicity accorded with his own wish. He was a member of the New York State Medical Association, Kings County Medical Association, Metropolitan Museum of Art, the Philosophical Society of Philadelphia, and many other societies of like character.

His death, the immediate cause of which was cardiac dyspnea, occurred on the evening of October 25, 1900, at his home. The following extract from an obituary notice published in the daily press is a touching and worthy tribute to his character:

"The death of this well-known maker of medicines is the removal of a sturdy character, a fine thinker, an eminent chemist and a strong, clear personality. Science, philanthropy, religion and citizenship have lost a bulwark and an ornament in him.

"He was a great power in Brooklyn—out of sight. He never advertised. He never made addresses. He wrote only within the lines, on the subjects and for the members of his own profession. He abhorred publicity or praise. Yet his influence on medicine, on medical thought, on medical practitioners and sympathetically on public health was not unlike that of the Gulf Stream on climate or of the Nile on soil. Men and women lived, labored, died and won renown here, who never knew of him. But those who knew Brooklyn to its elements, to its foundations, who knew medicine to its causes and beginnings, knew that this quiet, true, diligent man, this incarnated conscience and this great embodied capacity was veritably a genius, truly a world benefactor, one whom the giants and the literature of medicine around the earth held in almost worshipful veneration.

"He was a martyr as well as marvel of science.

---

* Read before the Kings County Medical Association, December 11, 1900.

Over a generation ago his devotion to his calling subjected him to injuries from an explosion by which his life was long in danger, his sight long threatened and his visage permanently and sadly marred. The latter misfortune was the only one that did not pass away. He bore it with dignity, philosophy and fortitude. It increased his congenital aversion to public occasions, but it, by reflex action, sweetened to him the society of friends and the comforts of literature and thought. It in nothing affected him, except to confirm and augment his faith in the Divine Goodness, giving, as it did, to him, a cross to bear which he bore in the spirit and love of the Master. To those aware of the causes and of the ordeal, this affliction made his career replete with the power of pathos and eloquent with the pathos of power.

"Long ago a wave of adversity rolled over and prostrated this extraordinary man. His medical brethren quietly put him on his feet, with a love gift that enabled him to start the world again. His rehabilitation was essential to their sense of security in their own work. Their gift to him was a debt, they felt, not a gift and not a loan. Not so felt he. As soon as he could he returned it all with interest to the full. He would owe no man anything even by implication. His exquisite act of honor has been within the knowledge of the descendants of those to whom it was tendered, for over a generation. It is permitted to tell it now that he is dead. Said Goethe: 'The Spirit in which we work is the chief matter.' The spirit in which E. R. Squibb worked was worthy of the best ideals of duty and of consecration to humanity."

A JOURNAL SUPPLEMENT.—With the April number of the JOURNAL will be distributed an attractive supplement containing the paper by Dr. E. H. Squibb, of Brooklyn, entitled "Brief Comments on the Materia Medica, Pharmacy and Therapeutics of the Year Ending July 1, 1900," read at the last annual meeting of the State Association. The publication will be of the same size as that of former papers on this subject by the author, and will be found invaluable as a book of reference regarding the advances that have been made during the year in the branches of which it treats. If any member of the State Association fails to receive a copy promptly, one will be forwarded on application to Dr. Squibb, P.O. Box 760, Brooklyn, N.Y.

Ulcer drug found to increase alcohol intoxication

Ulcer patients who tipple while taking the widely prescribed ulcer medication cimetidine are likely to feel drunker than usual.

Pharmacologists at Vanderbilt University School of Medicine, Nashville, Tenn., compared the influence of cimetidine and a placebo on alcohol metabolism in six volunteers. When the subjects drank while taking cimetidine, their blood contained higher concentrations of alcohol that appeared earlier and lasted longer than when they took the placebo; they also felt more intoxicated. Investigators John Feely, MD, and Alastair J J Wood, MBChB, report their findings from the double-blind study in this week's *Journal of the American Medical Association.*

Used to inhibit the secretion of stomach acid in ulcer patients, cimetidine accounts for the highest volume of retail sales of prescription drugs in the United States. The authors do not know exactly how cimetidine produces its effects on alcohol metabolism. The changes, however, are small and "unlikely to result in socially significant consequences," they say.

Obituaries

John R. Kuhl, M.D., Hammondsport.
Died February 15, 1982; age 79.
University of Buffalo Medical School, 1931. Memberships: The Medical Society of the County of Steuben, Medical Society of the State of New York; American Medical Association.

Harry A. Mackler, M.D., Brooklyn.
Died January 12, 1982; age 87.
Long Island City Hospital Medical School, 1919. Memberships: Medical Society of the County of Kings, Medical Society of the State of New York, Diplomate American Board of Abdominal Surgery.

Stuart F. MacMillan, M.D., Schenectady.
Died March 9, 1982; age 83.
Albany Medical College, 1925. Memberships: Fellow, American College of Surgeons; Diplomate, American Board of Surgery; charter member, Alden March Surgical Society; the Medical Society of the County of Schenectady; the Medical Society of the State of New York.

Julius Marcus, M.D., East Meadow.
Died January 19, 1982; age 75.
Cornell Medical College, 1931. Memberships: Bronx County Medical Society, Medical Society of the County of Nassau, Medical Society of the State of New York.

Edith A. Neumann, M.D., Jamaica.
Died February 28, 1982; age 84.
University of Berlin, 1924. Memberships: Medical Society of the County of Queens; Medical Society of the State of New York.

Brahim A. Mandour, M.D., Utica.
Died March 15, 1982; age 72.
Syracuse University Medical School, 1937. Memberships: Medical Society of the County of Oneida; Medical Society of the State of New York; American Medical Association.

Jacob B. Ostroff, M.D., Brooklyn.
Died November 14, 1981; age 78.
Tufts University Medical School, 1982. Memberships: Medical Society of the County of Kings; Medical Society of the State of New York.

William Vaughn Owen, M.D., Webster.
Died February 19, 1982; age 56.
University of Minnesota Medical School, 1952. Memberships: Medical Society of the County of Monroe; Medical Society of the State of New York.

Theodore Perl, M.D., Syracuse.
Died February 23, 1982; age 66.
Syracuse University College of Medicine, 1942. Memberships: Fellow, American College of Radiology; Jacob-Elsner Medical Society; the American Roentgen Ray Society; Radiology Society of North America; Medical Society of the State of New York.

Arthur Jay Philip, M.D., Rockville Center.
Died March 16, 1982; age 76.
University of Maryland Medical School, 1932. Memberships: Medical Society of the County of Nassau; Medical Society of the State of New York; New York State Society of Dermatology; American Medical Association.

Pro V. Prewitt, M.D., New York City.
Died March 21, 1982; age 89.
University and Bellevue Medical College, 1920. Memberships: Medical Society of the County of New York; Medical Society of the State of New York; Academy of Medicine.

Stanford Pulrang, M.D., New York City.
Died March 20, 1982; age 85.
McGill University, 1930. Memberships: Academy of Medicine; Medical Society of the County of Westchester; Medical Society of the State of New York.

Enio Romanelli, M.D., The Bronx.
Died March 30, 1981; age 54.
University of Rome (Italy), 1953. Memberships: Medical Society of the County of Queens; Medical Society of the State of New York.

Samuel Rosenfeld, M.D., Brooklyn.
Died August 27, 1981; age 81.
New York Medical College, 1923. Memberships: American Geriatric Society; Kings County Medical Society; Medical Society of the State of New York.

Solomon Rosokoff, M.D., Tonawanda.
Died February 22, 1982; age 72.
University of Buffalo Medical School, 1935. Memberships: American Academy of Family Physicians; American Medical Association; Medical Society of the State of New York; Erie County Medical Society.

Karl J. Simon, M.D., Yonkers.
Died December 7, 1981; age 86.
Medical Schools of Munich and Heidelberg, 1920. Memberships: Academy of Medicine; Medical Society of

the County of Westchester; Medical Society of the State of New York.

Henry Bruner Sutton, M.D., Ithaca.
Died March 13, 1982; age 88.
Cornell Medical School, 1921. Memberships: Fellow, American College of Surgeons; American Medical Association; Medical Society of the State of New York; Tompkins County Medical Society.

Ralph M. Towlen, M.D., South Jamesport.
Died March 11, 1982; age 75.
University of Michigan Medical School, 1930. Memberships: American Medical Association; Medical Society of the County of Suffolk; Medical Society of the State of New York.

Matthew Walzer, M.D., Brooklyn.
Died February 12, 1982; age 87.
Cornell University Medical School, 1919. Memberships: Diplomate, American Board of Internal Medicine; American Academy of Allergy; American Association of Immunologists; Medical Society of the County of Kings; Medical Society of the State of New York; American Medical Society.

Benjamin W. Warner, M.D., New York City.
Died April 2, 1982; age 79.
State University Brooklyn, 1926. Memberships: Bronx County Medical Society; Medical Society of the State of New York; American Medical Association.

Morris Schwartz, M.D., Glenham.
Died September 17, 1981; age 73.
University College Hospital (London, England), 1936. Memberships: American Academy of Family Physicians; American Medical Association; Medical Society of the County of Duchess; Medical Society of the State of New York.

Morris K. Silberman, M.D., Riverdale.
Died February 10, 1982; age 90.
New York University College of Medicine, 1915. Memberships: Fellow, American Academy of Dermatology and Syphilology; American Medical Association; Medical Society of the County of New York; Medical Society of the State of New York.

William Dorus Stubenbord, M.D., New York City.
Died January 3, 1982; age 77.
Cornell University Medical College, 1931. Memberships: Diplomate, American Board of Internal Medicine; Fellow, American College of Physicians; Medical Society of the County of New York; Medical Society of the State of New York.

William Roland Wasserman, M.D., The Bronx.
Died January 30, 1982; age 76.
Tufts University Medical School, 1928. Memberships: American Medical Association; Medical Society of the County of Bronx; Medical Society of the State of New York.

Harry Yarnis, M.D., New York City.
Died February 7, 1982; age 77.
Columbia University College of Physicians & Surgeons, 1930. Memberships: Academy of Medicine; New York Gastroenterological Society; American Medical Association; Medical Society of the County of New York; Medical Society of the State of New York.

G. Harold Warnock, M.D., Auburn.
Died January 4, 1982; age 72.
Buffalo University Medical School, 1933. Memberships: American Medical Association; Cayuga County Medical Society; Medical Society of the State of New York.

Bernard A. Weisl, M.D., Jamesburg, N.J.
Died January 7, 1982; age 76.
New York University Medical School, 1938. Memberships: Dipomate, American Board of Obstetrics and Gynecology; Fellow, American College of Surgeons; Medical Society of the State of New York.

Frederick S. Willner, M.D., Forest Hills.
Died February 28, 1981; age 70.
University of Vienna Medical School, 1936. Memberships: Diplomate, American Board of Psychiatry and Neurology; American Psychiatric Association; American Academy of Psychoanalysts; Medical Society of the County of Queens, Medical Society of the State of New York; American Medical Association.

William N. Zahm, M.D., New York City.
Died February 1, 1982; age 69.
Georgetown University Medical School, 1940. Memberships: American Geriatric Society; American Occupational Medicine Society; Academy of Medicine; New York Cardiological Society; New York Society for Internal Medicine; American Medical Association; Medical Society of the County of New York; Medical Society of the State of New York.

Hyman Zuckerman, M.D., New York City.
Died January 18, 1982; age 72.
Royal University of Pisa (Italy), 1937. Memberships: Fellow, American College of Cardiology; Fellow, American College of Physicians; Fellow, American College of Chest Physicians; American Medical Association; Medical Society of the County of New York; Medical Society of the State of New York.

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HOW CONTEMPORARY IS OUR NUTRITION EDUCATION?

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Assistant Professor
School of Public Health
University of Illinois Medical Center
Chicago, Illinois 60612

The 1980s offer unprecedented opportunities for communicating to people the benefits of choosing appropriate diets and for helping them act upon this knowledge.

Nutrition education is hardly something newly discovered. There exists in this discipline a rich heritage of expertise and good solid wisdom upon which professionals can build. The "newness" relates to the tools and resources at our fingertips – if they are recognized and capitalized upon.

No pretense is made in this article of putting forth any new insights regarding more effective methods of instruction or innovative messages on current concepts. The objective here is to stimulate thoughts and to reflect together on significant changes that have important implications for those who strive to help others make informed and, *in their own opinions,* appropriate food choices.

This article will address the pertinent changes in nutrition which have occurred over the past twenty years and have had the greatest impact on nutrition education. These changes are divided into three categories: scientific advances, personal life-style variation, and societal efforts to enhance nutrition status.

Scientific Advances

Within the last twenty years, research has provided new information that has disrupted, to a certain degree, traditional approaches to nutrition education. The diet-heart disease hypothesis, for example, compels educators to include in nutrition messages the risk of high intakes of saturated fat and cholesterol for heart disease in certain people. It is now necessary to be able to deal educationally with incomplete scientific evidence regarding the implications of such research for the population at large.

Other messages from research labs are less controversial, but also continuing to unfold. The advantages of breast feeding are now widely accepted, but hardly completely understood. The metabolic functions of many trace elements have begun to be elucidated, but nutrition educators are encumbered by limited information regarding human requirements for these nutrients and the lack of food composition data for trace elements. This task is complicated by incomplete information reaching the public and leading them to "self-medication" with supplements. In this respect, nutrition educators have justifiable concerns about possible harm due to nutrient imbalances or toxicities.

Nutrition education messages also must be updated as researchers report that some fat soluble vitamins function more like hormones than co-factors; that fiber is not one but many substances, each perhaps with quite different functions; and that past lessons about fat – once regarded simply as a rather mundane source of energy – must now include newer knowledge of essential fatty acids, prostaglandins and myelinization as well as atherogenesis. Furthermore, nutritionists must translate for students and for the public hypotheses regarding diet and cancer, the safety of additives, and countless reported cures and effects – some valid, others unfounded – of almost every vitamin in the nutrition alphabet.

The above are only examples, hardly an inclusive recitation of scientific advances since the early 1970s. An adage states that scientific "truth" may change with the morning's mail. As a profession, has newer information been incorporated into our current nutrition education messages?

Personal Life-Style Variation

Life-style affects food preferences and nutrient needs and life-styles will continue to change as they have for centuries.

Jogging and exercise are "in" for the 1980s. Such increased expenditures of energy raise questions that nutrition educators must be able to answer. The implications of this life-style variation go beyond physiology, however. Exercisers are a part of an even larger community of body-conscious, health-conscious persons. This population expects nutrition educators to be able to tell them not only about planning additional balanced energy sources, but also about diet and health and how the "magic" of food can enhance their athletic abilities.

The quest for naturalness pervades our society and nutrition educators must put this need – perceived or real – into nutrition education perspectives. The challenge is heightened by dramatic modifications in the food supply since World War II. Some new products offer improved probability of supporting health; others are bogus and potentially misleading.

Economics is another major influence on food choices. Double-digit inflation is squeezing food budgets and threatening the diet planning of persons, especially the elderly, on fixed incomes. Unemployment creates an even greater hazard because the food budget decreases almost instantaneously. The challenge to teach balancing dollars and nutrients is much more pervasive today than only a decade ago.

For a variety of reasons, many persons are adopting, or moving toward, vegetarian diets. In the recent past, vegetarian diets were often considered in the context of nutrition misinformation and food faddism.[1] Today, each nutrition educator has a responsibility, regardless of his or her personal food patterns and preferences, to meet a growing public need for planning nutritionally adequate vegetarian diets

Another major change affecting what people eat is how and where they live. The variability today is great; single-parent households, families where both parents work (perhaps on different shifts), group houses, and singles (students, divorcees, widow/ers or others) living alone to name a few. Limiting the nutrition education target audience to the housewife-mother is about as relevant as still talking about three sit-down meals a day – all prepared in the family kitchen.

Societal Efforts to Improve Nutritional Status

Various groups in both the public and private sectors have contributed to improving the nutritional status of the population.

Government influence on diets has grown logarithmically during recent years. Federal food program budgets, even after proposed cuts for the fiscal year 1982, are more than 15 billion dollars. The food stamp, school lunch,

(continued on page 1290)

NYU MEDICAL CENTER
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COURSE DESCRIPTION:
This new course will focus on controversial clinical situations that confront the general internist. Each three-hour session will consist of case presentations in a specific medical subspecialty. The faculty will provide the rationale for each step in the diagnostic and therapeutic management of the cases. They will also present an overview of the current controversies regarding management that will be highlighted in written hand-outs.

Strictly Limited to 60 Participants

TOPICS:
Unstable Angina: The Question of Coronary Artery By-Pass
Refractory Heart Failure: Use of Newer Agents
Chronic Active Hepatitis: When to Treat
Peptic Ulcer Disease: New Concepts in Management
Thyroid Nodule: Surgery vs. Suppression
Osteoporosis: Can We Prevent It?
Pulmonary Embolism: A Case of Iatrogenesis
Thrombophlebitis: Diagnosis and Management
Venereal Diseases: New Problems
Breast Cancer: New Recommendations for Treatment
Renovascular Hypertension: When to Work it Up
Diabetes: How Tight is Tight Control?
Management of Clinical Problems in the Elderly
Common Medical Emergencies: Practical Lessons from the Emergency Room
Hyperuricemia and Gout
The Periodic Health Exam: How Often and What Should Be Included
Atypical Pneumonias: Differential Diagnosis

FEE: $565.

ACCREDITATION: 30 AMA Category I credit hours
30 AAFP Prescribed credit hours (pending)

NEW STRATEGIES IN DIABETIC MANAGEMENT

SATURDAY, NOVEMBER 6, 1982

Clinical approaches to Type I diabetes have undergone dramatic changes within the past five years. Modalities include home glucose monitoring, multiple insulin injection regimens and insulin pump therapies.

This one-day program, designed for the non-diabetologist, presents the advantages and disadvantages of the new technologies and includes small group workshops providing sufficient practical experience with the new instruments to both manage patients involved in programs of tight glucose regulation and utilize these techniques in their everyday practice.

FEE: $120 **ACCREDITATION: 6 AMA Category I credit hours**

FOR FURTHER INFORMATION OR COURSE BROCHURES:
NYU Post-Graduate Medical School
550 First Avenue, New York, NY 10016
(212) 340-5295 (24-hour telephone service)

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(*continued from page 1270*)

Medical alumni elect officers

Robert A. Baumler, M.D., a 1952 graduate of the State University at Buffalo's School of Medicine has been elected president of the U/B Medical Alumni Association.

Recipient of 1982 Distinguished Service Award

Harold I. Kaplan, M.D., professor of psychiatry at New York University School of Medicine has been selected to receive the 1982 Distinguished Service Award of the Association of Psychiatric Out-patient Centers of America. The award is cosponsored by the New York University Postgraduate Medical School.

New President of ACP

Daniel D. Federman, M.D., FACP, dean for students and alumni, Harvard Medical School, was elected president of the American College of Physicians.

NACA expands–ten new appointments

HHS Secretary Richard S. Schweiker today announced the appointment of 10 new members to the National Advisory Council on Aging, which was recently expanded from 12 to 18 members to meet its increased responsibilities.

The members include leaders in the basic and medical sciences, education and public affairs.

The NACA reviews applications from scientists seeking financial support from the National Institute on Aging for research and training relating to the aging process. It also consults with and makes program recommendations to the Secretary of HHS and the directors of NIA and the National Institutes of Health.

Due to the growth of the NIA since it was established in 1974 (from a $15.9 million budget in 1974 to $75 million in fiscal year 1981), the NACA's functions and responsibilities have increased, requiring a broader range of scientific expertise than the size of the original Council allowed.

"As America grows older as a nation, it becomes more important than ever for us to learn more about the aging process," declared Schweiker. "These distinguished new members of the National Advisory Council on Aging will give a boost to our ongoing effort to better understand aging.

By learning more about aging, we'll help assure that our older citizens will live lives of fulfillment during the 'graying of America.' "

The 10 new council members are:

Carroll M. Brodsky, Ph.D., M.D., professor of psychiatry, University of California Medical Center, San Francisco

Alice Fenwick-Collier, deputy mayor of Akron, Ohio

(*continued on page 1278*)

Are the results of
$100 million worth of
government-funded research
on hypertension
worth reading about?

Robert Katzman, M.D., professor and chairman of the department of neurology, Albert Einstein College of Medicine

Dorothy T. Krieger, M.D., professor, division of endocrinology, Mount Sinai Medical Center

Ronald M. Lawrence, M.S., M.D., assistant professor of psychiatry, U.C.L.A. School of Medicine

William K. McClelland, president, Grand Peoples Company, Los Angeles

Adrian M. Ostfeld, M.D., Lauder professor, Laboratory of Epidemiology and Public Health, Yale University School of Medicine

Mildred L. Silver, president and administrator of Renal Hygienics, Tarzana, Calif.

Lewis Thomas, M.D., chancellor, Memorial-Sloan Kettering Cancer Center

Robert E. Windom, M.D., internal medicine, cardiology, Sarasota, Fla.

First report of synthetic human interferon in cancer therapy proves antitumor activity

The first published report of a study of synthetic human interferon in cancer therapy discloses that four of eight patients with advanced disease showed tumor shrinkage after treatment with an interferon prepared using gene-splicing techniques.

The study appearing in the March 26 issue of the *Journal of the American Medical Association* proves that at least one synthetic interferon has antitumor activity.

Interferons, a class of proteins secreted by animal cells, have been shown to confer resistance to viral infection and are being studied for their effect on cancer. Naturally produced human interferon, however, is scarce, limiting the scope of the studies. The production of a synthetic interferon by recombinant DNA techniques — otherwise known as gene splicing — promises an ample supply.

Clinical trials with the synthetic interferon were conducted at Stanford University Medical School by a team of researchers, including Thomas C. Merigan, MD, head of the school's department of infectious diseases and one of the nation's foremost investigators of interferon.

The interferon used in the Stanford study is identical in structure and biologic activity to one of the interferons produced by human white blood cells. It was produced by a laboratory strain of *Escherichia coli*, a common human intestinal bacterium, that was engineered to contain the human gene governing production of interferon. As it divides and redivides into millions of cells, each bacterium serves as a tiny interferon "factory."

During the Stanford study, one patient with breast cancer, two with lymphoma, and one with chronic myelogenous leukemia showed regression of their disease after treatment consisting of eight to 11 injections of nearly pure synthetic interferon in increasing doses over a period of 32 to 56 days. Side effects associated with the purified synthetic interferon were similar to those noted in other studies when partially purified interferon from human cells was used. These included fever, pronounced fatique, muscle pain, and headache, all of which proved reversible after the drug was discontinued.

These findings suggest that the toxic side effects "are true properties of interferon" and not of a contaminant, according to Sandra J. Horning, MD, principal author of the study.

In an accompanying editorial, *JAMA* Senior Editor, Lawrence D. Grouse, MD, PhD, calls the study by Horning and her colleagues a prime example of how recombinant DNA research may change the practice of medicine. Such research already has led to the production of human insulin and human growth hormone, both of which may be useful in the treatment of disease.

The preparation of biologically active synthetic interferon is yet another milestone in the development of recombinant DNA technology as a tool to produce medically useful substances.

Grouse warns, however, that the excitement created by the recombinant DNA industry "must not extend to the medical community, lest it result in a loss of scientific detachment. The applicability of recombinant DNA products to medical practice must be evaluated without undue haste," he says.

Stimulant medications may cause tic syndrome

Some children who take stimulant medications prescribed for hyperactivity are at risk for developing a severe tic disorder known as Gilles de la Tourette's syndrome, according to Thomas L. Rowe, MD, and colleagues from Yale University School of Medicine writing in the March 26 issue of the *Journal of the American Medical Association*.

Tourette's syndrome is a neuropsychiatric disorder that appears in children from age 4 to 18 years. It is characterized by persistent motor tics (involuntary muscle twitches) and repeated vocal tics (involuntary sounds including grunting, barking, hissing, and shouting — often of repetitious sounds and obscenities).

As many as 500,000 children in the United States are taking stimulant medications for attention disorders. One in 1,500 — more than 300 children — may be particularly vulnerable to stimulant-induced Tourette's syndrome, either because of a genetic predisposition to the disorder or because their hyperactive behavior is actually an early symptom of Tourette's syndrome, says Rowe.

Treatment with stimulants can elicit tic symptoms in vulnerable children or worsen existing symptoms into a full-blown case of Tourette's syndrome, which may not be reversible even after the drug is discontinued, Rowe warns.

Rowe's group reports that 15 of 100 patients they evaluated for Tourette's syndrome developed the symptoms following the use of stimulant medications (Dexedrine, Ritalin, or Cylert) originally prescribed for attention disorders. Discontinuing the stimulant medications and starting therapy with haloperidol (Haldol), a major tranquilizer, has decreased tic symptoms in some but not all of these patients.

The widespread use of stimulant medications may be increasing the incidence of Tourette's syndrome, Rowe speculates. Children with hyperactive or attention disorder symptoms need to be evaluated carefully for existing tics and Tourette's syndrome and for a family history of these conditions before a decision is made about beginning stimulant therapy, Rowe advises.

Material for inclusion in the Medical meetings section must be received eight weeks prior to publication date.

Medical Meetings

World Medical Association to conduct International Continuing Medical Education (CME) meeting

An international assemblage of physicians and medical educators is expected for the World Medical Association (WMA) Continuing Medical Education Meeting in Honolulu, Hawaii, October 11 to 14, 1982.

The WMA Meeting, to be held in conjunction with the 126th annual scientific meeting of the Hawaii Medical Association (HMA), will provide up-to-date continuing medical education on current topics of interest to physicians.

Among the topics to be discussed are "Evaluation of Methods of Continuing Medical Education", "Leprosy", "Current Advances in Pharmacotherapeutics", "Current Technologic Advances", "Health Care Manpower", and "Current Advances in the Disorders of the Central Nervous System".

The program offers a total of 19 hours of Category 1 Continuing Medical Education Credits.

A special feature will be the presentation of the Live Clinics at various hospitals, and the use of Video Clinics, which are videocassette programs for continuing medical education, produced by the American Medical Association.

American Association of Medical Assistants convention

The 26th Annual Convention of the American Association of Medical Assistants (AAMA) will be held in Houston, September 20 to 24, 1982, at the Shamrock Hilton Hotel. More than 20 educational sessions — geared to basic, intermediate, and advanced skill levels — will be held during the meeting. Special subject workshops will allow medical assisting practitioners, educators, and students to choose learning opportunities in their particular areas of interest.

Material for inclusion in the medical news section must be received eight weeks prior to publication date.

In 1977, when the Veterans Administration compared Step-2 regimens in 450 mild hypertensive patients, which regimen was proven most effective?[1]

The Month in Washington

At the end of the month the Senate and House were in deep debate on the budget for next fiscal year. The outcome will determine the size and scope of the federal health effort.

The stakes in the debate are high — the size of the federal deficit; the issue of modifying the scheduled tax cuts; adjustments in Social Security benefits; and the congressional budget process, itself.

The Senate bill, approved by the Senate Budget Committee on a party-line vote and endorsed by President Reagan, calls for $95 billion in additional taxes over the next three years, a freeze on most domestic spending and a smaller increase in Defense spending than originally sought by the Administration. The most controversial provision is for an unspecified savings of $40 billion in Social Security benefits.

The House Budget Committee bill, also adopted by a party vote, would leave Social Security benefits intact and provide for higher domestic spending levels.

The Senate bill would cut Medicaid benefits by $700 million next fiscal year, compared with only $59 million in the House bill. The Senate Medicare reduction was $5.1 billion, almost $3 billion more than the House measure provides.

*** *** ***

The Federal Trade Commission's asserted jurisdiction over the professions, including medicine, would be stripped from it under a bill approved by the Senate Commerce Committee.

The Committee action, on a 10–5 vote, was a triumph for the American Medical Association and other professional groups that have been challenging the FTC's seven-year campaign against health and other professional associations.

The Supreme Court earlier this year failed to resolve the jurisdictional question in a tie, 4–4 vote on the landmark FTC case against the AMA's code of ethics governing advertising by physicians. As a result, the FTC's strictures against the AMA were left standing.

The AMA and other professions have argued that the FTC was established to police business activities, not those of the learned professions which are governed by state regulations.

The Commerce Committee action came after a heated debate on an amendment by Sen. Ted Stevens (R-AK) to a bill reauthorizing the FTC for three years. Addressing his fellow committee members and before a crowded hearing room, Stevens said the FTC had not asserted any jurisdiction against the professions until 1975, after which "there has been considerable controversy."

The Committee should assure that the states can continue their traditional role of regulating the professions and the professions should be given the opportunity to discipline themselves, Stevens said. He noted that the Justice Department would continue to have powers to employ the antitrust statutes against the professions.

"The issue is the increasing extension of the federal bureaucracy into our daily lives," asserted Stevens. "Why should the FTC remove from the states the burden of being responsive to change?" he asked. If the present FTC course continues, the Senator said, "in the end you will have federal standardization of the professions."

The opposition to Stevens' amendment was led by Committee Chairman Bob Packwood (R-OR). "Professional associations are honest and decent but as they see it often isn't the way the public sees it," Packwood said. He contended that state medical and bar associations are "hardly ever" regulated by the states.

Sen. Robert Kasten (R-WI), Chairman of the Committee's Subcommittee on the Consumer which handled the FTC legislation, said he supported the Stevens proposal because the FTC over the past few years "has directly overridden state regulatory programs." The agency, he said, "has gone beyond the general guidelines of what we would like to have from it."

Voting for the amendment were Senators Stevens, Kasten, Barry Goldwater (R-AZ), Harrison Schmitt (R-NM), Larry Pressler (R-SD), Ernest Hollings (D-SC), Daniel Inouye (D-HI), Wendell Ford (D-KY), James Exon (D-NE), and Howell Heflin (D-AL).

In opposition were Senators Packwood, Slade Gorton (R-WA), Nancy Kassebaum (R-KS), Howard Cannon (D-NV) and Donald Riegle (D-MI).

A few days before the Senate Committee vote, the AMA and seven other professional organizations had sent a telegram to President Reagan urging support for their position against FTC jurisdiction, since this would be "consistent with your goals of reducing federal regulation, restoring power to the states and relying more on private sector responsibility."

"This is a matter of major importance to all professional groups, and we are concerned that this Administration appears to be unresponsive" the telegram concluded.

Signing were the AMA, the American Dental Association, the American Optometric Association, the American Veterinary Medical Association, the National Society of Professional Engineers, the American Institute of Architects, the American Consulting Engineers Council, and the American Society of Civil Engineers.

The House Commerce Committee is expected to take up the questions of FTC reauthorization and jurisdiction soon. There is a strong drive in the House behind a measure (H.R. 3722) by Reps. Thomas Luken (D-OH) and Gary Lee (R-NY) that would impose a moratorium on FTC's actions against the professions. Almost 200 House members have co-sponsored the bill.

Prepared by the Washington D.C. office of the American Medical Association.

The Stevens amendment before the Senate Committee was patterned after legislation (S. 1984) introduced by Senators James McClure (R-ID) and John Melcher (D-MT), two leading Senate proponents of restricting the FTC's scope over the professions.

The legislation is given a good chance of clearing Congress if opponents do not succeed in keeping it from floor votes in House and Senate.

*** *** ***

The House Commerce Committee has formally adopted a proposal to place federal health planning into a block grant to the states, stripping most centralized control from the controversial program.

The action came on an amendment by Representatives Richard Shelby (D-AL) and Edward Madigan (R-IL) over the initial opposition of Representative Henry Waxman (D-CA), chairman of the health subcommittee.

The program would be kept alive for two more years with funding of $64 million next fiscal year. However, the nature of the program would be changed significantly with the states and localities given a much freer hand and many current restrictions lifted.

The certificate-of-need (CON) requirements in present law would be liberated greatly, with the CON for capital expenditures put at $5 million in comparison with the present $600,000. The CON for institutional health services would be set at $1 million.

Strongly opposed by the AMA, the planning program which is up for reauthorization this year, has been a target of the Reagan Administration which wants to phase it out.

The Senate Labor and Human Resources Committee on a tie vote last month blocked a proposal to continue and revise the planning program.

*** *** ***

The government has reported progress in collecting overdue school loans from health professionals and announced new steps to improve collection and prevent abuses.

As a result of a crackdown on overdue loans, 80 physicians employed by the Health and Human Services (HHS) Department were discovered to be delinquent and notified they will be disciplined unless payments are brought up-to-date immediately. A review by HHS Inspector General Richard Kusserow also found 83 delinquent physicians associated with medical schools.

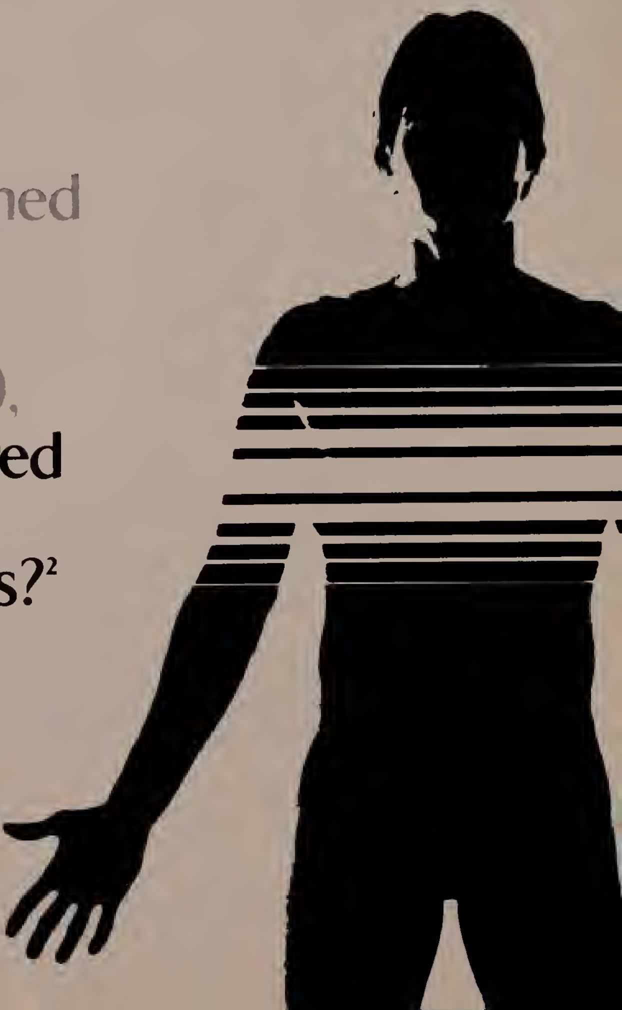
Kusserow said six medical schools have increased collections by almost 250%. More than $5 million in delinquent loans could be erased within one year at that rate, Kusserow said.

The reviews revealed $30.6 million in delinquent loans with more than $5 million owed by physicians.

New regulations will establish new delinquency rate ceilings for schools and penalties for exceeding the ceilings. The Public Health Service Student Financial Aid guidelines are being revised to require schools to go to court to recover loans if necessary.

Senator Charles Percy (R-IL) has introduced legislation that would allow the Internal Revenue Service to release current addresses of delinquent borrowers to the schools holding the loans.

In 1979, when results were published for the five-year, 10,000-patient Hypertension Detection and Follow-up Program (HDFP study),
which Step-2 regimen was preferred and was deemed effective without significant adverse effects?[2]



*** *** ***

The Social Security Administration has proposed new medical standards to be used in evaluating disability claims.

The slightly tighter medical standards, published recently in the Federal Register for 60-day comment, are not related to the more rigorous standards announced last year for the disability program as a whole. Significant reductions to the number of beneficiaries is expected under the program.

The revisions on the Listing of Impairments reflect advances in medical treatment and diagnosis and Social Security's experience in evaluating claims. They are not based on any changes in the law.

Of the 13 body systems in the Listing, changes are proposed in all but two — skin disorders and genitourinary.

Significant changes are recommended for: respiratory, musculoskeletal, cardiovascular, digestive, hemic and lymphatic, neurological and neoplastic. Less significant are changes for special senses and speech and the multiple body systems listing. Minor changes are proposed for mental disorders and endocrine systems.

Slight changes also are proposed for the Listing of Impairments used in evaluating children under age 18 for Supplemental Security Income disability claims. The changes are for musculoskeletal, special senses and speech, genito-urinary, mental and emotional disorders, and neoplastic disease.

*** *** ***

The AMA has expressed its support for the basic goals of legislation to encourage the development of drugs for rare diseases, but called for specific changes that would "allay the concerns of practicing physicians."

The AMA, in a letter to Rep. Henry Waxman (D-CA), chairman of the House Commerce Health Subcommittee and sponsor of the bill, said that legislation was needed to solve the problem of developing and producing the so-called "orphan drugs" that are financial losers for their manufacturers.

The legislation (H.R. 5238) would amend the Food, Drug and Cosmetic Act to make drugs available on a limited basis for treatment of rare diseases even though the drug was still being tested. It also would provide the manufacturer with seven years of exclusive marketing even if the drugs could not be patented, and establish an interagency on orphan drugs. The legislation would amend the Internal Revenue Code to provide a tax credit to those who develop drugs for rare diseases.

*** *** ***

The Administration is considering legislative proposals to make Health Maintenance Organizations (HMOs) more competitive. Frank Seubold, PhD, Director of the HMO office, said a major question to be decided is whether separate legislation should be sought or whether to place the HMO law amendments with the overall pro-competition bill.

The HHS Department is working on a number of changes, Seubold said, but he stressed that none of them yet have reached the stage of final adoption as departmental policy by HHS Secretary Richard Schweiker.

Among the types of changes under scrutiny at HHS are proposals to give HMOs a free hand in charging members for services on top of the prepaid fee. At present, HMOs are limited to a nominal extra charge. In addition, staff people are considering dropping or easing the requirements for mental health and substance abuse services by HMOs. Another change designed to make HMOs more competitive with indemnity insurance would be to allow the organizations to vary their membership charges among their members, taking into account age, health status, etc.

Although the Administration wants to chop the HMO loan program to a bare minimum, officials say they still wish to encourage private development of the plans.

*** *** ***

Administration-proposed economies in the childhood immunization program could prove "costly and cruel," an official of the American Academy of Pediatrics has warned the Senate.

Vincent Fulginiti, M.D., Chairman of the Academy's Committee on Infectious Diseases, also criticized "sensationalized medical accounts of vaccine side-effects" that show evidence of frightening parents about pertussis vaccination.

Dr. Fulginiti told a Senate Labor and Human Resources Subcommittee that the delivery of vaccines to children "would be reduced to intolerably low levels" if there is no increase in the $28.8 million sought by the Administration for the immunization program next fiscal year. The seven-percent cut imposed on the program this year comes at a time when the cost of vaccine has increased 44 percent over the past two years, he said.

"Based on past experience, these cuts proposed by the Administration would prove terribly costly and cruel — costly in direct dollar terms to all of our citizens for many years to come, and cruel to the unfortunate victims and their families for a lifetime," said Dr. Fulginiti.

The danger was disupted by William Foege, M.D., Director of the Centers for Disease Control (CDC), who said the immunization program has become more efficient and the backlog of immunizations has been eliminated, making it possible to reduce costs. Dr. Foege also said he has been assured by HHS Secretary Richard Schweiker that the immunization program will be carefully monitored for adverse effects.

*** *** ***

HHS Department has sent notices to all hospitals warning that loss of federal Medicare and Medicaid payments could result from denial of treatment to the handicapped.

The letter was a result of the publicized "Infant Doe" case in Indiana where a deformed baby was allowed to die.

HHS Secretary Schweiker said "the President has instructed me to make absolutely clear to health providers in this nation that federal law does not allow medical discrimination against handicapped infants."

The letter said in part that "a recipient may not lawfully decline to treat an operable life threatening condition in an infant, or refrain from feeding the infant, simply because the infant is believed to be mentally retarded."

*** *** ***

Books Reviewed

Noguchi and His Patrons. By Isabel R. Plesset, Cranbury, New Jersey, Fairleigh Dickinson University Press, 1980. Illustrated, 320 pages. Hardcover, $30.00.

This book is a vast description of the actual beginnings of the great era of research in which we live today, the beginnings of the Rockefeller Institute for Medical Research. It took the author seven years of digging to amass this material; one look at the book can convince you of that. Of the 300 or more pages, 40 are given to references; each statement in the entire book is based on a reference that can be checked.

Scientific accuracy is not sacrificed to pleasant reading. The characters in the story are made very real. In addition to Hideyo Noguchi, M.D., himself, there are Simon Flexner, M.D., the Rockefellers, and a host of microbiologists of the early 1920s. Each project that Noguchi, a most distinguished bacteriologist and investigator, worked on was of course interesting to professors and researchers in the United States, as well as in England and Germany; the part that each played in Noguchi's buildup is mentioned, all of which is fascinating to read.

The Rockefeller Institute under Simon Flexner in those days had a military discipline. My own laboratory was near Noguchi's, and we got to know each other. He was a perfect soldier, kept his eye on the target, and worked his staff hard and long hours. All this is in the book, which is well worth having, studying, and keeping. **Philip Reichert, M.D.**

Gynecological Therapeutics. Edited by D. F. Hawkins, D.Sc., Ph.D., M.B. London, England, Bailliere Tindall, 1981. Illustrated, 287 pages. Hardcover, $37.50.

The editor of *Gynaecological Therapeutics* has had previous experience in bringing together authorities in specialized fields to provide the active physician with a single volume of procedures that have become established practice.

In the preface, the editor expresses the philosophy that

In 1980, when the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure published their recommendations, **which Step-2 regimen best met their criteria for effectiveness, safety, simplicity of titration, convenience, and economy?**[3]

the practicing physician should "take the trouble to understand the basis of current developments" and thereby enhance his ability to render care.

Several chapters require special mention: "Genetic and Congenital Sexual Disorders" by Sir John Dewhurst is a most concise and informative presentation by a leading authority in the field; "Psychosomatic Aspects of Gynaecology" deserves the reader's attention because it is an intelligent discussion of a very vital subject.

Although *Gynaecological Therapeutics* does not add any new knowledge to the field, it is a comprehensive textbook that consolidates current knowledge with therapeutic procedures in specific areas of gynecology. **Ralph M. Schwartz, M.D.**

The Immunology of Infant Feeding. Edited by A. W. Wilkinson. New York, Plenum Press, 1981. Illustrated, 151 pages. Cloth, $29.50 (Ettore Majorana International Science Series).

This book represents information regarding various aspects of infant nutrition and the multiple complex immunologic interactions. The data regarding the antibacterial and antiviral properties by breast milk, handling of food antigens, and predisposition to food allergy are clearly presented. The effects of protein calorie malnutrition on specific cell-mediated immune responses are summarized.

There are, however, a number of deficiencies in this volume: (1) these British authors compare breast milk to formulas employed in the United Kingdom. Since the book presumably is to circulate in the United States as well as the United Kingdom, there should be references to American cow's milk formulas, (2) the title is not an accurate reflection of the material presented. The data regarding food allergy relate more to young children, and perhaps the title should more accurately represent the material presented, and (3) there are many typographic errors. This is a multiauthored volume, which lacks a common theme and, unfortunately, contains many isolated chapters and redundancies. **Steven D. Douglas, M.D.** and **Mary Catherine Harris, M.D.**

Ethics and Regulation of Clinical Research. By Robert J. Levine. Baltimore, Urban & Schwarzenberg, 1981. Cloth, 299 pages. Price, $35.

On rare occasions, a book that provides the reader with more than he will want to know but not more than he needs to know is published. Furthermore, it is no small feat that Robert J. Levine has reduced a vast literature to a manageable size. But then Levine comes to his task with considerable personal experience with clinical research and institutional review boards. There are few, if any, persons as well qualified to write about the not always compatible subjects that this author has chosen. As Levine observes

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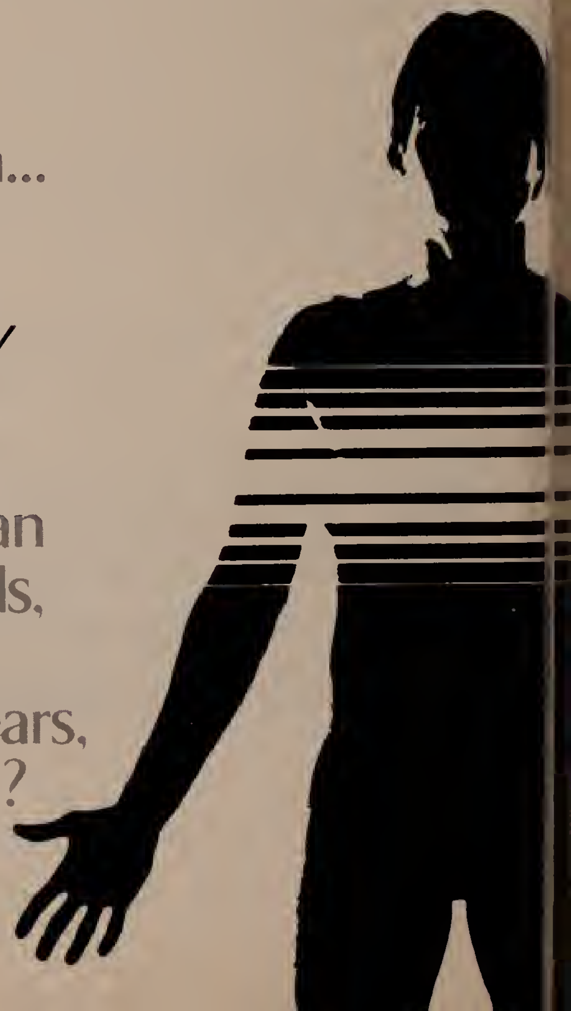

from time to time, it is not unusual that the interest of ethics in clinical research is in conflict with the interest of the regulations of clinical research, and vice versa.

Dr. Levine has made an important contribution to the literature in a number of ways. He has provided a logical approach to his subject, as evidenced by the chapter titles. He has pointed out the folly and the great cost of much of the work done by the institutional review boards. He has made a valid and desirable proposal that would change the function of these boards for the better were it adopted. And, finally, he has provided in his reference section that which must be considered a definitive bibliography of the subject at hand. **Rue I. Moore, A.B., B.D.**

Bladder Cancer. Edited by P. Skrabanek and A. Walsh. Geneva, Switzerland, International Union Against Cancer, 1981. (UICC Technical Report Series, Volume 60) Softcover, 192 pages. $16.00. (Distributed by Hans Huber Publishers, Langgasstrasse 76, Bern 9, Switzerland Ch 3000).

This booklet is an up-to-date account of cancer of the bladder, even though it barely brushes the topic of radiation therapy.

The different topics undoubtedly have been covered by other authoritative publications. This report can be defined as a summary of the latest knowledge on oncology of the bladder, even though it is somewhat incomplete. I would not recommend it for general use for every day clinical practice, but rather for somebody more inclined toward teaching or research. **Enio O. Solissio, M.D.**

Physicians' Guide to Diseases of the Oral Cavity. By Harriet S. Goldman, D.D.S. and Michael Z. Marder, D.D.S. Oradell, New Jersey, Medical Economics Company, Inc., Book Division, 1982. Illustrated, 230 pages. Hardcover, $39.50 (plus $1.25 handling).

The bibliography of the authors indicates that they have had vast experience in the subject matter and both have had instrumental roles in teaching oral pathology in several endeavors. I believe this book reflects their knowledge.

The book is very readable, well-illustrated, and informative. The organization is logical. They appropriately present localized disease in the early chapters and then go on to discuss systemic manifestations as they arise in the oral cavity. The color illustrations certainly embellish their discussion.

As a physician, I found it quite enjoyable to peruse the book without being concerned with the in-depth knowledge of dentistry and how it influences these diseases. The subject matter is presented in a clear manner designed for those with limited experience. There are some cursory discussions, however, particularly in dealing with oral carcinoma and salivary gland pathology, which may be too brief. Since the intent of the authors is only to provide the

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And there's more proof on the way!

1982 will see the completion of the Multiple Risk Factor Intervention Trial (MRFIT)—a six-year, 12,000-patient study assessing the factors that increase risk of cardiovascular disease. For the management of hypertension, the preferred Step-2 regimen in this study is reserpine-thiazide.

In 1978, in a preliminary report presented to the Epidemiology Section of the American Heart Association (Dallas, Nov 1978), after 12 months of the trial, fewer patients (5.3%) treated with reserpine suffered depression than even the untreated control group (7.7%)!

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general practitioner with exposure to this type of pathology, I feel that the book is more than adequate in achieving the authors' goals. This topic is often neglected in medical school and training, and therefore I recommend this book for most practicing physicians, particularly pediatricians, internists, and otolaryngologists. It provides an excellent reference guide when one is confronted with patients who have these oral lesions. **Steven M. Parnes, M.D.**

Managing Ob/Gyn Emergencies. Edited by John T. Queenan, M.D. Oradell, New Jersey, Medical Economics Company, Inc., 1982. Illustrated, 157 pages. Softcover, $15.95 (plus $1.25 handling).

The strength of this book lies in the clear, pragmatic clinical approach of the diagnosis and treatment of immediate and potential catastrophic life-threatening emergencies in obstetrics and gynecology. It should be particularly useful to residents and physicians practicing in relatively isolated medical communities.

The emergencies are more common in obstetrics where availability of supportive skilled assistance is often limited. Such emergencies often occur at night when only the obstetrician is available; consultation is limited and laboratory facilities may be inadequate. This book is especially helpful for the diagnosis and treatment of such catastrophies.

Emergencies originating from pulmonary embolism, amniotic fluid embolism, intrauterine and postnatal distress, eclamptic convulsions, and other syndromes are clearly presented. Rupture of the pregnant uterus following cesarean section is discussed, although trauma to the pregnant uterus is neglected.

Most catastrophies in gynecology allow time for reflection and consultation. The diagnosis and management of ruptured pelvic abscess, anesthesic emergencies, ectopic pregnancy, etc. are detailed.

Anovulatory bleeding and subarachnoidal hemorrage, which rarely present as gynecologic emergencies, are cogently discussed.

The book, measuring 4 in by 9 in in size, provides ready access by placement on a desk. **George Blinick, M.D.**

Visual Electrodiagnostic Testing: A Practical Guide for the Clinician. By Ronald E. Carr, M.D., and Irwin M. Siegel, Ph.D. Baltimore, Md., Williams & Wilkins, 1982. Illustrated, 126 pages. Cloth, $32.00.

The senior author has been known for more than 20 years as an authority in this field; he is nationally acclaimed for his contributions and for the referral center in the field he has built. The book is logically divided into three sections, with the first section covering basic concepts in

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Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in Pregnancy

Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS

Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

methods of electroretinography, electro-oculography, and visual-evoked cortical potentials. The second section is quite properly the largest; it consists of the correlation of the material in the first section with clinically manifest types of disorders. The third section contains technical data on the formulation and application of these techniques. The book should be a valuable guide for the audience for which it is intended and is, in fact, the only such guide available. I congratulate the authors and recommend the book most enthusiastically. **Ira Snow Jones, M.D.**

The Mountains and the Valleys are Mine: A Symposium on Rural Mental Health. Volume 1. Second edition. Edited by Thomas M. Cassidy, M.D., Marshall S. Gordon, M.S.W., and Abraham Heller, M.D. Ridgewood, New York, Bren-Tru Press (sponsored by the Gallia-Jackson Meigs Mental Health Board). Hardcover, 289 pages.

This is a magnificently produced tome and is impressive in its organization, design, typography, and visual effectiveness. For those interested in the field of mental health and particularly in the problems presented by rural America, this is an eminently satisfactory text. It is thorough and complete, covering most aspects of the mental hygiene delivery system. To understand its content, let me explain that it is the proceedings of a symposium that took place in the summer of 1979 and is the written transcription of the acta. It appears to be an accurate transcript although there were some sentences that were clearly spoken—not written in the colloquial flow—and probably should have been more closely edited. However, this a quibble when one views the large picture of this really monumental production.

For those closely allied with the field of psychotherapy in its broad sense of psychiatry, psychology, social service, and nursing care, there is much that is educational and informative. Granted this is a limited area of expertise but, especially for psychiatrists wedded to a metropolitan ethos, it could be an eye-opener as to problems found in rural health which, although different, still have a familiar ring. I recommend it to my city-mouse colleagues.

The excellence of the speakers and the wide range of expertise are formidable. The humor of presentation is often infectious and I enjoyed the humanity and humanness of each presentator. All seemed dedicated to their work and offered a credibility that is occasionally lacking in other symposia. In summary, I would urge at least a perusal for the interested practitioner. It is an excellent text to be part of a library. **Allison B. Landolt, M.D.**

ADVERSE REACTIONS

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Reserpine

Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

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References:

1. Propranolol in the treatment of essential hypertension. Veterans Administration Cooperative Study Group on Antihypertensive Agents. *JAMA* 237:2303-2310, 1977.
2. Five-year findings of the hypertension detection and follow-up program: I. Reduction in mortality of persons with high blood pressure, including mild hypertension. Hypertension Detection and Follow-up Program Cooperative Group. *JAMA* 242:2562-2571, 1979.
3. The 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 140:1280-1285, 1980.

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(*continued from page 1172*)

manufacturers to distributors and retailers located throughout his state had contributed to Pennsylvania becoming known as the look-alike drug center of the nation.

Several states have reported since the pseudo-speed article in the *New York State Journal of Medicine* publication in January 1982 cases of death from cerebrovascular accidents secondary to the ingestion of look-alike drugs containing varying quantities of phenylpropanolamine with or without the presence of ephedrine and/or caffeine. At the Benjamin Rush Center in Syracuse, in our 30-bed unit for drug- and alcohol-abusing adults, we have many instances of individuals who abuse both the look-alikes and the legitimately obtained capsules or tablets. In our 15-bed adolescent unit at any given time more than 50% of its occupants have an admitted history of abusing pseudo-speed, sometimes youngsters who do not abuse other substances including alcohol or marijuana.

I can, at this point, only encourage our New York State legislators to adopt legislation similar to that passed recently in Pennsylvania to ban the sale and/or distribution of look-alike drugs. The American Medical Association has rarely taken such an aggressive stand in recommending control of a nonprescription, nonillicit substance and I feel that the New York State Medical Society Drug Abuse Committee would be remiss in not following through with the recommendation from the AMA.

RONALD J. DOUGHERTY, M.D.
9429 Woodlawn Drive
Brewerton, New York 13029

Pink Disease and mercury poisoning

To the Editor: Dr. Maurissen's excellent article "History of Mercury and Mercurialism"* makes no mention of the now forgotten Pink Disease or erythrodema.

The age of onset was from six months to three years. It usually began with a slight fever, followed by loss of appetite, irritability, sweating and insomnia. Then slight swelling of the hands and feet appeared, with erythema, desquamation of the skin, photophobia, loss of knee jerks, and a general picture of misery. The condition continued for many months and some of the children died. It was considered variously to be a deficiency disease allied to pellagra, a vasomotor disturbance, or an infection.

It was the custom in the 1920s, 1930s, and 1940s, and probably much earlier, to "open the bowels" in children with infectious diseases, castor oil (of which I have horrid memories) and calomel (mercurous oxide) being favorites.

The two cases I saw, in 1943 and 1947, were treated by eminent pediatricians with calomel. It was at the end of the 1940s that Pink Disease was recognised as being caused by mercury poisoning.

The disease has now disappeared from the textbooks and many of our younger pediatricians have never heard of it.

M. G. JACOBY, M.D.
152 North Ocean Avenue
Patchogue, New York 11772

Hydralazine-induced lupus

To the Editor: Hydralazine-induced lupus is a well-recognized phenomenon.[1,2] It has been reported to be rare or nonexistent when the daily dose is less than 500 mg although a subgroup of the population which acetylates the drug more slowly may develop the condition on as little as 300 mg.[3] Therefore, we were surprised to diagnose hydralazine-induced lupus in a lady who received only 100 mg daily.

Case history: In January 1978, a 66-year-old white female was first found to be hypertensive. She had previously been followed for intermittent mild back pain felt to be due to scoliosis and secondary osteoarthritis and for primary hypothyroidism, clinically euthyroid on replacement therapy. The hemoglobin was 13.4, hematocrit 39, sedimentation rate 12. She was begun on hydrochlorothiazide 50 mg daily and hydralazine 25 mg four times a day. Over the next 14 months she was seen eight times. Blood pressures were normal and she was without complaints. In September 1979, she complained of the recent onset of pain, swelling, and stiffness in the hands, shoulders, and elbows. Examination confirmed mild swelling of the proximal interphalangeal and metacarpophalangeal joints of both hands and of both wrists. The sedimentation rate was 34, repeat 45. The hemoglobin was 11.9. Rheumatoid factor was negative; antinuclear antibody titer (ANA) positive 1 : 5120 with a homogeneous pattern. Anti-DNA antibodies were negative. Despite aspirin and sulindac, synovitis progressed. By November 1979, both wrists exhibited only 45 degrees flexion and extension. Grip strength was half normal. Both elbows lacked the terminal 5 degrees of extension. Hydralazine was discontinued. In December, she noted improvement in all affected joints. In January 1980, examination of the joints revealed return of normal function and resolution of synovitis. The ANA was still 1 : 5120 with a homogeneous pattern. Blood pressure was 170/100. Clonidine was started and propranolol later added. To date, there has been no recurrence of polysynovitis. Nonsteroidal anti-inflammatory drugs are not needed. By November 1980, the ANA titer had decreased to 1 : 320.

With this case in mind, physicians must watch for drug-induced lupus in patients receiving the relatively low doses of hydralazine commonly used in modern combined drug antihypertensive regimens.

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(continued from page 1275)

and Women, Infants and Children (WIC) Programs have increased the availability of foods to low-income persons. For public policy reasons based on freedom of choice for the poor, purchases made with food stamp money are not regulated by the federal government. On the other hand, the school lunch and WIC programs do control the foods offered.

The amount of foods affected by the federal government also includes food service in government buildings and food procurement for federal hospitals and prisons. The degree of "control" of food consumed is minimal in these situations, but the potential for influencing the amounts and types of foods available through these channels is significant.

Public sector activities also have impacted on nutrition education. In the early 1970s, the Food and Drug Administration (FDA) introduced the U.S. Recommended Dietary Allowances (U.S. RDA) as the standard for nutrition labeling and the old MDR (Minimum Daily Requirement) became history. Nutrition labeling has not accomplished miracles, but it should be recognized as an information tool – not an educational panacea. This tool would be more useful if more products were labeled. Also needed is development of administratively acceptable and educationally effective methods for presenting to consumers similar information for fresh, nonpackaged foods (e.g., point-of-purchase nutrient composition data). In reality, the effectiveness of the U.S. RDA labeling system is currently limited by the relatively minor accomplishments of nutrition educators to understand and teach this system.

In recent years, both the private and public sectors have heightened their sensitivity to food safety questions. The safety of many substances on the GRAS (Generally Recognized As Safe) list has been reevaluated and, in some cases, reclassified during the 1970s. The Food Safety Council with its joint consumer-industry membership is moving toward developing useful indices of benefit and risk. However, there remains a long way to go in prioritizing hazards and assessing the significance of relative risks – a fundamental process for alleviating unnecessary concern and concurrently eliminating unreasonable risks.

During the last five years, a plethora of reports on dietary guidance have been released for the public.[2] These have been issued by government sources as diverse as Congressional staffs, the Surgeon General, and interagency coordinating committees. Contributions from the private sector have come from the American Heart Association, the National Nutrition Consortium Board and several professional associations. In the late 1970s, emphasis on "defensive diet planning" characteristic of the Senate Select Committee Dietary Goals replaced guidance for "offensive diet planning," the concepts upon which the Basic Four system was founded. These two approaches merged with the publication in 1980 of the Dietary Guidelines endorsed by the Department of Agriculture and the Department of Health and Human Services.

An analysis of factors affecting contemporary nutrition education would be incomplete without recognizing the roles of the electronic and print media. Nutrition made news in the decade past. Interest in nutrition also was a lucrative business for publishers, networks, advertising agencies, and writers possessing a spectrum of qualifications in this discipline. Currently, the media has heightened consumer awareness of nutrition and, in many instances, soundly buttressed the efforts of nutrition educators. It has often taken the lead in conveying nutrition information to the public.

Despite accomplishments in this arena, education efforts are limited, ironically, by a failure in communications. Few well-trained nutritionists excel as spokespersons on television or radio. Academia rarely prepares nutrition professionals to write for the public or even to collaborate with journalists who have these skills.

The efforts of nutrition educators in the area of public communication via media have been directed primarily toward hair-splitting semantic arguments rather than nutrition education. Comparitively few efforts have been made at linking the scientific knowledge of nutritionists with the creativity of advertisers and the communication skills of writers in order to bring useful nutrition information to people via the most commonly used channels of communication – television, radio, newspapers and magazines.

Nutrition Education Strategies

A practical framework for developing a strategy to ensure that nutrition education is kept current is to continually ask: (1) *What* is to be done? (2) *How* is it to be done? (3) *Why* do one thing rather than another? The answer to the first question will contemporize the content of the message based on scientific advances and client needs. Responding to the second question leads to reconsideration of target audiences that might have been overlooked, alternative educational resources not being utilized, and innovations in education and communications that should be utilized.

The third question is the most difficult and the most critical. It requires projecting several steps beyond to anticipate the effect of new activities. Caution must be taken when trying to solve today's problem not to create new problems for tomorrow.

Summary/Implications

Perhaps the greatest potential for nutrition education is tapping the wealth of resources available. The challenge is whether the nutrition profession is willing to delegate part of its role as nutrition educator to media experts, allied health professionals, and other educators and at the same time provide these groups with access to trained nutritionists.

Many people could benefit from this type of collaborative effort. Consumer groups have excellent track records for getting involved in nutrition issues. Grocery stores, from consumer coops to national chains, are willing to tackle the problems faced by nutritionists. Voluntary organizations, including health-related associations as well as civic and educational groups, want to get into the act. Health and service delivery personnel from social workers to surgeons realize that nutrition can be a major determinant in the success of their work with clients.

Can educators – will educators – be partner to building bridges with these human resources? The roles nutrition educators have chosen require continued education, sensitivity to factors that alter what and why specific foods are eaten, and integration of the intellectual and human determinants of appropriate food choices.

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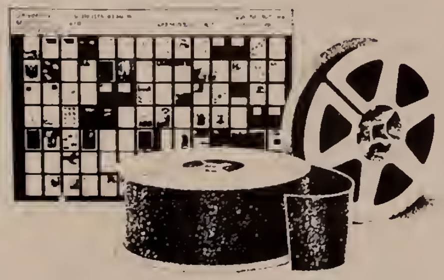

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September 20th, 1982—7:00 p.m.–9:00 p.m.
STRESS FREE ANESTHESIA AND THE TRAUMA PATIENT
*Buffalo General Hospital
September 21st, 1982—4:00 p.m.–5:00 p.m.
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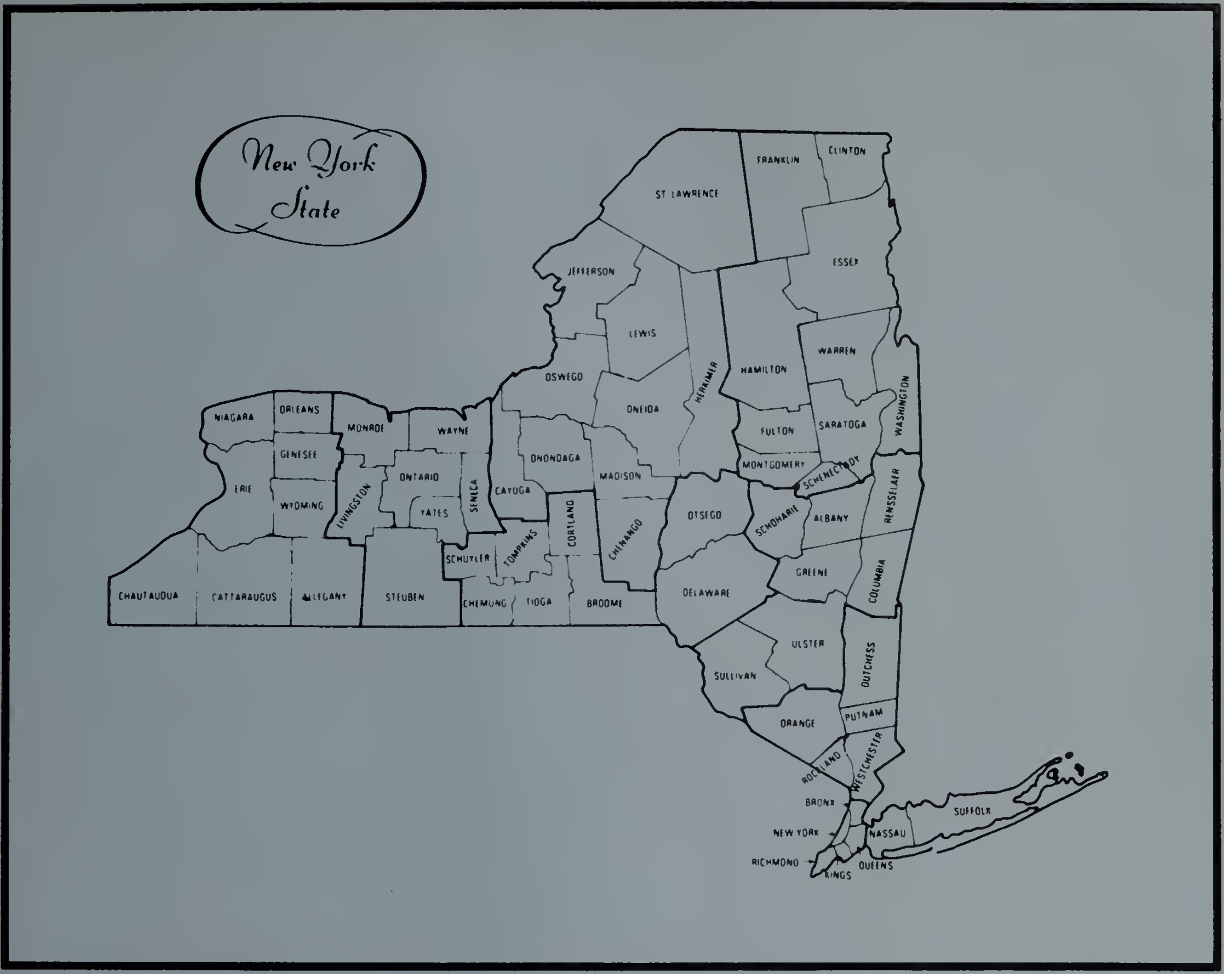

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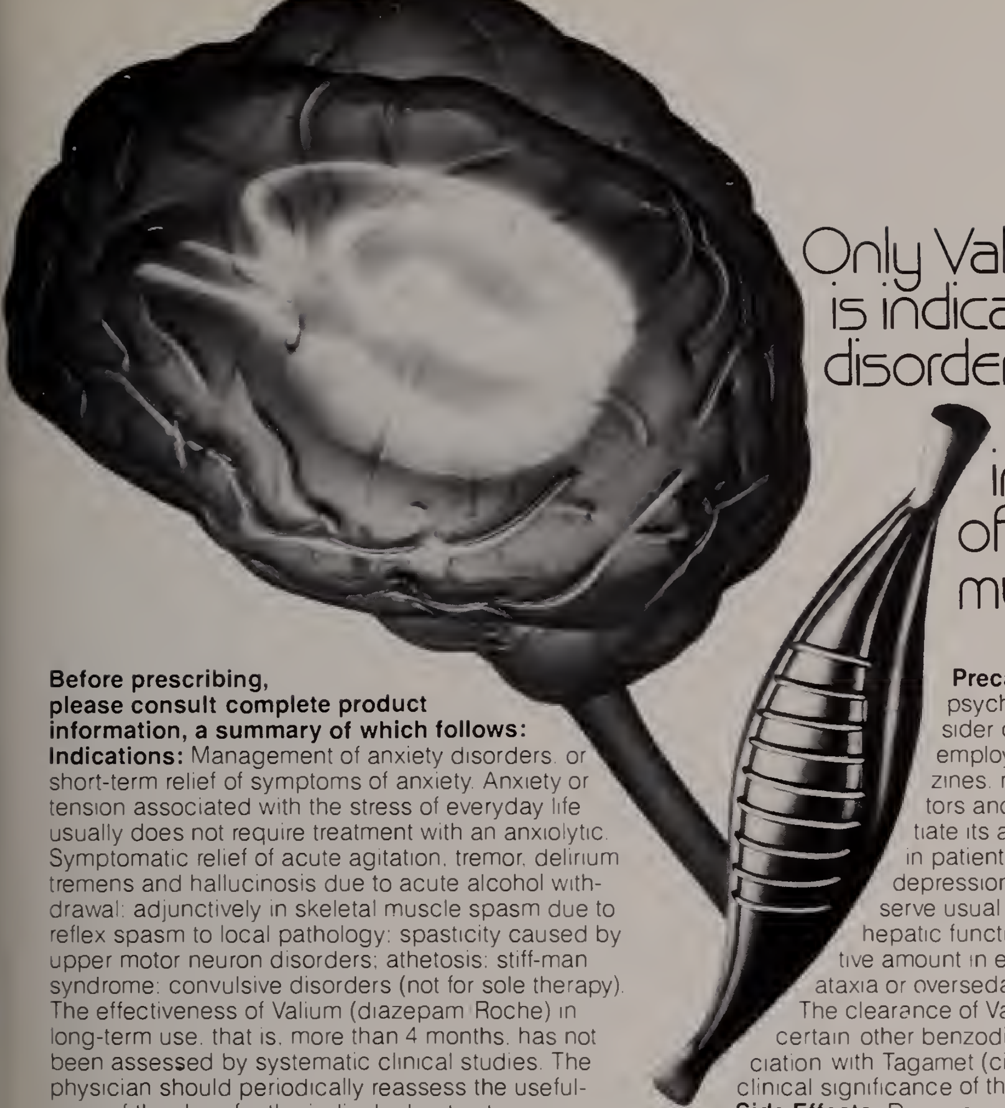
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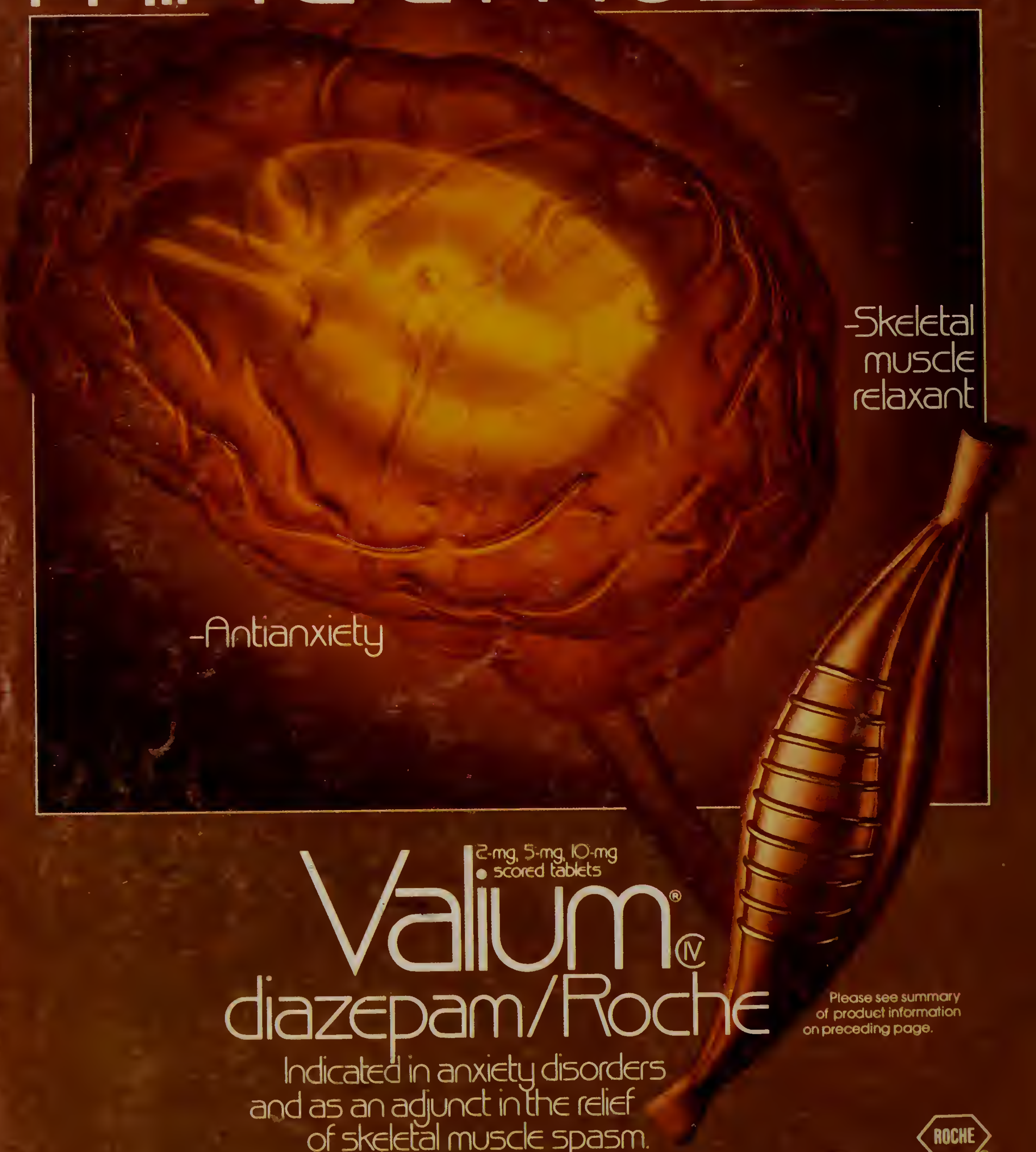

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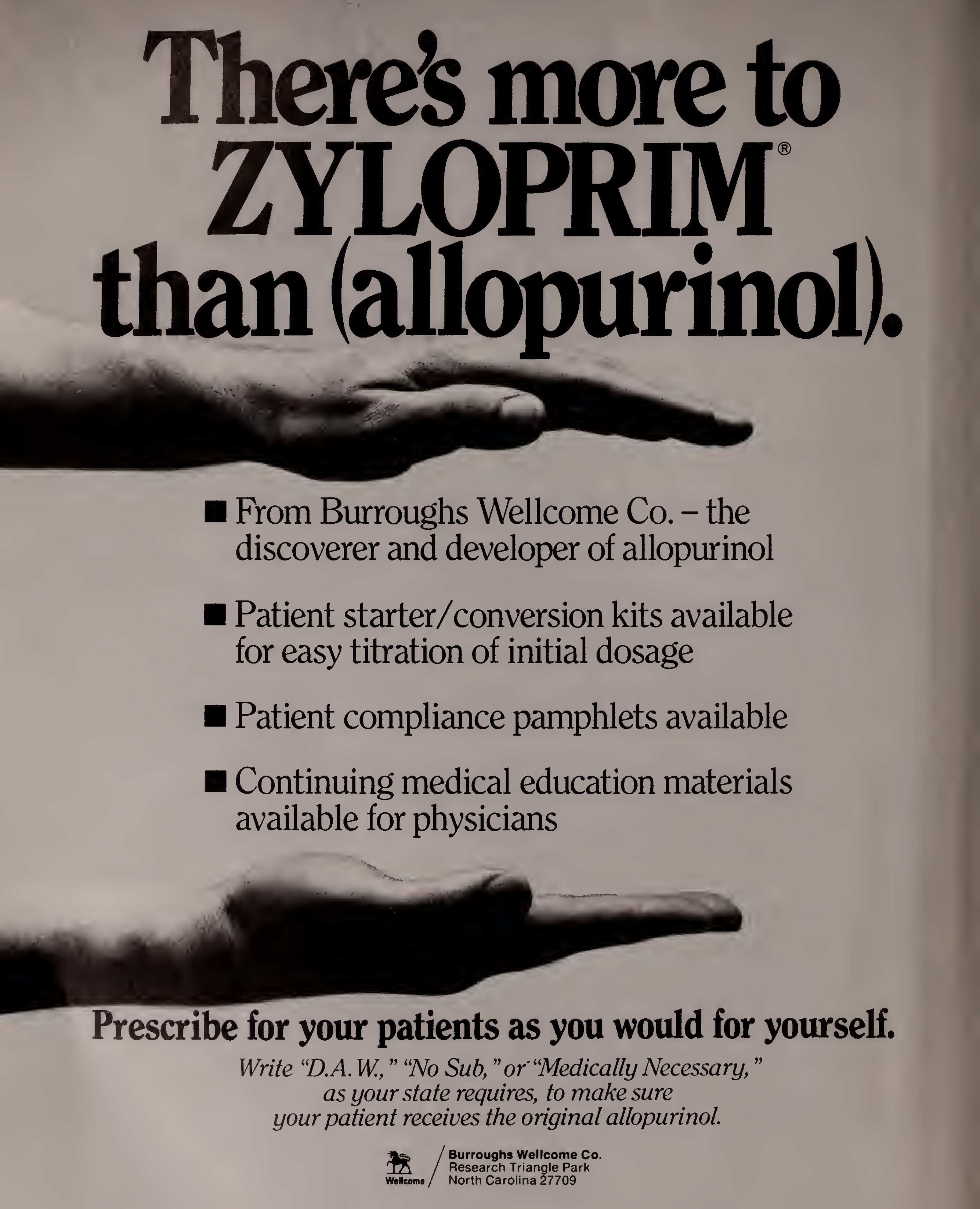

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Low thiazide dosage means reduced risk of hypokalemia.

When thiazides are prescribed in doses greater than 50 mg/day, the potential for hypokalemia increases substantially. What's more, the greater the fall in serum K^+*, the greater the risk of hypokalemia-induced PVCs.*[3,4]

With INDERIDE, the additive hypotensive effect of propranolol HCl allows the effective dose of hydrochlorothiazide to be kept low (25 mg b.i.d.). And by lowering the daily dose of diuretic, INDERIDE also lowers the potential for diuretic-induced side effects. Potassium problems are less likely to occur—yet blood pressure can be controlled consistently.

INDERIDE®

Each tablet contains INDERAL®
(propranolol HCl) 40 mg or 80 mg,
and hydrochlorothiazide 25 mg

B.I.D. 40/25 80/25

When you know you need more than a thiazide.

Please see Brief Summary of Prescribing Information on following page.

INDERIDE®

Each tablet contains INDERAL (propranolol HCl) 40 mg or 80 mg, and hydrochlorothiazide 25 mg

B.I.D. 40/25 80/25

NEW TABLET SHAPE

BRIEF SUMMARY
(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERIDE®

BRAND OF
propranolol hydrochloride
(INDERAL®)
and hydrochlorothiazide

No. 484—Each INDERIDE®-40/25 tablet contains:	
Propranolol hydrochloride (INDERAL®)	40 mg
Hydrochlorothiazide	25 mg
No. 488—Each INDERIDE®-80/25 tablet contains:	
Propranolol hydrochloride (INDERAL®)	80 mg
Hydrochlorothiazide	25 mg

WARNING: This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning.)
CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in: 1) bronchial asthma; 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock; 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.
Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.
WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy. Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.
Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.
USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.
Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers: Thiazides appear in breast milk. If the use of the drug is deemed essential, the patient should stop nursing.
PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.
Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (*e.g.*, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.
ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular:* bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.
Hydrochlorothiazide: *Gastrointestinal:* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System: dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular: orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions.

Other: hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.
HOW SUPPLIED: —Each hexagonal-shaped, off-white, scored INDERIDE 40/25 tablet is embossed with an "I" and imprinted with "INDERIDE 40/25," contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 (NDC 0046-0484-81) and 1,000 (NDC 0046-0484-91). Also in unit dose package of 100 (NDC 0046-0484-99)
—Each hexagonal-shaped, off-white, scored INDERIDE 80/25 tablet is embossed with an "I" and imprinted with "INDERIDE 80/25," contains 80 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 (NDC 0046-0488-81) and 1,000 (NDC 0046-0488-91). Also in unit dose package of 100 (NDC 0046-0488-99).

The appearance of these tablets is a trademark of Ayerst Laboratories.

Store at room temperature (approximately 25° C).

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Letters to the Editor

Medic Alert
The red badge of protection

To the Editor: In military life, the inseparable "dog tag" provides identity and protects individuality. Today, in our violent and unpredictable world, thousands of our citizens are wearing the red badge of Medic Alert for identification and protection in the event of a medical emergency. In a recent 12-month period, according to the Medic Alert Foundation, there were more than 2,000 reports by Medic Alert members who stated that the red emblem had been helpful in their emergencies, and in some cases was believed to have saved their lives.

This unique system of emergency medical identification consists of three parts:

1. The metal tag with the red emblem worn as bracelet or necklace. The reverse side has the member's identification number, medical conditions or other pertinent information, and a collect-call telephone number.
2. A wallet card reissued and updated annually with additional information.
3. The 24-hour emergency answering service with computer-based personal medical data which takes member's calls from anywhere in the world.

Medic Alert was conceived more than 25 years ago by Marion C. Collins, M.D., a practising physician in Turlock, California, which is the headquarters of the nonprofit, tax-exempt, charitable Foundation. Medic Alert has more than one million members in the United States and another half million in affiliates in 16 countries. The Foundation is self-supporting through the $15.00 lifetime membership fee, contributions from members and friends, and the work of hundreds of volunteers. The member's file can be updated at least annually. Changes are made in the computer file for a $4.00 fee. A trust fund assures maintenance of the member's file for life. There is also a fund which pays the membership fee for individuals who cannot pay. The Foundation is directed by a volunteer Board of Directors composed of physicians and other public-spirited citizens.

More than 27% of Medic Alert membership is the result of recommendation by a physician, many of whom are themselves Medic Alert members. Medical societies and hospital auxiliaries assist the Foundation by placing Medic Alert applications in physician's offices, hospital waiting rooms, and local pharmacies. The American Medical Association estimates that one in five Americans have medical conditions which, if unknown at the time of an emergency, could endanger his or her life. Diabetes, epilepsy, severe allergy, and cardiac disease are just some of the more common medical conditions in the registry of the Foundation.

Medic Alert membership should be considered when making the discharge plan for the hospitalized patient. It is especially important for the mentally disabled who are discharged into the community to have this means of identification. The physically handicapped and all senior citizens are candidates for Medic Alert. An increasing number of joggers and others engaged in activities for which they wear special clothing without any personal identification use Medic Alert. In short, Medic Alert is a system available to all persons and groups for protection and identification.

By introducing patients to Medic Alert, the physician adds an important new dimension to health supervision. This system contributes substantially to the patient's individual sense of security and clearly demonstrates the physician's own commitment to the welfare of his patient.

GEORGE M. WHEATLEY, M.D.
16 Watersedge, Lattingtown
Locust Valley, NY 11560

Physicians interested in obtaining a supply of Medic Alert applications may obtain them by writing or calling:

Medic Alert Foundation, International
777 United Nations Plaza
New York, NY 10017
tel: (212) 697-7470
or
Nassau County Academy of Medicine
Stewart Avenue
Garden City, NY 11530
tel: (516) 832-8140

Vagal dysfunction in childhood

To the Editor: It has been drawn to my attention that there are two essential addenda to my recent report, "Vagal Dysfunction and Sudden Infant Death Syndrome"[1]: (1) clarification as to the etiology of the surgical procedure employed and (2) two of my major hospital affiliations, especially as regards these cases. The affiliations are Community Hospital at Glen Cove, Glen Cove, N.Y. and Nassau Hospital, Mineola, N.Y. (where all the surgery has been done in conjunction with the Thoracic Cardiovascular Department and Manucher Mohtashemi, M.D.) and my academic affiliation which is Associate Professor of Clinical Surgery, State University of New York.

To my very great distress, I realize that in my recent follow-up report on selective vagotomy for childhood bradycardia, the history and origin of the surgical procedure was not made clear, as it had been in the original article.[2] This, in brief, follows: On September 23, 1968 I repaired a congenital esophageal atresia with tracheoesophageal fistula on a full-term, normal-delivery newborn boy, weight 8 lb 1 oz, at Nassau Hospital, Mineola. About 12 hours postoperatively he developed a bradycardia of 60 to 70 with color changes and poor activity. Because he also had a barking cough, I assumed it to be due to surgical irritation of the cardiac nerves arising from the recurrent laryngeal and distal right vagus and tried atropine (0.1 mg, intramuscularly). There was an immediate and dramatic relief of the bradycardia. However, when this persisted (it finally ceased spontaneously after six days and the child

(*continued on page 1394*)

Abstracts

Hall LF, Shayegani M, and Hipp SS: Genital Infections in Women, **New York State J Med. 1982 82:** 1317.

Vaginal discharges from 90 patients who attended a private practice with a complaint of vaginitis were tested in-office by wet-mount examination, and the findings were compared to those obtained by laboratory tests. The isolations of yeast, *Trichomonas*, *Gardnerella*, and *Ureaplasma* were also compared in specimens from symptomatic patients and those from a 109-person control group. In laboratory testing *Ureaplasma* (the most frequent isolate), and *Gardnerella vaginalis* were present at least twice as frequently in symptomatic as in asymptomatic women. The rate of clue-cell observations in office testing was double the rate of *G. vaginalis* isolations in the laboratory, but from seven patients *G. vaginalis* was recovered by the laboratories in the absence of clue cells. Yeast and *Trichomonas* were identified more frequently in laboratory testing than by wet-mount examination; occurrences of *Chlamydia* in vaginitis patients were also noted. The results indicate that the laboratory plays an important role in helping to identify the causative agents of vaginitis.

Piver MS, Barlow JJ, and Lele SB: Para-aortic lymph node metastasis in FIGO stage I endometrial carcinoma. **New York State J Med 1982; 82:** 1321.

Forty-one patients with FIGO stage I endometrial carcinoma underwent para-aortic lymph node biopsy and six (14.6%) were found to have biopsy-confirmed para-aortic lymph node metastasis. Of the six women with para-aortic lymph node metastasis, five had grade 3 (poorly differentiated) tumor or deep myometrial invasion and the sixth patient had metastasis to the ovary not clinically apparent preoperatively. The authors could find only one report of the result of therapy of a single patient with para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma. Since there was no known effective therapy for patients with para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma, treatment plans were developed sequentially in an effort to find effective therapeutic regimens. Of the six patients treated with either chemotherapy, radiation therapy, or combination therapy, none responded to therapy; and four are dead of recurrent endometrial carcinoma and two are alive with progression of their malignancy. Significantly, five of the six instances (83.3%) of para-aortic lymph node metastasis were clinically apparent (hard, enlarged, and fixed) at the time of exploratory laparotomy and the instance of ovarian metastasis associated with para-aortic node metastasis was histologically verified. Since there is currently no known effective therapy for para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma, the routine use of para-aortic lymph node biopsy in such instances would not appear warranted at this time. However, since the finding of clinically apparent metastasis at surgery, whether para-aortic, ovarian, or other metastasis, so alters the outcome and treatment, it is suggested that this information be utilized in the current FIGO staging system for endometrial carcinoma while investigators evaluate therapeutic regimens for such metastasis.

Lanzafame, RJ, Long JE, and Hinshaw, JR: Primary Cancer of the Small Bowel: A review of a 40-year experience in a community hospital and of a 10-year experience in all of the hospitals in Monroe County, New York, **New York State J Med 1982; 82:** 1325.

Sixty primary small-bowel neoplasms over the past 40 years at Rochester General Hospital (RGH) were reviewed and compared with 105 cases treated in Monroe County, New York, between 1970 and 1980. Patients presented with chronic symptoms of two months' or longer duration and complained of pain (53%), nausea (37%), or weight loss (28%). Laboratory examination revealed anemia (hematocrit < 35) in 38% (23/60) and elevated alkaline phosphatase (> 100 units) in 48% (19/40). Upper-gastrointestinal series (UGI) with small-bowel follow through (SBFT) was diagnostic in 72% (26/36), and endoscopy was diagnostic in 80% (4/5) of patients. Adenocarcinoma was most common: 48% in the RGH and 37% in the county-wide series. Carcinoids accounted for 30% and 33%, respectively. Other tumors included leiomyosarcoma (13% and 11%, respectively) and lymphoma (7% and 12%, respectively). Synchronous or metachronous primary lesions were present in 18% of patients with small intestinal lesions and in 14% of patients with carcinoma of the colon. The overall five-year survival for the RGH series was 43%. Management of patients, particularly those beyond age 40, with chronic gastrointestinal complaints should include UGI-SBFT and barium enema. Endoscopy may be indicated in patients with duodenal lesions.

Abstracts in Interlingua

Hall LF, Shayegani M, e Hipp SS: Infectiones genital in feminas, **New York State J Med** 1982 82:1317.

Le secretion vaginal de 90 patientes con vaginitis tractate in consultorio private esseva examinate mediante monstras humide. Le resultatos del examination microscopic esseva comparate con illes obtenite per le laboratorio. Le fungi, *Trichomonas*, *Gardnerella* e *Ureaplasma* trovate in monstras de patientes symptomatic esseva etiam comparate con illes trovate in 109 feminas formante un gruppo de controlo. Le tests del laboratorio demonstrate que le *Ureaplasma* (le trovato plus frequente) e le *Gardenella vaginalis* esseva presente al minus due vices plus frequentemente in le patientes symptomatic que in le feminas asymptomatic. Le proportion de cellulas basic observate in le consultorio esseva due vices le proportion de *G vaginalis* trovate in le laboratorio; non obstante, le *G vaginalis* esseva demonstrate in le laboratorio in absentia de cellulas basic. Le levaturas e le *Trichomonas* esseva identificate plus frequentemente mediante le tests del laboratorio que mediante le examination microscopic de monstras humide fresc. *Chlamydia*, in patientes con vaginitis, etiam esseva observate. Le resultatos indica que le laboratorio joca un rolo importante in le identification del agentes causante de vaginitis.

Piver MS, Barlow JJ, e Lele SB: Nodulos lymphatic para-aortic metastatic in le carcinoma endometrial, Stadio I, FIGO, **New York State J Med** 1982 82:1321.

In 41 patientes con carcinoma endometrial, Stadio I, FIGO, esseva facite le biopsia del nodulos lymphatic para-aortic. In 6 (14.6 pro cento) cases, le biopsia confirmava le metastasis nodulari lymphatic para-aortic. Del 6 feminas con nodulos lymphatic para-aortic metastatic (NLPAM), 5 habeva tumores Grade 3 (pauvremente differentiate), o ben invasion myometrial profunde. Le sexte patiente habeva un metastasis in le ovario mais non clinicmente apparente pre-operatori. Le autores trovate solmente un reporto del resultato del therapia de un sol patiente con NLPAM del carcinoma endometrial, Stadio I, FIGO. Ben que non habeva un therapia cognoscite per le patientes con NLPAM secondari a iste typo de carcinoma, que sia effective, un plan therapeutic esseva disveloppate sequentialmente in un effortio per trovar un tractamento effective. De 6 patientes tractate con chemotherapia, radiotherapia o therapia combinate, non respondeva al tractamento; 4 patientes moreva per carcinoma endometrial recurrente, e 2 superviveva con le morbo maligne progressante. Significativemente, in 5 de 6 patientes (83.3 pro cento) con NLPAM, le morbo esseva clinicmente apparente (nodulos lymphatic dur, grande e fixate)) al tempore del exploration laparatomic, e etiam in le casos de metastasis del ovario associate a NLPAM que esseva verificate histologicmente. Ben que actualmente non es cognoscite un therapia effective per le NLPAM del carcinoma endometrial, Stadio I, FIGO, le uso rutinari del biopsia del NLPAM, in tal casos, non pare justificate in iste momento. Non obstante, como le trovatos de metastases clinicmente apparente durante le chirurgia, sia para-aortic, ovarian o altere typo de metastases, altera le tractamento e le prognosis del patientes, es suggerite que iste information sia utilisate in le systema actual de studio del Stadio I, FIGO, del carcinoma endometrial durante le tempore del investigation supra un evalutation complete del therapia plus conveniente para iste typo de metastasis lymphatic.

Lanzafame RJ, Long JE, e Hinshaw, JR: Carcinoma primari del intestino tenue. Revision del experientia de 40 annos in un hospital communitari, e del experientia de 10 annos in omne hospitales del Condato Monroe de Nove York, **New York State J Med** 1982 82:1325.

Un gruppo de 60 casos de neoplasmas primari del intestino tenue, observate durante le ultime 45 annos in le Hospital General Rochester (HGR) esseva revistite e comparate con 105 casos tractate in le Condato Monroe de Nove York de 1970 a 1980. Le patientes habeva symptomas chronic durante 2 o plus menses, includente dolor (53 pro cento), nausea (37 pro cento) o perdita de peso (28 pro cento). Le tests del laboratorio revelava anemia (hematocrito <35%) in 38 pro cento del casos (23/60), e un elevation del phosphatasa alkaline (>100 unitates) in 48 pro cento (19/40) del patientes. Le serie gastrointestinal superior e del intestino tenue esseva diagnostic in 72 pro cento del casos (26/36) e le endoscopia in 80 pro cento (4/5) del patientes. Le adenoma carcinoma esseva le plus commun del morbos trovate: 48 pro cento in le HGR, e 37 pro cento in le serie includente omne hospitales del Condato Monroe. Le carcinoide esseva trovate in 30 pro cento e 33 pro cento, respectivemente. Altere tumores esseva leiomyosarcoma (13 pro cento e 11 pro cento, respectivemente) e lymphomas (7 pro cento e 12 pro cento, respectivemente). Lesiones primari synchronose o metachronose esseva presente in le patientes con lesiones del intestino tenue, e in 14 pro cento de illes con carcinoma del colon. Le periodo total de 5 annos de superviventia, in le HGR, esseva 43 pro cento. Le tractamento del patientes, particularmente illes de plus que 40 annos, con symptomas gastrointestinal chronic debe includer le serie gastrointestinal superior e le "SBFT", e etiam le enema baritate. Le endoscopia pote esser indicate in patientes con lesiones duodenal.

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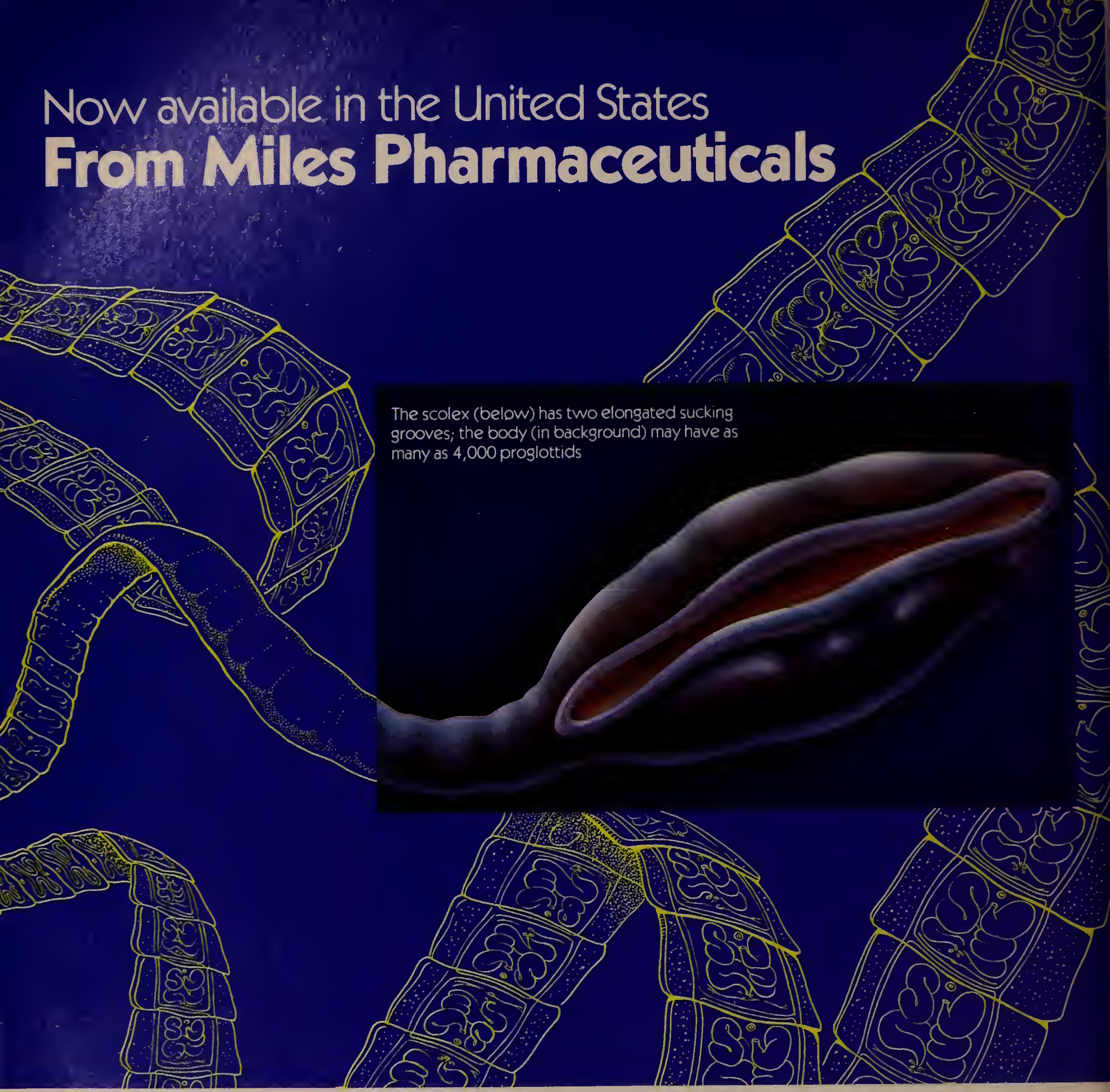
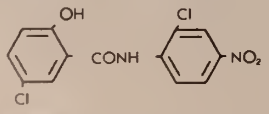


The scolex (below) has two elongated sucking grooves; the body (in background) may have as many as 4,000 proglottids

DESCRIPTION: NICLOCIDE (niclosamide) is an anthelmintic provided in chewable tablet form at a strength of 500 mg per tablet. Niclosamide is 2′, 5-Dichloro-4′-nitrosalicylanilide. The empirical formula is $C_{13}H_8Cl_2N_2O_4$ with the following structural formula.



CLINICAL PHARMACOLOGY: NICLOCIDE inhibits oxidative phosphorylation in the mitochondria of cestodes. Both in vitro and in vivo, the scolex and proximal segments are killed on contact with the drug. The scolex of the tapeworm, loosened from the gut wall, may be digested in the intestine, and thus may not be identified in the feces even after extensive purging. The use of NICLOCIDE has not been associated with the development of anemia, leukopenia or thrombocytopenia nor have there been any effects on normal renal and hepatic functions.

INDICATIONS AND USAGE: NICLOCIDE (niclosamide) is indicated for the treatment of tapeworm infections by Taenia saginata (beef tapeworm), Diphyllobothrium latum (fish tapeworm) and Hymenolepis nana (dwarf tapeworm).

CONTRAINDICATIONS: NICLOCIDE™ Tablets are contraindicated in individuals who have shown hypersensitivity to any of its components.

PRECAUTIONS: NICLOCIDE affects the cestodes of the intestine only. It is without effect in cysticercosis.

Drug Interactions: No data are available regarding interaction of niclosamide with other drugs.

Carcinogenesis, Mutagenesis, Impairment of fertility:

Carcinogenicity Potential: Although carcinogenicity studies on niclosamide per se have not been done, long-term feeding studies on its ethanolamine salt in rats and mice did not show carcinogenicity. Mutagenicity tests have not been performed.

Pregnancy: Pregnancy Category B: Reproduction studies in rabbits and rats at doses of 25 times the human therapeutic dose and in mice at 12 times the human therapeutic dose, have revealed no evidence of impaired fertility or harm to the fetus due to niclosamide. There are, however, no adequate and well-controlled studies in pregnant women. Because animal studies are not always predictive of human response, the drug should be used during pregnancy only if clearly needed.

Nursing Mothers: No studies are available.

Pediatric Use: In children under 2 years of age, the safety of the drug has not been established.

ADVERSE REACTIONS: The incidence of side effects has been reported as follows: nausea/vomiting 4.1%, abdominal discomfort including loss of appetite 3.4%, diarrhea 1.6%, drowsiness, dizziness, and/or headache 1.4%, and skin rash including pruritus ani 0.3%. Other side effects listed in decreasing order of frequency were: oral irritation, fever, rectal bleeding, weakness, bad taste in mouth, sweating, palpitations, constipation, alopecia, edema of an arm, backache and irritability. There was also one instance of a transient rise in SGOT in an i.v. narcotic addict. Two cases of urticaria reported may be related to the breakdown products of the tapeworm. All side effects were mild or moderate and transitory and did not necessitate discontinuation of the treatment.

OVERDOSAGE: Insufficient data are available. In the event of overdose a fast-acting laxative and enema should be given. Vomiting should not be induced.

DOSAGE AND ADMINISTRATION:

1. Taenia saginata and Diphyllobothrium latum
   a. Adults: 4 tablets (2.0 g) chewed thoroughly in a single dose.
   b. Children weighing more than 34 kg (75 lbs): 3 tablets (1.5 g) chewed thoroughly in a single dose.
   c. Children weighing between 11 and 34 kg (25 to 75 lbs): 2 tablets (1.0 g) chewed thoroughly in a single dose.
2. Hymenolepis nana
   a. Adults: 4 tablets (2.0 g) chewed thoroughly as a single daily dose for 7 days.
   b. Children weighing more than 34 kg (75 lbs): 3 tablets (1.5 g) chewed thoroughly on the first day, then 2 tablets (1.0 g) daily for next 6 days.
   c. Children weighing between 11 and 34 kg (25 to 75 lbs): 2 tablets (1.0 g) to be chewed thoroughly on the first day, then one tablet (0.5 g) daily for next 6 days.

   T. saginata and D. latum infections are usually due to a single adult worm and require an intermediate host in their life cycle. With Hymenolepis nana multiple infections are the rule. No intermediate host is required, both larval and adult stages of the worm may be found in the human intestine where the complete life cycle occurs. Since the drug is more effective against the

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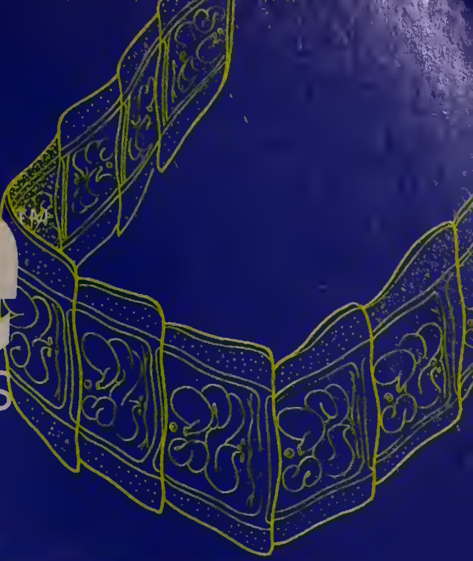

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NICLOSAMIDE CHEWABLE TABLETS 500 MG.

A safe, reliable single-dose taeniacide that eradicates beef and fish tapeworms in a single day

Highly effective prompt taeniacidal action

NICLOCIDE™ (niclosamide) is considered as the drug of choice in eliminating beef tapeworm (Taenia saginata), fish or broad tapeworm (Diphyllobothrium latum), and dwarf tapeworm (Hymenolepis nana) from the intestines. Except for the dwarf tapeworm, which requires a seven-day treatment (SEE FULL PRESCRIBING INFORMATION BELOW), a one-day single-dose treatment is sufficient to kill these cestodes.

Breaks hold of head and chain of segments

NICLOCIDE works promptly and simply. After tablets are chewed thoroughly and washed down with a little water (for children tablets should be pulverized and mixed with a little water), the insoluble micronized crystals act by direct contact on the tapeworm head. As soon as NICLOCIDE reaches the parasite, the scolex and upper segments are killed, thus depriving the whole chain of its hold. It is then discharged in stool either in one piece or smaller portions.[*]

Safe and well tolerated/ little gastrointestinal mucosa irritation

NICLOCIDE has proved exceptionally well accepted by adults as well as children weighing more than 11 Kg. (25 lbs.).

Convenient one-day single-dose administration[†]

NICLOCIDE Tablets are taken as a single dose after breakfast.[*] Tablets must be chewed or pulverized thoroughly and washed down with a little water. No special diet or preparation is necessary except in patients who are constipated. In these cases, a thorough cleansing of the bowels may be required before treatment. The avoidance of alcohol during treatment is the only other requirement.

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[*] A drastic saline purge, such as magnesium sulfate or sodium sulfate should be given two hours after the NICLOCIDE dose if it is required that the tapeworms be expelled rapidly and in one piece.

[†] In infections with beef tapeworm (T. saginata) and fish tapeworm (D. latum) one single dose is sufficient, for infections with dwarf tapeworms (H. nana) a seven-day treatment is recommended (SEE FULL PRESCRIBING INFORMATION ON THESE PAGES).

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mature than the larval stage, therapy must be extended over several days to cover all stages of maturation.

Patients with H. nana must be instructed to observe strict personal and environmental hygiene to avoid autoinfection with this parasite.

3. NICLOCIDE™ must be thoroughly chewed and then swallowed with a little water. No special dietary restrictions are necessary before or after treatment. The best time to take the drug is after a light meal (e.g., breakfast). A mild laxative may be desirable in constipated patients to achieve a normal bowel movement.

   Young children should have the tablets crushed to a fine powder and mixed with a small amount of water to form a paste.

   NICLOCIDE has a vanilla taste which is not unpleasant to most persons.

   NICLOCIDE is suitable for administration on an ambulatory or outpatient basis.

4. Follow-up:

   As the vermicidal action of NICLOCIDE renders the tapeworm, especially the scolex and proximal segments, vulnerable to destruction during their passage through the gut, it is not always possible to identify the scolex in stools. The sooner the tapeworm is passed and examined after treatment, the better the chance of identification of the scolex. Segments and/or ova of beef or fish tapeworm may be present in the stool for up to 3 days after therapy. Persistent T. saginata or D. latum segments and/or ova on the seventh day post therapy indicate failure. A second identical course of treatment may be given at that time.

   No patient should be considered cured unless the stool has been negative for a minimum of three months.

HOW SUPPLIED: NICLOCIDE is available as round, light yellow chewable tablets, scored on one side, embossed with the word Miles and number 721, each containing 500 mg of niclosamide, and is supplied in boxes of 4 tablets.

Storage Conditions: Store below 86°F (30°C), avoid freezing.

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Medical Meetings

Fifth annual symposium on genetics for practicing physicians

An outstanding faculty of experts will focus on the state of the art in the symposium on Recent Diagnostic Techniques and Treatments in Genetic Diseases. This symposium will be held on September 12, 1982, at the Skytop Room of the New York Statler Hotel, 7th Avenue and 33rd Street, New York City, and is sponsored by the Greater New York Chapter March of Dimes and Genetics Task Force of New York, Inc. Co-sponsor is the Long Island Jewish-Hillside Medical Center.

For further information call (212) 922-1460.

Annual meeting of the NYSCPA

The annual meeting of the New York State Cancer Programs Association, Roswell Park Memorial Institute, will be held on October 8 and 9, 1982, at the Buffalo Hilton Hotel, Buffalo, New York. For further information contact: Edwin A. Mirand, Secretary, New York State Cancer Programs Association, c/o Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.

13th international cancer congress

The 13th International Cancer Congress will be held in Seattle, Washington, from September 8 through 15, 1982.

Annual meeting and postgraduate course

The American College of Gastroenterology will conduct its Annual Scientific Meeting and Postgraduate Course from October 25 to 29, 1982, at the Grand Hyatt Hotel in New York City.

Three days of symposia and free papers related to gastroenterology will be presented; and two days of intensive postgraduate education in the digestive diseases field will be held. AMA Category I credit will be available.

For further information, please contact: American College of Gastroenterology, 13 Elm Street, Manchester, Massachusetts (617) 927-8330.

Fifth annual program on current concerns in adolescent medicine

The Division of Adolescent Medicine of the Department of Pediatrics at Long Island Jewish-Hillside Medical Center announces that the Fifth Annual Current Concerns in Adolescent Medicine will be held on September 23 and 24, 1982, at the Warwick Hotel, New York City.

Update your medicine 1982–1983

The New York Hospital-Cornell Medical Center announces its CME Program "Update Your Medicine" will be held on the following Wednesday evenings at the Uris Auditorium from 7 PM to 9 PM: September 15, 1982; October 20, 1982; November 10, 1982; January 19, 1983; February 16, 1983; March 20, 1983; April 20, 1983; and May 18, 1983. Transcripts will be available. This CME program is AMA credited. For further information contact: Lila A. Wallis, M.D., FACP, Chairman, CME (212) 737-4444.

AMA to offer English language study for foreign-trained physicians

The American Medical Association's Department of Physician's Credentials will offer an intensive, one-day seminar on improving English pronunciation for foreign physicians next fall. The session will be held at the Marriott Essex House, 160 Central Park South, in New York on Saturday, September 11, 1982 from 9 AM to 5 PM.

The seminar is designed to help foreign medical school graduates improve their spoken communications with their patients. Lectures and practice on producing the sounds of general American English will be stressed. There will also be intensive oral drill and criticism of individual students, and practice in sustained discourse through reading and extemporaneous speaking.

The instructors for the program will be the husband and wife team of Robert H. Lang, PhD, and Elizabeth K. Lang, MA, of Cleveland, Ohio. Dr. Lang is executive director of the Cleveland Academy of Medicine and Ms. Lang is Associate Professor of Speech Communications at Cuyahoga Community College and author of the Book "Improving English Pronunciation."

So that improvement can be continued after the one-day session, a 134-page study guide is provided with nine audio tapes. Progress in pronunciation can be checked against the tapes. There are 47 lessons in the study guide, focusing on sounds of American English and problems of accenting of words.

Category 1 credit of 8 hours toward the AMA Physician's Recognition Award has been approved for the seminar. Further information is available from Mr. Gale Jewett, Department of Physician's Credentials, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610 (312) 751-6570.

Material for inclusion in the medical meetings section must be received eight weeks prior to publication date.

Medical News

New York State Department of Social Services

The Office of Disability Determinations, Department of Social Services, wishes to advise those physicians who are asked to send medical reports to our office on their patients who are applying for disability benefits under the Federal Social Security Act that our office is eager to assist them in the type of information needed. By doing this, we hope to conserve the busy physician's time, as well as allow for earlier decisions on their patients' claims.

In the New York City area call (212) 587-3162 between 9 AM and 5 PM. Outside of New York City call 1-800-522-5511, extension 3162.

American College of Radiology News

Kakarla Subbarao, MD, has been selected for Fellowship in the American College of Radiology (ACR).

Theodore Robinson, MD, has been selected for Fellowship in the American College of Radiology (ACR).

Next AAP vice president

Paul F. Wehrle, MD, FAAP, Los Angeles, was elected 1982–1983 vice president and president-elect of the American Academy of Pediatrics.

New director

David R. McNutt, MD, Chicago Deputy Commissioner of Health, has been named Director of the New York Academy of Medicine.

SUNY-Downstate news

Duncan W. Clark, MD, has received the Alumni Medallion from his alma mater, the College of Medicine at Downstate Medical Center (State University of New York), Brooklyn, in recognition of distinguished service to American medicine.

Commemorative stamp

The Postal Service announces that a 20-cent commemorative stamp honoring Civil War Surgeon Dr. Mary Edwards Walker was issued June 10, 1982, in Oswego, New York.

Overview of the CPI*

The consumer price index rose at an annualized rate of 5.2 percent during April 1982. Although this reverses the decline that the index experienced in March, it nevertheless represents the seventh consecutive month during which prices have risen at an annualized rate of less than 6%. During April, a large increase in the housing component (11.1% at an annualized rate) was offset by a continued decline in the transportation component (−8.9% annualized) and a moderate increase in the food and bever-

(*continued on page 1342*)

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* From the AMA CPI Report/April 1982.

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Genital Infections in Women

The role of the laboratory in identification of microorganisms associated with vaginitis

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Vaginal discharges from 90 patients who attended a private practice with a complaint of vaginitis were tested in-office by wet-mount examination, and the findings were compared to those obtained by laboratory tests. The isolations of yeast, Trichomonas, Gardnerella, *and* Ureaplasma *were also compared in specimens from symptomatic patients and those from a 109-person control group. In laboratory testing* Ureaplasma *(the most frequent isolate), and* Gardnerella vaginalis *were present at least twice as frequently in symptomatic as in asymptomatic women. The rate of clue-cell observations in office testing was double the rate of* G vaginalis *isolations in the laboratory, but from seven patients* G vaginalis *was recovered by the laboratories in the absence of clue cells. Yeast and* Trichomonas *were identified more frequently in laboratory testing than by wet-mount examination; occurrences of* Chlamydia *in vaginitis patients were also noted. The results indicate that the laboratory plays an important role in helping to identify the causative agents of vaginitis.*

The importance of vaginal infection cannot be overemphasized. For the patient, infection produces symptoms that are a source of concern, embarrassment, and possible incapacitation. For the gynecologist, it is the leading complaint among patients who come for an office visit. The organisms most commonly responsible for nongonococcal vaginal infection are *Trichomonas vaginalis* and *Candida albicans.*

In a venereal disease clinic survey of vaginal discharges in England, Catterall found *T vaginalis* to be the cause in 41% of the patients, *C albicans* in 34% and gonococci in 31%.[1] Another recent study of patients attending antenatal, gynecology, and family planning clinics found the highest prevalence of infection to be due to candidiasis, followed by trichomonal infection, with very little gonorrhea being detected in these populations.[2] *Gardnerella vaginalis* has been implicated as the causative agent of perhaps 90% of vaginal discharge not caused by yeast or *Trichomonas.*[3]

Since the presence of all three of these organisms can be detected by use of on-site, wet-mount examination, the diagnosis of vaginal infection would seem a simple one. However, the wet-mount examination is not without controversy. The observation of clue cells in a wet mount is a simple test commonly correlated with the presence of *Gardnerella* in the vagina.[3,4] Some researchers, nevertheless, point out that this finding does not always correlate with the isolation of this organism in culture[5] and, furthermore, that asymptomatic women frequently have *Gardnerella* isolated from the vagina.[6] Culture for *C albicans* on Sabouraud's glucose-peptone agar has been shown to be more reliable than the use of either wet mount or Gram stain.[7]

Cervicitis is also a common cause of vaginal discharge.[8] One third of patients with cervicitis may be infected with *Chlamydia trachomatis*,[9] and when cervical erosions are present, the rate is even higher (47%), but identification tests for *Chlamydia* are not commonly available. *Ureaplasma urealyticum* is not commonly thought to be responsible for vaginitis and, therefore, is not generally included in any study of vaginitis, although it is implicated as a causative agent in spontaneous abortion, infertility, salpingitis, postpartum fever, and low birth weight.[10]

More data are available from public clinic populations than from private patients on the incidence or coincidence of these microorganisms in cases of vaginal infection. This is due in part to several factors: These infections are not reportable; diagnostic tests are not commonly performed for *Chlamydia* or *Ureaplasma* among vaginitis patients; and many physicians in private practice still do not use microscopic examination of discharge but rely upon clinical evidence alone for their diagnosis.

In the present study, patients attending a private practice because of a complaint of vaginitis were tested for the presence of *Trichomonas*, yeast, and *Gardnerella*. Identification of these organisms by on-site wet mount was compared to the results of laboratory examination. The prevalence of these organisms in symptomatic patients was compared to that in a control group with no complaints of vaginal infection. *Chlamydia* and *Ureaplasma* culture tests were also performed.

Materials and Methods

Study groups. Patients in the private practice of an obstetrician-gynecologist were divided into two groups: those who voluntarily or upon questioning complained of vaginal discharge, odor, vulval irritation, or itching and a control group who reported having none of these symptoms. The symptomatic group comprised 90 patients, all of whom were tested for *Trichomonas*, yeast, *Gardnerella*, *Ureaplasma*, and *Chlamydia*. The control group comprised 109 patients, all of whom were tested for *Trichomonas*, yeast, and *Gardnerella*. Only 50 control patients were tested for *Ureaplasma* and none for *Chlamydia*.

Office examination. The patients were examined, and clinical data including the nature of any discharge (amount, odor, color), were noted. For wet-mount examination, material from each discharge specimen was mixed with a drop of 0.85% saline and immediately examined microscopically for the presence of leukocytes, clue cells, mycelia, yeast blastospores, and trichomonads. A 10% KOH was then added for repeat examination for the presence of yeast.

Laboratory tests. A vaginal specimen was obtained and mixed with 1 ml of saline; in some cases, specimens were refrigerated overnight before forwarding to the laboratory. Laboratory strains of *G vaginalis* tested for survival after refrigeration were recovered in amounts equal to freshly inoculated portions of the same cultures. Cervical cells obtained with an Ayre spatula were inoculated into 2 SP transport solution[11] for culturing *Chlamydia*. If cervicitis was present, endocervical specimens were sent to the New York State Department of Health for examination for *Neisseria gonorrhoeae*.

The vaginal specimen was examined by streaking onto a New York City (NYC)[12] agar plate and Shepard's A7 medium[13] for *Ureaplasma*, onto Sabouraud's glucose-peptone agar for yeast, and onto Casman agar containing 5% rabbit blood for *Gardnerella*.

The Casman agar plates were incubated in 5% CO_2 at 35 to 37 °C and examined daily for the growth of small colonies having a ground-glass appearance, with slight hemolysis around the colonies. Suspected colonies were inoculated onto a Casman agar slant. Growth from this slant was tested for oxidase and inoculated onto beef-heart infusion agar (for catalase), motility agar, esculin broth, and five tubes of serum and water with a carbohydrate base (glucose, maltose, lactose, sucrose, or dextrin). Gram stains were made from the original specimen and from the Casman agar slant.

A smear of the vaginal material was examined by acridine-orange fluorescent microscopy[14] for the presence of trichomonads and yeast. Cervical material in 2 SP transport medium was tested for the presence of *Chlamydia* by using McCoy cells treated with cytochalasin B according to Sompolinsky and Richmond.[15]

Results

In the laboratory tests (Table I) *Ureaplasma* was the organism most frequently detected; it was present almost twice as often in symptomatic patients (61%) as in controls (36%). In 32 of the 55 *Ureaplasma*-positive specimens from the symptomatic group, no other organisms were isolated. Although yeasts, the second most frequently found organisms, were equally distributed (21%) in both groups, wet-mount examination in the office detected yeasts in only five specimens in each group (5% to 6%). (In a previous study,[16] 80% of genital yeasts were *C albicans*.)

G vaginalis was recovered 2.4 times more frequently from symptomatic patients (13.3%) than from controls (5.5%). All isolates of *G vaginalis* were recovered from patients in whom the physician had noted some aspect of abnormal discharge (color

TABLE I. Identification of Microorganisms From Symptomatic Patients and Controls By On-Site and Laboratory Tests

	Symptomatic Group				Control Group			
Organism	No. Specimens	On Site (wet-mount positive)	Laboratory (culture-positive)	%	No. Specimens	On Site (wet-mount positive)	Laboratory (culture-positive)	%
U. urealyticum	90	NA	55	61.1	50	NA	18	36.0
Yeast	90	5	19	21.1	109	5	23	21.1
G. vaginalis	90	23*	12	13.3	109	17*	6	5.5
T. vaginalis†	90	1	3	3.3	109	0	0	0
C. trachomatis††	73	NA	4	5.5	ND	—	—	—

* Based on presence of clue cells.

† Patients with obvious trichomoniasis were not selected for this study.

†† Of the 90 specimens, 17 were unsatisfactory for *Chlamydia* testing. ND = not done; NA = not applicable.

TABLE II. Cultural Isolation of *G vaginalis* as Compared to Microscopic Observation of Clue Cells in Wet Mounts

	Combinations			TOTAL	
	G+ C+	G+ C−	G− C+	G+	C+
Patients (90)	5	7	18	12	23
(%)	5.6	7.8	20.0	13.3	25.5
Controls (109)	4	2	13	6	17
(%)	3.7	1.8	11.9	5.5	15.6

G = *G vaginalis;* C = clue cells.

and/or consistency). Eleven of the 12 *G vaginalis* isolates from the symptomatic group were associated with *Ureaplasma*, as were two of six isolates from the control group.

Cultural isolation of *G vaginalis* in the laboratory, as compared to wet-mount microscopic examination for clue cells in the office, is detailed in Table II. Detection of clue cells by wet mount was much more frequent than laboratory culture of *G vaginalis;* the ratio was double for patients and triple for controls. In seven symptomatic cases, *G vaginalis* was recovered, but no clue cells were observed. In only five cases were clue cells and *G vaginalis* found together.

A 20-year-old, sexually active woman with mixed infections (three organisms) received repeated treatment with several antibiotics (Table III), which temporarily eliminated only one of the organisms (*C trachomatis*). Microscopic examination in the office revealed clue cells only on the first and last tests, 14 months apart, whereas laboratory culture demonstrated *G vaginalis* in all test specimens. The sexual partner of this patient declined testing and treatment.

TABLE III. Response to Antibiotic Therapy by a Patient With Mixed Infections

Date	Clinical Observation	Laboratory Isolation	Treatment
10/18/79	Discharge WBC Clue cells	Not done	Flagyl*
10/31/79	Discharge WBC Ectopy No clue cells	*U urealyticum* *C trachomatis* *G vaginalis*	
11/14/79			Minocin†
12/13/79	Discharge WBC No clue cells	*U urealyticum* *G vaginalis*	
1/10/80			Flagyl*
1/23/80	Discharge No WBC No clue cells	*U urealyticum* *G vaginalis*	
2/6/80			Tetracycline††
12/22/80	Discharge Clue cells WBC Ectopy	*U urealyticum* *C trachomatis* *G vaginalis*	Flagyl*

* 250 mg three times a day for 7 days
† 100 mg two times a day for 14 days
†† 250 mg four times a day for 14 days
WBC = white blood cells

Comment

Close cooperation between a practicing gynecologist and microbiologists from a public health laboratory made it possible to relate the clinical examination for agents of vaginitis to isolation of the organisms tested for in the laboratory.

Ureaplasma was recovered almost twice as often from patients in the symptomatic group as from the control group (61% *v* 36%). In most (58%) of the *Ureaplasma*-positive symptomatic women no other reason for vaginitis was detected. In other studies, *Ureaplasma* has also been isolated more frequently from specimens from vaginitis patients than from controls,[17] but its role in vaginitis is not yet known.

An association of *Ureaplasma* with *G vaginalis* was noteworthy. From the symptomatic group, 11 of the 12 specimens containing *Gardnerella* also contained *Ureaplasma*. The role of both organisms is controversial. One possibility is that an interaction between them is necessary to elicit the symptoms of clinical disease.

The observation of clue cells by microscopic examination of wet mounts was not always a reliable indicator for the presence of *Gardnerella* in our study or others,[18,19] although in our study, *Gardnerella* was isolated only from patients with abnormal discharge. The 13.3% recovery of *G vaginalis* in this study was remarkably similar to 14.8% isolation from 377 vaginal specimens submitted to our laboratory by several other area physicians (unpublished results).

The role of yeast in vaginitis is well known, but isolation of yeast from the vagina is not always correlated with signs and symptoms of vaginitis. In this study, yeasts were as common in the control as in the symptomatic group. Oriel et al[20] found 19% of their patients with yeasts to be asymptomatic. However, Carroll et al have reported that the presence of yeasts in the vagina during pregnancy denotes infection[21] and have suggested that isolation of *C albicans* from the vagina at any time correlates with some signs of genital tract morbidity.[22]

From the symptomatic group, 73% of the specimens positive for yeasts would have gone undetected if glucose-peptone culture had not been used. Similarly, Rothenberg et al[23] found that 70% of women with yeast infection were positive by culture but not by vaginal smear. However, yeasts were equally prevalent in our controls, which indicates a need for careful correlation between the physician's clinical impression and the laboratory results in the diagnosis of yeast vaginitis.

Patients with obvious trichomonal infection were not included in this study. However, trichomonads were detected in two women from the symptomatic group by acridine-orange microscopy; wet mounts were negative for this organism. We have previously noted[16] that this test can detect from 16% to 25% more positives than on-site wet mount. While the test is not practical for on-site identification because a fluorescent microscope is needed, it is effective for mail-in slide tests.

Chlamydia was isolated infrequently from the symptomatic patients and in all but one case was associated with other possible vaginal pathogens. *Chlamydia* is not considered to have a causative role in vaginitis, but these isolations emphasize the need for total evaluation for genital infections of women. In the case documented in Table III, despite treatment of *C trachomatis* with minocycline(Minocin), the patient was found to habor the organism when tested again two months later. It is not known whether this was reinfection or a treatment failure. Neither the *Ureaplasma* nor the *Gardnerella* carried by this patient was eradicated by metronidazole (Flagyl), minocycline, or tetracycline, indicating a need for posttreatment cultures to ensure that eradication of organisms has accompanied the resolution of symptoms.

The laboratory testing of organisms associated with vaginitis added important information to the clinical examination in this study: More organisms were identified than by wet mount, and more possible pathogens were identified for treatment.

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Para-Aortic Lymph Node Metastasis in FIGO Stage I Endometrial Carcinoma

Value of surgical staging and results of treatment

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Forty-one patients with FIGO stage I endometrial carcinoma underwent para-aortic lymph node biopsy and six (14.6%) were found to have biopsy-confirmed para-aortic lymph node metastasis. Of the six women with para-aortic lymph node metastasis, five had grade 3 (poorly differentiated) tumor or deep myometrial invasion and the sixth patient had metastasis to the ovary not clinically apparent preoperatively. The authors could find only one report of the result of therapy of a single patient with para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma. Since there was no known effective therapy for patients with para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma, treatment plans were developed sequentially in an effort to find effective therapeutic regimens. Of the six patients treated with either chemotherapy, radiation therapy, or combination therapy, none responded to therapy; four are dead of recurrent endometrial carcinoma and two are alive with progression of their malignancy. Significantly, five of the six instances (83.3%) of para-aortic lymph node metastases were clinically apparent (hard, enlarged, and fixed) at the time of exploratory laparotomy and the instance of ovarian metastasis associated with para-aortic node metastasis was histologically verified. Since there is currently no known effective therapy for para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma, the routine use of para-aortic lymph node biopsy in such instances would not appear warranted at this time. However, since the finding of clinically apparent metastasis at surgery, whether para-aortic, ovarian, or other metastasis, so alters the outcome and treatment, it is suggested that this information be utilized in the current FIGO staging system for endometrial carcinoma while investigators evaluate therapeutic regimens for such metastasis.

Survival for most patients with FIGO stage I endometrial carcinoma treated by what would be considered conservative therapy—hysterectomy with or without preoperative uterine or postoperative vaginal radium—remains very high.[1] The major exceptions to this salutory outcome in FIGO stage I endometrial cancer are those patients with poorly differentiated carcinomas (grade 3), or those whose tumor extends deeply into the uterine muscle. Moreover, in a prospective randomized study of 540 patients evaluating the utility of postoperative pelvic irradiation, including patients with grade 3 tumors or deep myometrial invasion, survival was not enhanced by the addition of this modality as compared with a control group treated by conservative means (hysterectomy plus vaginal radium).[2]

The most likely explanation for the failure of pelvic irradiation to improve survival in women with FIGO stage I, grade 3 or deeply invading tumors was the documentation by Creasman et al[3], in a multi-institutional cooperative study of the Gynecologic Oncology Group, that most patients with either of these adverse parameters not only have a high incidence of pelvic lymph node metastasis but also have concomitant metastasis to the para-aortic lymph nodes, the latter clearly out of the standard field of pelvic irradiation. We recently reported on this high incidence of para-aortic lymph node metastasis in grade 3 carcinomas or those with deep myometrial invasion in a prospective evaluation of 41 patients who underwent staging para-aortic lymphadenectomy or para-aortic lymph node biopsy at the time of primary surgery for FIGO stage I endometrial adenocarcinoma.[4] Six of the 41 patients (14.6%) were found to have metastasis to the para-aortic lymph nodes. None of the patients with grade 1 (well-differentiated) lesions had para-aortic lymph node metastasis, as compared with 13.6% with grade 2 (moderately differentiated) lesions, and 37.5% with grade 3 lesions. Similarly, none of the patients with tumor limited to the endometrium had para-aortic lymph node metastasis, and 4.5% with superficial

TABLE I. FIGO Classification of Endometrial Cancer

Stage	Characteristic
Stage I	Carcinoma is confined to corpus
IA	Length of uterine cavity ≤8 cm
IB	Length of uterine cavity >8 cm
Stage I cases should be subgrouped as to histologic type of carcinoma:	
Grade 1	Highly differentiated adenomatous carcinomas
Grade 2	Differentiated adenomatous carcinomas with partly solid areas
Grade 3	Predominantly solid or entirely undifferentiated carcinomas
Stage II	Carcinoma has involved corpus and cervix
Stage III	Carcinoma has extended outside uterus but not outside true pelvis
Stage IV	Carcinoma has extended outside true pelvis or has obviously involved mucosa of bladder or rectum. A bullous edema as such does not permit allotment of a case to stage IV.

myometrial invasion (less than 50%) had para-aortic lymph node metastasis, but this increased to 45.5% with deep myometrial invasion. Therefore, of the six women with para-aortic lymph node metastasis, five, or 83.3%, had grade 3 lesions or deep myometrial invasion. Moreover, the sixth patient had an occult metastasis to the ovary, possibly accounting for the mode of aortic nodal metastasis in this instance.

With these studies[3,4] documenting that approximately 20% to 45% of women with grade 3 lesions or deep myometrial invasion from FIGO stage I endometrial carcinoma have para-aortic lymph node metastasis, many surgeons are confronted with the issue of considering para-aortic node biopsy in such instances. Notwithstanding that consideration, the salient question arises: Is there effective therapy for such metastasis? The authors could find only one report of the results of treatment of a patient with para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma.[5] In 1970 Silberstein and coauthors[5] reported a patient with FIGO stage I endometrial carcinoma treated by preoperative intrauterine radium followed by abdominal hysterectomy and bilateral salpingo-oophorectomy. At the time of surgery "biopsy of an enlarged node above the bifurcation of the aorta was reported as metastatic carcinoma." She received 6,000 rads over a 6-week period to the para-aortic lymph nodes and at the time of the report was alive without evidence of recurrence at 2.8 years.

The purpose of this report is to (1) present the results of therapy of our six patients documented to have para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma, and (2) review the utility of utilizing the findings at surgery in the current staging system since 90% of women with FIGO stage I endometrial carcinoma do undergo exploratory laparotomy and bilateral salpingo-oophorectomy (Table I).

Materials and methods

Of the 41 patients with FIGO stage I endometrial adenocarcinoma who underwent surgical staging from 1977 to 1981, six were found to have histologic evidence of para-aortic lymph node metastasis; three had poorly differentiated carcinomas, three had moderately differentiated carcinomas, and five patients had deep myometrial invasion. The patients are presented in chronologic order to present the evolution of various treatment plans utilized.

Results

The results of therapy of our six patients are summarized in Table II.

Case 1. A 58-year-old woman underwent exploratory laparotomy in 1977 for a FIGO stage I poorly differentiated endometrial adenocarcinoma. At the time of surgery there were enlarged para-aortic lymph nodes that were clinically positive for metastasis (enlarged, hard, and fixed) from lumbar vertebrae L-5 to L-1. Biopsy confirmed metastasis to the para-aortic lymph nodes.

Because of the extensive metastasis to the para-aortic lymph nodes, pelvic and para-aortic irradiation was not considered curative. Therefore, she was treated with medroxyprogesterone acetate (Depo-Provera) at a dose of 1 g intramuscularly per week, considered at that time our most effective therapy.[6] After 1 month of treatment, she developed progres-

TABLE II. Results of Treatment of Para-Aortic Node Metastasis Clinical Stage I Endometrial Adenocarcinoma

Patient	Metastasis	Surgery	Treatment	Status
1	L-5–L-1	Biopsy	Medroxyprogesterone	DOD 6 wk
2	L-5–L-3	Partial excision	Pelvic & aortic radiotherapy, 5,000 rads	DOD 39 mo
3	L-4–L-1	Biopsy	MFP	DOD 14 mo
4	Microscopic 3/7 nodes	Lymphadenectomy	Pelvic radiotherapy, 5,000 rads; medroxyprogesterone	DOD 11 mo
5	L-2–L-1	Excision	MFP + tamoxifen	Alive with progression 9 mo
6	L-5–L-1	Biopsy	MFP + tamoxifen	Alive with progression 7 mo

Abbreviations: MFP = melphalan, 5-fluorouracil, medroxyprogesterone acetate; DOD = dead of disease sion of her malignancy as evidenced by multiple osteolytic lesions in the lumbar spine and ribs. She died of endometrial carcinoma 6 weeks after initiation of treatment.

Case 2. This 56-year-old patient with FIGO stage I moderately differentiated endometrial carcinoma underwent exploratory laparotomy in 1978. At the time of surgery she was found to have metastasis to the para-aortic lymph nodes in the region of L-4 to L-5. Because of the fixation of the lymph nodes to the lower vena cava, only a partial excision could be carried out, leaving small residual metastasis along the lower vena cava. Since there was only minimal residual tumor burden, the disease was considered to be possibly curative by external irradiation; she received 5,000 rads whole pelvis and para-aortic irradiation over a 5-week period, followed by intravaginal radium. She did well until 1981 when she developed extensive recurrence in the abdomen and died 39 months after initial diagnosis.

Case 3. A 56-year-old woman with FIGO stage I moderately differentiated endometrial adenocarcinoma underwent exploratory laparotomy in 1978. At the time of surgery there were clinically positive para-aortic lymph nodes extending from L-4 to L-1, biopsy of which confirmed para-aortic lymph node metastasis. In view of the extensive para-aortic lymph node metastasis she was not considered a candidate for curative pelvic and para-aortic nodal irradiation. However, because of the high response rate reported by Cohen and coauthors to melphalan, 5-fluorouracil, and medroxyprogesterone acetate (MFP) of 85% for patients with metastatic endometrial adenocarcinoma,[7] and subsequently confirmed in a similar study of ours (54.5%),[8] she was treated with MFP. After eight courses of MFP, she developed progression of her disease with extensive intra-abdominal recurrence and died 14 months after initiation of therapy.

Case 4. A 79-year-old woman with FIGO stage I moderately differentiated endometrial adenocarcinoma underwent exploratory laparotomy in 1980. At the time of surgery, the para-aortic lymph nodes were clinically negative for metastasis (normal size, soft, and mobile). A staging para-aortic lymphadenectomy was carried out removing the lymph nodes from the bifurcation of the aorta to just below the renal vessels; three of the seven para-aortic lymph nodes contained microscopic evidence of metastasis. Because of her age and the considered possibility that the subclinical para-aortic lymph node metastasis had been completely resected, she was treated with pelvic irradiation (5,000 rads/5½ weeks) in an attempt to eradicate any subclinical metastasis in the pelvic lymph nodes. In addition, she received adjuvant medroxyprogesterone acetate (Depo-Provera), 1 g/week for 10 months. She subsequently developed extensive recurrence in the para-aortic lymph nodes confirmed by exploratory laparotomy and died 11 months after initiation of therapy.

Case 5. This 40-year-old patient underwent exploratory laparotomy for FIGO stage I poorly differentiated endometrial adenocarcinoma in 1981. At the time of surgery she was found to have extensive para-aortic lymph node metastasis (7 × 4 × 4 cm) at L-1. Although these metastases were resected, she was not considered a candidate for curative pelvic and para-aortic irradiation because of the high location of the para-aortic lymph node metastasis, and she was treated with systemic chemotherapy consisting of MFP with the addition of the antitumor agent, tamoxifen citrate. Tamoxifen citrate was added to our evaluation of MFP in 1981 to evaluate if the response rate previously reported to MFP alone could be enhanced by the addition of this antiestrogenic compound. After eight courses of MFP plus tamoxifen, her malignancy progressed as evidenced by recurrence in the vagina. She is currently alive with progression of her malignancy, 9 months after initiation of treatment.

Case 6. This 71-year-old patient underwent exploratory laparotomy in 1981 for FIGO stage I poorly differentiated endometrial adenocarcinoma. At surgery she was found to have metastasis to the para-aortic lymph nodes from L-5 to L-1, confirmed by biopsy. Because of the extensive amount of malignancy in the para-aortic lymph nodes, she was treated with MFP plus tamoxifen. After the fourth course of chemotherapy she developed progression of her disease in the upper vagina and is currently alive 7 months after initiation of therapy.

In summary, none of the six patients with para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma responded to therapy. Four patients are dead from cancer from 1.5 to 39 months after initiation of therapy and two are alive with progression of disease at 7 and 9 months, respectively.

Comment

The purpose of any cancer staging classification is twofold: one as a descriptive account of the known clinical extent of the disease process at primary presentation and secondly as a prognostication of survival. That is, the lower the stage, the more confined the malignancy and the better the prognosis; and, conversely the higher the stage the more widespread the disease and the poorer the outcome. In clinically localized FIGO stage I endometrial cancer, a disease in which over 90% of the women undergo exploratory laparotomy, total abdominal hysterectomy, and bilateral salpingo-oophorectomy, clinicians are left with a dilemma of comparing results of therapy based upon the use of physical examination findings and routine roentgenograms (eg, chest x-ray). The ability to use the findings of surgery and subsequent pathologic review as part of the staging classification would make comparison of results of therapy for each individual stage more useful. First, it is well documented that the survival of patients with stage I, grade 1 or grade 2 carcinomas or tumor limited to the endometrium or only superficially invading the myometrium is considerably better than for women with stage I endometrial carcinomas that are grade 3 or have deep myometrial invasion.[1] This is a significant consideration because it is now known that one of the prime reasons that patients with grade 3 tumors or deep myometrial invasion have survival rates worse than patients with grade 1 or grade 2 lesions or tumor limited to the endometrium or only superficially invading the myometrium is the high incidence of pelvic and para-aortic lymph node metastasis in grade 3 and deep myometrial invading lesions.[3] However, although the grade of the tumor can be assessed without the finding at surgery, clearly the presence or absence of deep myometrial invasion must be determined after extirpation of the uterus (this can be done by frozen-section evaluation of the uterus at the time of primary surgery). Second, it is normally not possible to detect small ovarian metastasis preoperatively (stage III), but they are readily detected either at surgery and on microscopic review of the excised ovaries. Moreover, the prognosis is considerably worse for patients with ovarian metastasis as compared with those without evidence of such spread.[9]

In the current report of the 41 patients with FIGO stage I endometrial cancer who underwent pretherapy surgical staging, six (14.6%) had para-aortic lymph node metastasis. Significantly, five of the six instances (83.3%) of para-aortic lymph node metastasis were clinically apparent (hard, enlarged, and fixed) at the time of exploratory laparotomy. The finding of para-aortic lymph node or other metastasis clinically apparent at surgery would allow these patients to be allotted to higher, more appropriate stage and thus make comparison of results within each stage more meaningful. Moreover, to date there is no satisfactory treatment for patients found to have para-aortic lymph node metastasis from FIGO stage I endometrial carcinoma. Of our six patients treated for para-aortic lymph node metastasis from FIGO stage I endometrial cancer, four are dead of cancer from 1.5 to 39 months after initiation of treatment and two patients are alive, both with progression of disease, 7 and 9 months respectively after initiation of therapy. No patient responded to the plan of therapy.

Therefore, until a satisfactory treatment for para-aortic lymph node metastasis from a FIGO stage I endometrial carcinoma is known, the routine use of para-aortic lymph node biopsy even in grade 3 lesions or tumors deeply invading the myometrium would not appear indicated at this time. However, the finding of obvious metastasis to the para-aortic lymph nodes (enlarged, hard, and fixed) could be confirmed by biopsy of the enlarged node and the patient allotted to a more appropriate stage IV. It is suggested that the use of this information in the current staging system for endometrial carcinoma would allow for a more meaningful comparison of results between institutions, improve prognostication for patients known to have a specific stage, and allow for a more concentrated effort to find a suitable therapy for patients at high risk for the development of para-aortic lymph node metastasis either clinically apparent at surgery or at high risk because of grade of tumor and amount of myometrial invasion of the uterus.

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Primary Cancer of the Small Bowel

Review of a 40-year experience in a community hospital and of a 10-year experience in all of the hospitals in Monroe County

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Sixty primary small-bowel neoplasms over the past 40 years at Rochester General Hospital (RGH) were reviewed and compared with 105 cases treated in Monroe County, New York, between 1970 and 1980. Patients presented with chronic symptoms of two months' or longer duration and complained of pain (53%), nausea (37%), or weight loss (28%). Laboratory examination revealed anemia (hematocrit < 35) in 38% (23/60) and elevated alkaline phosphatase (>100 units) in 48% (19/40). Upper-gastrointestinal (UGI) series with small-bowel follow through (SBFT) was diagnostic in 72% (26/36), and endoscopy was diagnostic in 80% (4/5) of patients. Adenocarcinoma was most common: 48% in the RGH and 37% in the county-wide series. Carcinoids accounted for 30% and 33%, respectively. Other tumors included leiomyosarcoma (13% and 11%, respectively) and lymphoma (7% and 12% respectively). Synchronous or metachronous primary lesions were present in 18% of patients with small intestinal lesions and in 14% of patients with carcinoma of the colon. The overall five-year survival for the RGH series was 43%. Management of patients, particularly those beyond age 40, with chronic gastrointestinal complaints should include UGI-SBFT and barium enema. Endoscopy may be indicated in patients with duodenal lesions.

Primary malignancies of the small bowel are uncommon and account for only 1% of all gastrointestinal cancers.[1–4] Nearly half of the patients with small-bowel cancers admitted to Rochester General Hospital (RGH) during the past 40 years were treated between 1970 and 1980, and the increased incidence has continued since the end of this review. The time from onset of symptoms to obtaining appropriate diagnostic tests has been long in all four decades due to the chronic, mild nature of patients' complaints. Upper gastrointestinal series with small bowel follow-through (UGI-SBFT) has frequently indicated the site of the lesion. In recent years, endoscopy and biopsy have usually provided the correct preoperative diagnosis of the proximal tumors. Timely, appropriate diagnostic studies can decrease the delay in operative treatment with, one hopes, an improvement in survival.

Methods

We reviewed the medical records of all patients with primary malignancies of the small intestine admitted to RGH from 1940 to 1980. The data for all such patients treated in Monroe County, New York, between 1970 and 1980 were obtained via computer search of the Rochester Regional Tumor Registry. Tumors of the ileocecal valve and periampullary tumors that were not precisely documented as arising from the small intestine were excluded from this study.

Results

RGH cumulative data 1940–1980. There have been 60 cases of primary malignant tumors of the small intestine at RGH since 1940, 28 of them during the past ten years. Two thousand forty-four cases of carcinoma of the colon were treated during this period. Of the 60 patients, 34 were men (57%) and 26 were women (43%). Eleven men (18%) and seven women (12%) were alive at completion of this study.

Table I shows the age distribution of patients with these tumors. They ranged in age from 40 to 88 years, with an average age of 63. Most patients were in the fifth, sixth, and seventh decades of life.

Fifty-seven patients (95%) were symptomatic and were eventually explored. Of the remaining three, one was an 88-year-old man with an adenocarcinoma of the third part of the duodenum (confirmed by autopsy), another was a woman with a constricting carcinoid tumor of the ileum, found incidentally during repair of a procidentia, and the third was a 78-year-old man with a widely metastatic carcinoid of the ileum that was found at autopsy, one day following admission for myocardial infarction.

The duration of symptoms was recorded for 56

TABLE I. Age Distribution*

Range: 40–88 Years	Average: 63 Years
40–49	5
50–59	19
60–69	19
70–79	13
80–89	4
TOTAL	60

* n = 60.

TABLE II. Presenting Symptoms*

	n	Percentage†
Pain	32	53
Nausea/vomiting	22	37
GI bleeding	17	28
Weight loss	14	23
Small-bowel obstruction	14	23
Melena	13	22
Diarrhea	13	22
Mass	9	15
Distention/bloating	9	15
History of anemia	7	12
Weakness	7	12
Jaundice	6	10
Syncope	4	7
Peritonitis	3	5
Anorexia	3	5
Constipation	3	5
Acute abdomen, nonspecific	2	3
Flushing	1	2
Miscellaneous	7	12
Asymptomatic	1	2

* Presenting complaints of 60 patients, not mutually exclusive.
† Percentage of 60 patients.

TABLE III. Laboratory Findings at Admission

Tests	Patients	Percentage
Anemia (n = 60)	23	38
Leukocytosis (n = 60)	17	28
Elevated bilirubin (n = 40)	6	15
Alkaline phosphatase >100 (n = 40)	19	48
SGOT elevated (n = 40)	6	20
LDH elevated (n = 40)	4	10

TABLE IV. Frequency of Radiologic Diagnosis

Procedure	Patients	Percentage
UGI-SBFT (n = 36)	26	72
Barium enema (n = 22)	4	18
Free-air series (n = 20)	6	30
Endoscopy (n = 5)	4	80
Ultrasound (n = 1)	1	100

(93%) patients. Most patients (67%) presented with chronic, intermittent abdominal pain for at least two months. Forty-one percent (23) were symptomatic for six months or longer. Only 12 patients (21%) presented with acute symptoms of less than one-week duration, and these were all due to small-bowel obstruction. Two of these had small-bowel intussusception, and three others had ileus secondary to perforation of the intestine by the tumor. Table II lists the presenting complaints. Pain of a crampy, intermittent nature was reported most often (32 patients, 53%). Nausea and vomiting occurred in 22 (37%) of the patients. Sporadic GI bleeding was reported in 17 (28%) and melena in 13 (22%). Weight loss and small-bowel obstruction were each present in 14 (23%) patients.

The laboratory and radiologic findings are listed in Table III and IV, respectively. At the time of admission, anemia was present in only 23 patients (38%). The alkaline phosphatase was greater than 100 in 19 of the 40 patients (48%) on whom the test was obtained. The upper GI series with UGI-SBFT was most often helpful. A lesion was demonstrated in 26 of the 36 patients (72%) who had this study. Barium enema localized the lesion in four of 22 (18%) patients. Free-air series revealed small-bowel obstruction in six of 20 (15%) patients. Ultrasound was helpful in localizing the lesion in one patient who had a palpable mass. Endoscopy was performed in five patients with duodenal abnormalities, and the biopsies showed tumor in four. In one patient, treatment was delayed because the initial biopsies showed no tumor.

Table V lists the anatomic location and histology of the tumors. Twenty-four tumors (40%) were in the ileum, the majority located in the distal ileum. Malignancies of the duodenum were present in 16 patients (26%). Eighteen patients (30%) had jejunal lesions.

Curative resections were performed in 31 patients (52%) and palliative procedures were performed in 27 (45%). Two patients were not operated. The most common curative procedures were pancreatoduodenectomy for adenocarcinoma of the duodenum and extensive segmental and mesenteric resection for tumor in other parts of the small bowel. Limited segmental resection or bypasses were performed for palliation.

Table VI shows survival by histologic type. The overall five-year survival rate is 43%. Twenty-three patients with adenocarcinoma have been followed for five or more years, revealing a 35% (8) five-year survival. Of 18 patients with carcinoid, nine (44%) have survived five or more years. Fifty percent of patients with leiomyosarcoma survived for five or more years.

Synchronous or metachronous malignancies were reported in 11 patients (18%), with four patients developing multiple other primaries. These are listed in Table VII.

Monroe County data 1970–1979. During this study period, there were 105 patients with primary small-bowel malignancy (48 men, 57 women) and 4,540 patients with carcinoma of the colon admitted to the hospitals in Monroe County, New York. Twenty-eight of these patients with small-bowel malignancy and 1,100 with colon carcinomas were admitted to RGH.

TABLE V. Tumor Type and Location

Type	Duodenum	Jejunum	Ileum	Unspecified	Totals	Percentage
Adenocarcinoma	16	9	4	0	29	48
Carcinoid	0	2	14	2	18	30
Leiomyosarcoma	0	4	4	0	8	13
Lymphoma	0	2	2	0	4	7
Fibrosarcoma	0	1	0	0	1	2
TOTAL	16 (27%)	18 (30%)	24 (40%)	2 (3%)	60 (100%)	100

TABLE VI. Survival in Years*

Tumor	≤1	>1 ≤2	>2 ≤3	>3 ≤4	>4 ≤5	≥5	Percentage†
Adenocarcinoma	12 (2)	0 (3)	2 (1)	0	1	4 (4)	35
Carcinoid	7	0	1	1	1	3 (5)	44
Leiomyosarcoma	1	2	1	0	0	3 (1)	50
Lymphoma	2	0	0	0	0	0 (2)	50
Fibrosarcoma	0	0	0	0	0	1	100
TOTAL	24	5	5	1	2	23	43

* Numbers in parentheses indicate patients alive at time of study. (There are 42 deceased, 18 living.)

† Percentage of patients surviving five years or more.

The age distribution of patients with small-bowel malignancy is given in Table VIII. The peak incidence occurred during the fifth, sixth, and seventh decades, but seven of the patients were under 30 years old.

The anatomic distribution and histology of the tumors throughout the county and at RGH are compared in Table IX. The populations are similar. Adenocarcinoma was the most common tumor, accounting for 30 cases (37%), followed by 35 carcinoids (33%). Leiomyosarcoma and lymphoma were nearly equal in frequency, accounting for 12 (11%) and 13 (12%), respectively. There was one case of mesothelioma of the ileum reported during the study period.

Fifty-six of the patients have died. Diagnosis and survival are presented in Table X. Of the patients who died, only three survived for five years or more.

Synchronous or metachronous malignancy was reported in 15 of 84 (18%) patients with small intestine primaries. By comparison, 561 (14%) of 3,927 patients with carcinoma of the colon had multiple primaries. Table XI indicates the sites of the other malignancies in patients with carcinoma of the colon.

Comment

Our data indicate that an apparent increase in numbers of small-bowel malignancies is an institutional and not a countywide phenomenon in comparison with the number of colon carcinomas treated. We find, as have others,[1–9] that small intestinal neoplasms are rare enough to escape diagnosis for long periods of time but that appropriate diagnostic tests often indicate the site of the lesions.

Delay in diagnosis and treatment is probably related to the chronic, relatively mild nature of the symptoms as well as the lack of consistently accurate diagnostic modalities. All too often the patient's symptoms were disregarded or misdiagnosed for months before treatment. As in other series,[1–9] the majority of patients reported symptoms for two or more months. Despite a history of pain, weight loss, anemia, and guaiac-positive stools or intermittent bleeding, these patients were managed medically or symptomatically without adequate radiologic workup of the GI tract. We have demonstrated that UGI-SBFT indicate the site of the lesion in 72% of the patients examined, and others have had the same experience.[1,3,4,6,7,10,11]

TABLE VII. Other Primary Tumors by Site*

Tumor	No.
Adenocarcinoma, colon/rectum	5
Carcinoma, breast	4
Adenocarcinoma, prostate	2
Clear cell carcinoma, kidney	1
Squamous carcinoma, palate	1
Transitional cell carcinoma, bladder	1
Adenocarcinoma, pancreas†	1
Anaplastic carcinoma, lung	1
TOTAL	16

*n = 11 (18%).

† Occurring in a patient with carcinoid syndrome.

TABLE VIII. Age Distribution of Small-Bowel Malignancy, Monroe County 1970–1979

Age (yr)	No. of Malignancies
0–20	3
21–30	5
31–40	1
41–50	14
51–60	24
61–70	24
71–80	22
≥81	12
TOTAL	105

TABLE IX. Tumor Histology and Location
Monroe County 1970–1979 Data

Tumor	Duodenum	Jejunum	Ileum	Unspecified	Totals	Percentage
Adenocarcinoma	21	12	3	3	39	37
Carcinoid	1	0	28	6	35	33
Leiomyosarcoma	2	4	2	4	12	11
Lymphoma	1	1	6	5	13	12
Other sarcoma	3	0	2	0	5	5
Mesothelioma	0	0	1	0	1	1
TOTAL	28 (27%)	17 (16%)	42 (40%)	18 (17%)	105	100

Rochester General Hospital

Tumor	Duodenum	Jejunum	Ileum	Unspecified	Totals	Percentage
Adenocarcinoma	6	3	3	0	12	43
Carcinoid	0	1	9	1	11	39
Leiomyosarcoma	0	3	0	0	3	11
Lymphoma	0	0	2	0	2	7
Other sarcoma	0	0	0	0	0	0
Mesothelioma	0	0	0	0	0	0
TOTAL	6 (22%)	7 (25%)	14 (50%)	1 (3%)	28	100

Endoscopy was positive in 80% (4/5) cases of duodenal tumors and is a modality which should be used with greater frequency in the evaluation of duodenal ulcerations.[3,6,11–13] The majority of patients in this series presenting with adenocarcinoma of the duodenum were found radiographically to have duodenal ulcers and many of the ulcers were located in the distal second portion or third and fourth portions of the duodenum. Ulcers or other radiographic defects in unusual locations warrant further investigation immediately.

Earlier studies[1–9] have reported only 10% to 20% of small-bowel malignancies in the duodenum. Our data (27%) suggest the higher figure represents the frequency in our area. Wilson and others[9] reported a similar experience at New York Hospital (31%) and found a 23% incidence in 2,144 collected cases of small-bowel tumors. Half of the duodenal malignancies treated at RGH occurred in 1979. An increase in periampullary as well as pancreatic carcinomas has been reported in western countries.[2,3] Endoscopy should become an increasingly important modality for the early diagnosis of these lesions.

Survival of patients in this series is similar to the experience at other institutions.[3–9]

Miles and others[6] present a rather graphic description of the typical patients with small-bowel malignancy. Our own data lend further support to those tenets. Collated data[3,4,6–8,10–13] inclusive of this series would suggest that the approach to the patient with nonspecific chronic abdominal complaints should include a thorough history and physical examination; routine laboratory studies, including stools from occult blood; a CBC with differential; and an SMAC profile. In the absence of a colonic lesion, findings such as occult blood in the stool, anemia, or elevated alkaline phosphatase should lead to an UGI-SBFT. Computerized tomography and ultrasound tend to be of low yield in the absence of a palpable mass. Endoscopy has been useful in our hands in defining duodenal pathology.

In addition to the problem of defining the population at risk of developing small-bowel malignancy, the problem of neoplasia in multiple-organ systems should not be underrated. The increased incidence of second primaries in patients with a known malignancy is often quoted. Second primaries of the colon in patients with colon cancer has been estimated at 4% to 8%.[2] Our series agrees with the work of others. In a review of collected series, Silberman, Crichlow, and Caplan[4] showed an 18% incidence of multiple

TABLE X. Survival of Deceased Patients
Monroe County 1970–1979*

	<1 yr	>1 ≤2 yr	>2 ≤3 yr	>3 ≤4 yr	>4 ≤5 yr	≥5 yr
Adenocarcinoma	14	4	4	1	0	1 (4%)
Carcinoid	9	1	3	1	3	2 (11%)
Leiomyosarcoma	0	1	4	1	1	0
Lymphoma	3	1	0	0	0	0
Other	0	1	0	1	0	0
TOTAL	26 (46%)	8 (14%)	11 (20%)	4 (7%)	4 (7%)	3 (5%)

* n = 56.

TABLE XI. Data for Patients With Colon Carcinoma and Multiple Primary Lesions: Tumor Frequency According to Site and Type; Monroe County Data

Site/Type	Frequency	Percentage
Colon	171 (160 pts)	30.5
Breast	87	16.6
Prostate	80	15.2
Lung	44	8.4
Uterus	42	8.0
Bladder	32	6.1
Leukemia	18	3.4
Stomach	16	3.1
Lymphoma	14	2.6
CA in situ (all sites)	12	2.3
Ovary	12	2.3
Cervix	10	1.9
Kidney	9	1.7
Thyroid	8	1.5
Small bowel	8	1.5
Larynx	8	1.5
Oropharynx	9	1.9
Myeloma	7	1.3
Vagina/labia	6	1.1
Ureter	5	0.95
Esophagus	4	0.76
Skin	4	0.76
Gallbladder	3	0.57
Melanoma	2	0.38
Testis	2	0.38
Penis	2	0.38
Bone	2	0.38
Sarcoma	4	0.76
Other	5	0.95

primaries occurring outside the small intestine. We have also found multiple primary sites of malignancy in 14% of patients with carcinoma of the colon. This high incidence of synchronous or metachronous tumors is staggering when compared to the 0.33% incidence noted in the average population.[4]

Patients with known intestinal primary lesions of any site demand close follow-up in order to avoid missing new lesions elsewhere. Improvement in survival can be achieved only by earlier diagnosis and, therefore, earlier intervention.

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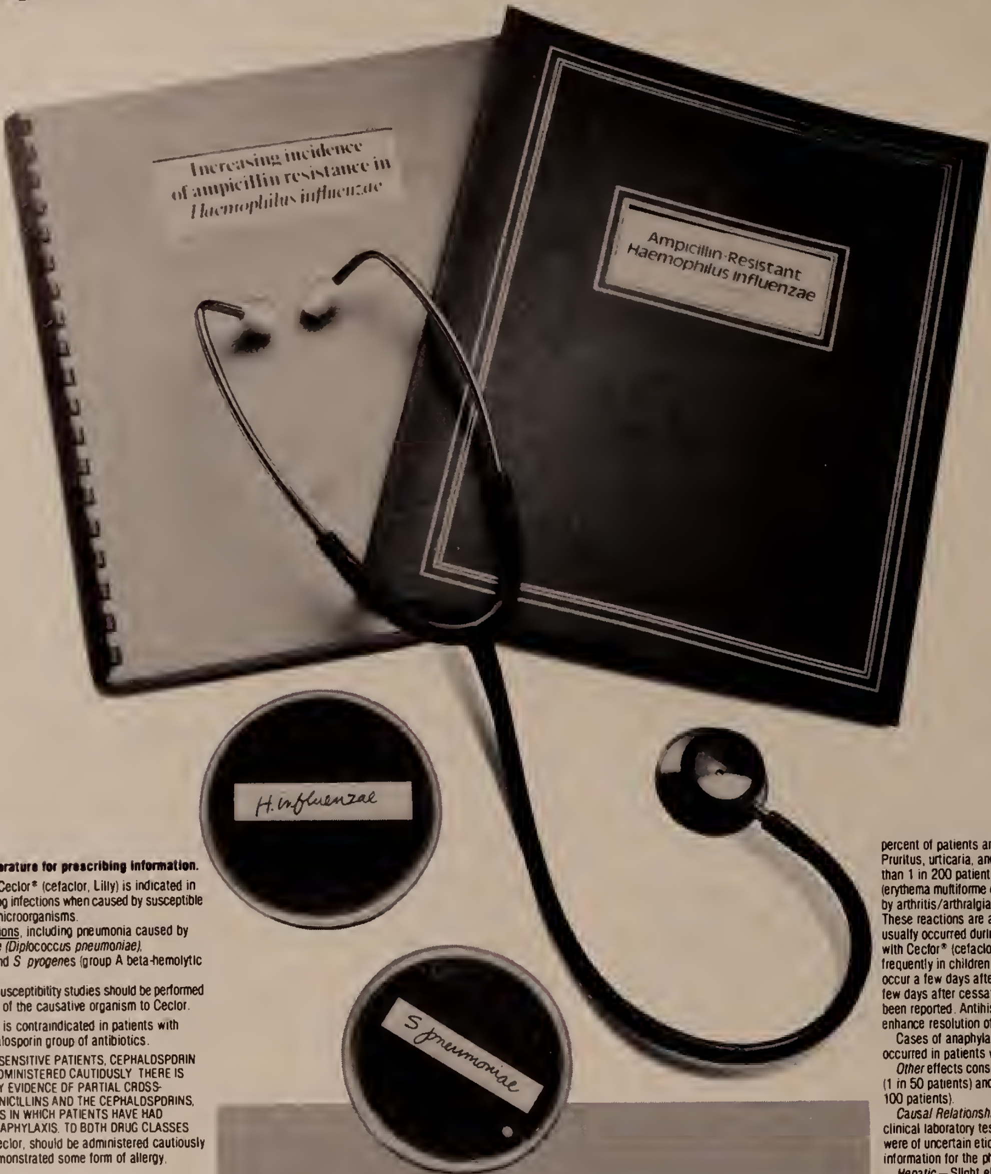
An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin-Resistant Haemophilus influenzae
H. influenzae
S. pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.$^{1\text{-}6}$

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor® cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms.

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g , pressor amines, antihistamines, or corticosteroids

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly)

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2 5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae*[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information

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Lilly

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

200086

Scientific Sessions held at New York University, November 3, 1980

ABSTRACTS AND REPORTS OF PROCEEDINGS

New York Society for Cardiovascular Surgery

ALLAN ELLIA BLOOMBERG, M.D., Editor

Fall Meeting, 1980

The fall meeting of the New York Society for Cardiovascular Surgery was held at New York University of November 3, 1980. Joseph A. Buda, M.D., President of the Society, was in the chair.

Dr. Buda: I would like to welcome you all this evening to this meeting of the New York Society for Cardiovascular Surgery. The topic is "Clinical Appraisal of Current Materials in Peripheral Arterial Surgery." The major concern that we all have as vascular surgeons is patency of the graft over the long and short term. We are all familiar with the relatively satisfactory results in the aortoiliac position of graft material. We are also familiar with the problems that occur in the femoropopliteal position for grafts. I think that I can safely say that autogenous vein is currently used as the yardstick for measuring patency and success in other kinds of grafts and tonight we will hear something from the various members of the panel which will bring us up to date on the current evaluation and current clinical status of the various materials used.

Introduction

Dr. Arthur Voorhees Jr.: It is interesting to me, and I am sure to my contemporaries in this room, that as one gets older one realizes that one is contributing significantly less, in many directions, and one turns more and more to broad perspectives of history.

This has been a fascinating tale to me, since in retrospect, one can see how the development of an idea begins in the past; how the synthesis of many ideas can be attributed to no one investigator or no one group. But, somehow, names become attached to them, and perhaps, give greater significance than the individual deserves.

The field of vascular surgery was restricted before the 1900s; the methods and materials were just not there. A few pioneer surgeons removed an aneurysm and did an end aneurysmorrhaphy, hopefully without losing the limb or the life of the individual. About 1900 the early papers of Carrel and Guthrie appeared and in 1909 they introduced two really exciting ideas. The first was the idea of meticulous suture technique for joining blood vessels together and the second was the development of synthetic or heterologous materials that might be used as conduits.

They were extraordinarily prolific. Referring to their original papers you find that they wrote on the use of silver-coated ivory, and when that failed, they shifted to paraffin-coated ivory and wrote another paper. Most of these papers suggest that Guthrie did the actual writing, since they were written in polished English, whereas Carrell's native tongue was French.

In any event, they focused our attention on the technique of joining things together. Their early successes with the use of autogenous, heterologous, and synthetic materials as conduits proved to be of limited value. Shortly after, Carrell returned to France and became involved with Lindberg in developing an artificial heart device. Guthrie went to the University of Pittsburgh.

Touffier, during World War I, evolved the concept that he might join vessels divided by trauma, by tubes originally coated with silver and paraffin. He had limited success in maintaining patency of these for more than 24 to 36 hours, but it was long enough, in many instances, to maintain the viability of the limb, and introduced the concept that slowly occluding arterial flow promoted the development of collaterals which might be sufficient to ensure viability of the limb. Again, after World War I, interest in this area subsided because there really had not been any crashing success by Touffier and his disciples.

There was remarkably little activity between 1920 and 1940 in so far as the literature is concerned. There is a dismal record of amputation following major arterial injuries. War again rekindled interest, this time by colleagues that we know, Drs. Lord and Blakemore who started the concept of preserving heterologous grafts, mainly vein grafts. With a little support from the military, they also froze grafts and tried to transport them into the field. It was a great gesture but not reality.

After the war, the return of larger numbers of surgical residents to continue their training swelled the ranks of a research cadre. At about this time, Gross announced the use of a homograph to replace a portion of aorta in his first human experiment, if you will. The explosion after 1948 was colossal. During that time there was a vast search on for the best way to harvest autogenous or homologous grafting material. Banks were formed. Multiple preservation techniques were explored. There was a proliferation of ideas but the net result was the realization that not enough human material was being harvested to make it worthwhile.

Charles Huffnagel, about this time, made a significant contribution by realizing that the critical area was not the material itself, but the juncture. He used methylmethacrylate tubes in the arch of the aorta and anchored them in place with a multiple-joint point pressure technique in a most ingenious way. That dramatic success was brief but it served to show that the real "critter" in the effort to reconstruct blood vessels was the anastomosis. Science and industry, if you will, could create a nonthrombogenic surface, and produce a readily reconstructable prosthesis of a synthetic nature.

It was approximately in the late 1940s and early 1950s that we struck on the idea of using material that we thought would act as a trellis which would allow cells to grow through and into it. We coined the term "arteriogenesis"—which couldn't be further from the truth—and presented to the profession the concept of permeable textile types of arterial prostheses. This initiated another explosion, mainly regarding technology. The synthetics involved were nylon, vinyon, Orlon, and Dacron, all having disadvantages. Vinyon was probably the most appealing but we could not persuade the manufacturers to make it because of cost. Dacron came to our rescue, primarily due to the fact that pants, shirts, suits, and everything else was made from it and had a sustaining economic base.

The activity from 1955 through 1970 focused on various weaves and the mechanical problems of turning corners and adjusting for length; that is, the longer the tube, the less the diameter, the more significant the resistance to the wall and the more likely, even when below thrombogenicity, to become progressively occluded. Gradually, as some of the problems have been solved the old problems of the anastomosis has recurred. With increasing ability, we are able to maintain prostheses in a patent state with a reduction of fibrin platelet aggregations on the wall but we have again become involved with the problem of circumferential scarring at the site of anastomosis. This has taken several forms. One is the so-called intimal proliferation; other studies have indicated that this is nothing more than a transmission of normal histiocytes that accumulate at any site of irritation.

In any event, I think that tonight we have an opportunity to review some of our thoughts and to see what new thoughts our investigators have produced. Thank you.

The following article is abstracted.

Site-Specific Vascular Prostheses

R. W. SNYDER, Ph.D

USCI Surgical Products

The USCI extrinsically supported (EXS) vascular prosthesis was designed specifically for small-diameter applications in the extremities. The product is a new variation on an old theme.

It has long been observed that macroperturbations in the geometry of the flow surface often result in a locally thickened inner capsule or in deposits of fresh thrombi. The crimps in most vascular prostheses are from 1 to 1.5 mm in depth. This is relatively unimportant in large-diameter prostheses. However, in a 6-mm prosthesis these local perturbations in the flow surface become important.

In the past, uncrimped versions of vascular prostheses have been commercially available. However, because of difficulties with kinking and problems in handling a wet uncrimped prosthesis, these products have not enjoyed popular support in the surgical community. The EXS product combines the smooth flow surface of an uncrimped prosthesis with the handling characteristics of Dacron and increased resistance to kinking and compression.

Several potential additional advantages to this type of construction have been uncovered. The first additional advantage noted was the increased resistance to compression which is important in axillofemoral and other extra-anatomic bypasses. The second advantage has not been completely demonstrated at this time. However, it appears that the decreased compliance in the midlength segment of a porous textile prosthesis may improve the stability of the ingrowth and inner capsule. Preliminary results which will be discussed further indicate that the stabilization of the structure may be equivalent to increasing the porosity in terms of the "gossamer" concept of Dr. Wesolowski.

In addition to the Sauvage EXS site-specific vascular prosthesis, the larger diameter straight and bifurcate prostheses have also been improved. The porosity of these products has been decreased and their strength increased without any sacrifice in their handling characteristics. Data indicate that there is a range of porosities in knit structures which will yield the same long-term results in regard to the biologic response. Thus it has been possible to increase the factors of safety in regard to both preclotting and long-term strength without sacrificing efficacy.

The following article appears in its entirety.

Expanded Polytetrafluoroethylene Grafts in Arterial Surgery

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New York City

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Over the past four years we have used expanded polytetrafluoroethylene (PTFE) grafts in more than 500 lower extremity arterial reconstructions for limb salvage, which justifies several preliminary conclusions.

PTFE grafts continue to be promising in femoropopliteal reconstructions even in locally and systemically high-risk situations. Our present life-table 36-month patency rate for 175 PTFE femoropopliteal bypasses performed for limb salvage is 77%. This cumulative patency was achieved despite the fact that 83 of the grafts were inserted into the popliteal artery below the knee and 42 of the grafts were to a blind or isolated segment of popliteal artery, with no direct runoff into patent calf arteries. Aggressive study and appropriate reoperation when PTFE femoropopliteal bypass grafts fail are important in achieving these patency rates. The three-year patency rate for PTFE femoropopliteal bypasses without reoperation would be only 62%. Several of the PTFE femoropopliteal bypasses reoperated on for early or late closure have remained patent for more than two years.

Our present conclusions regarding late femoropopliteal graft failure, or thrombosis after the first month, are based on experience with 22 cases. We reoperate only if the limb is threatened (18 of the 22 cases). If such reoperations are performed aggressively and appropriately, patency can usually be restored (16 of our 18 operated cases). Patency was maintained for two to 27 months (mean, 11 months) in 14 of 18 cases. Patency can usually be restored by reopening the distal incision and making a longitudinal opening in the graft to see the inside of the distal anastomosis. Proximal graft thrombectomy and salvage of the graft was possible in 83% of cases, even when reoperation was delayed three months after closure.

The causes, relative frequency, and effective operative treatment for our late PTFE graft closures are as follows. For intimal hyperplasia (25% of our cases), extension of the longitudinal graft opening across the toe of the anastomosis and down the recipient artery followed by patch grafting was effective. When angiography revealed progression of disease (42% of our late closures), distal graft extension was required. No cause of failure could be found in 33% of our late closures. Unlike our failures with other graft materials, simple thrombectomy in these cases often restored patency, which can persist over two years.

Life-table patency rates at 36 months for PTFE axillofemoral and femorofemoral bypasses are 84% and 87%, respectively. Although these midterm results are encouraging, whether or not this graft offers patency advantages over standard Dacron fabric prostheses is not known. We continue to use it because it requires no preclotting and is therefore easier to use, and because it may have less tendency to develop pseudointima and to thrombose in low-flow conditions.

Significant numbers of our patients with PTFE axillopopliteal bypasses and bypasses to small arteries at or below the ankle have now been followed up over one year and some over two years. Of 30 PTFE grafts to the ankle or foot observed over one year, 15 (50%) are patent. Of 13 axillopopliteal grafts observed over one year, nine (69%) are patent. Although these patency rates are not spectacular, these newer operations have salvaged limbs over two years, and the results must be considered encouraging when one considers that these poor-risk patients would otherwise have lost the limb. Although the mortality of these newer procedures remains below 4% and morbidity remains low, the exact role of these operations remains to be defined by larger numbers of cases followed up for longer periods.

What the long-term results will be and how these results will compare with those for autologous saphenous veins and other new prosthetic grafts are the major remaining unanswered questions. Answers to these questions will only be provided by adequately conducted and refereed prospective, randomized, controlled studies. Such studies are now in progress in our and other institutions.

Until the results of such studies are known, we believe the following philosophy is reasonable and appropriate. If available and adequate in the ipsilateral leg, autologous saphenous vein is the graft of choice for arterial reconstructions below the inguinal ligament. PTFE grafts are an acceptable alternative that can be used when the patient's life expectancy is less than two years or when the vein is unsuitable or unavailable. If a PTFE graft is used, an aggressive attitude with appropriate reoperation for failed grafts will improve overall results.

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* *By invitation.*

This work was supported in part by a grant from the Manning Foundation.

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The following article is abstracted.

Extended Femoro-Tibial or Peroneal Bypass Grafting with Umbilical Vein

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Developments in selection of patients and of techniques for limb salvage revascularization have accentuated the need for reliable grafts as alternatives to the autologous saphenous vein. We began our preliminary investigation of the umbilical vein graft in 1974. The current series covers the period of October 1975 to January 1980 using glutaraldehyde-stabilized umbilical vein (Biograft) that is surrounded by a polyester mesh and stored in alcohol without propylene oxide. Annual cumulative graft patency rates (CPR) for all tibial reconstructions (n = 140) at one to four years were 66%, 58%, 54%, and 54%. All interval patency rates exceeded 82%. These statistics were inferior to those achieved for all popliteal reconstructions (n = 255): 83%, 74%, 63%, and 63% at one to four years, respectively. The results of peroneal reconstructions (n = 83) were predictably below those of the tibials. From one to four years, CPRs were 61%, 52%, 32%, and 32%. Operative mortality (<30 days) was 2.1% and 4.8% for tibial and peroneal bypasses, respectively. The higher rate for the latter reflects the advanced stage of generalized atherosclerosis in this population. These results are comparable to those achieved with autologous saphenous vein.

A particularly exciting innovation is the adjunctive use of a distal arteriovenous fistula (AVF) to maintain graft patency and function. This has been performed in 17 peroneal and 16 tibial bypasses, most of whom had failure of prior vascular reconstructions and were now judged to be inoperable based on current criteria of vessel calcification, small size, and absence or deficiency of the pedal arch. Early results suggest that supplementary AVF to crural reconstruction may provide for graft patency and limb salvage in very select cases otherwise doomed to failure. The overall results of tibial and peroneal bypasses continue to support our view that with appropriate case selection and deployment of available sophisticated technology, attempts to revascularize limbs for salvage are preferable to a policy of uniform limb ablation. Furthermore, use of the glutaraldehyde-stabilized umbilical vein graft (Biograft, Meadox Medicals) has facilitated these operations and provides results comparable to those achieved with autologous saphenous vein.

Diabetes Mellitus

Estimating effectiveness of patient education and treatment strategies

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Investment by the medical community in patient education is based on the assumption that personal health behaviors influence morbidity, mortality, illness duration, and the impact of risk factors. Patient education is also believed to result in reduced utilization of labor-intensive health care services, increased compliance with treatment plans, and decreased risk of malpractice litigation.

It has been suggested that patient education leads to the following: (1) reduced number of hospital days, (2) lower hospital readmission rate, and (3) decreased use of clinics and emergency rooms.[1] Studies that estimate the effectiveness of patient education have usually dealt with the ability of patients to answer questions about their illness or change in patients' behavior or attitude,[2,3] rather than process or disease outcomes. Persuasive evidence that patient education does influence disease outcomes is scant.

Studies that assess cost-effectiveness of patient education have also been flawed by failure to include the relevant cost of the educational process itself and by failure to consider the possibility that patients have substituted cost-equivalent services from an alternative health care deliverer.

Against this background, we moved to develop a quantitative instrument with which to measure the effectiveness of patient education. The instrument monitors the following:

(1) cost of educational intervention
(2) understanding by patients of their illness and its management (results of formal testing)
(3) all contacts of cohort patients with the health care delivery system
(4) identifiable charges for patient contacts with the health care delivery system
(5) medical outcome

Planning was constrained by the following factors: Resources are limited for support of developing and maintaining a quantitative instrument; in an era of resource limitation, channeling of resources is toward "high-profile" diseases; the instrument developed should be interinstitutionally transferable; formatting of clinical data should be suitable for, and facilitate, day-to-day clinical management and utilization review.

Feasibility of monitoring the variables cited above depended upon the availability of computer-compatible data describing interactions of members of the cohort with the health care deliverers and upon substitution of a computerized record for the traditional narrative medical record. The Erie County Medical Center, at which the cohort is under study, carries out scheduling of all patient interactions with the institution by computer. Access to this scheduling program was the basis for a previous method we have described (DIASURV) for tracking patients in a tertiary care institution.[4]

By means of computer-assisted monitoring, the institution now identifies and tabulates for billing purposes all services provided to patients. It is acknowledged that charges assigned to these services by the institution may not represent true costs.[5] To deal with this issue, we also assign arbitrary value units (AVUs) to all interactions of patients with health care providers. This obviates the need for a

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Presented at the Continuing Medical Education Assembly of the Medical Society of the State of New York, Niagara Falls, New York, Section on Preventive Medicine and Public Health, Friday, June 26, 1981.

* By invitation.

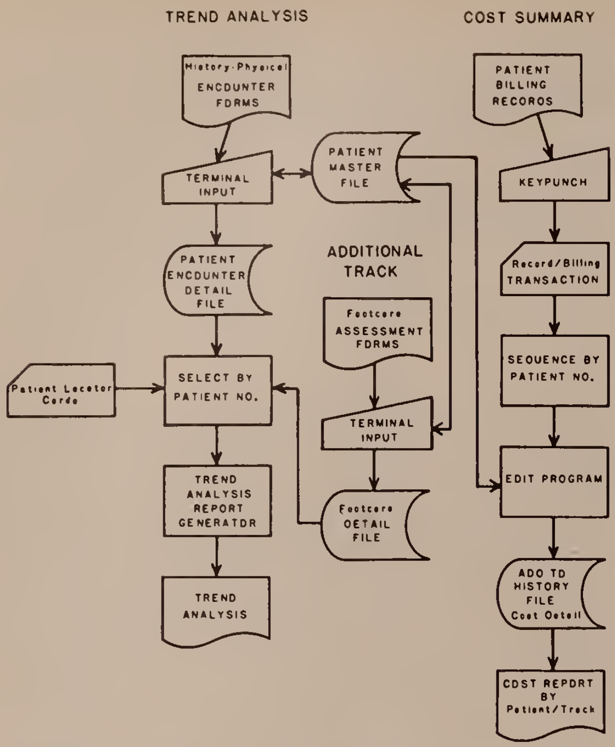


FIGURE 1. Schema of computer program for monitoring process and outcomes (trend analysis component) and identified health care delivery costs (cost summary) of the patient cohort. Output of trend analysis component (shown in Figure 3) derives from regularly updated encounter forms (Fig 2). Additional files ("tracks") are created to maintain treatment or education strategy-specific data not included in the primary data base (history/physical examination/laboratory tests). For example, the educational track shown here compiles results of tests of patients' knowledge of foot care after exposure to a new educational package related to foot care.

TABLE I. Levels and functions of computer-assisted program to monitor process, outcome, and cost of management of patient cohort

Level	Purpose
A. Monitor and tabulate all interactions of diabetic patients with health care deliverers (expansion of DIASURV program)[4] (cost reporting, Fig. 1)	Estimate cost of management of diabetic cohort
B. Computerize the management of longitudinal data obtained from the diabetic cohort (trend analysis, Fig. 1)	Estimate effectiveness of diabetic management
C. Test new strategies of diabetic management through utilization of A and B (additional tracks, eg, foot care, Fig. 1)	Estimate cost-effectiveness of therapeutic interventions
D. Trend analysis of specific clinical data collected from individual members of the cohort (review and summary of serial trend analyses)	Facilitate clinical management of members of the cohorts; utilization review

description of services in terms of dollars. A clerk-patient interaction is assigned 1 AVU; a nurse-patient interaction, 4 AVU; an emergency room visit, 25 AVU; and so forth.

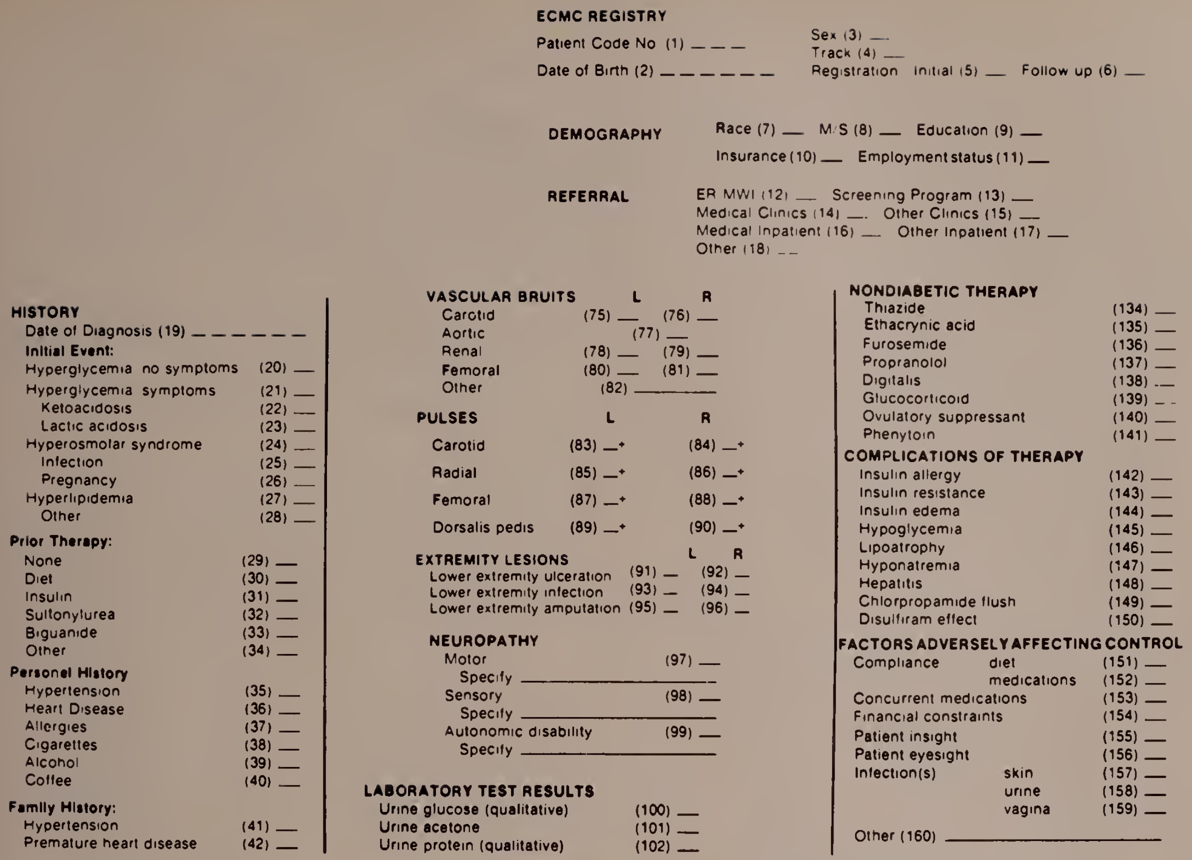
For purposes of the present study, a computer program was written to tabulate and analyze all identified transactions of the cohort with the institution and to manage the process and outcome data. The program schema is shown in Figure 1.

Description of the instrument

The interest of our group in diabetes mellitus, the local availability of a well-established diabetic patient education program,[6] and our commitment to computer-assisted approaches to medical problems[4,7,8] caused us to formulate a computer-based, four-tiered system (see Table). A history-physical form (Fig 2) was developed to replace the narrative medical record for members of the diabetic cohort. This primary data base encounter form is computer compatible and disease specific, ie, not a comprehensive history and physical examination document. The form is suitable for completion by nonphysician health care team members, except for a limited number of physical examination items. The computer program stores and tabulates this information in conjunction with data maintained from the tracking/billing system described above. A trend analysis output—summarizing 20 critical clinical values on each subject—is prepared by the computer for each anticipated visit of members of the cohort to the institution. (An example of the output is shown in Figure 3.) The six most recent interactions of the patient with the institution are summarized on a single page of output. In most cases, availability of this output obviates the need for a narrative record. Clinical usefulness of the trend analysis is important leverage to encourage completion of the encounter forms by participating members of the health care team. Scanning of individual patients' trend analyses provides estimates of the course of disease management suitable for utilization review purposes.

A sample summary output of patient-specific costs is shown in dollar amounts in Figure 4. Summaries may be requested for each patient and for all patients in a track (see above); also available are tabulations of specific services (eg, pharmacy, x-ray, emergency room visits) for the cohort.

The capability to monitor process, outcome, and identifiable charges thus enables us to test strategies of health management and determine the impact of these strategies on cost and outcome. Currently, we are testing the effectiveness of several patient education programs on outcome and charges in a cohort of 150 diabetic patients. Additional encounter forms are developed to collect information about each new intervention (Fig 5). The strategy-specific data base includes information from the general history/



ECMC REGISTRY

Patient Code No (1) ___ ___ ___

Date of Birth (2) ___ ___ ___ ___ ___ ___

Sex (3) ___

Track (4) ___

Registration Initial (5) ___ Follow up (6) ___

DEMOGRAPHY Race (7) ___ M/S (8) ___ Education (9) ___

Insurance (10) ___ Employment status (11) ___

REFERRAL ER MWI (12) ___ Screening Program (13) ___

Medical Clinics (14) ___ Other Clinics (15) ___

Medical Inpatient (16) ___ Other Inpatient (17) ___

Other (18) ___

HISTORY

Date of Diagnosis (19) ___ ___ ___ ___ ___ ___

Initial Event:

Hyperglycemia no symptoms (20) ___

Hyperglycemia symptoms (21) ___

Ketoacidosis (22) ___

Lactic acidosis (23) ___

Hyperosmolar syndrome (24) ___

Infection (25) ___

Pregnancy (26) ___

Hyperlipidemia (27) ___

Other (28) ___

Prior Therapy:

None (29) ___

Diet (30) ___

Insulin (31) ___

Sulfonylurea (32) ___

Biguanide (33) ___

Other (34) ___

Personel History

Hypertension (35) ___

Heart Disease (36) ___

Allergies (37) ___

Cigarettes (38) ___

Alcohol (39) ___

Coffee (40) ___

Family History:

Hypertension (41) ___

Premature heart disease (42) ___

VASCULAR BRUITS	**L**	**R**
Carotid	(75) ___	(76) ___
Aortic	(77) ___	
Renal	(78) ___	(79) ___
Femoral	(80) ___	(81) ___
Other	(82) ___	

PULSES	**L**	**R**
Carotid	(83) ___+	(84) ___+
Radial	(85) ___+	(86) ___+
Femoral	(87) ___+	(88) ___+
Dorsalis pedis	(89) ___+	(90) ___+

EXTREMITY LESIONS	**L**	**R**
Lower extremity ulceration	(91) ___	(92) ___
Lower extremity infection	(93) ___	(94) ___
Lower extremity amputation	(95) ___	(96) ___

NEUROPATHY

Motor (97) ___

Specify ___

Sensory (98) ___

Specify ___

Autonomic disability (99) ___

Specify ___

LABORATORY TEST RESULTS

Urine glucose (qualitative) (100) ___

Urine acetone (101) ___

Urine protein (qualitative) (102) ___

NONDIABETIC THERAPY

Thiazide (134) ___

Ethacrynic acid (135) ___

Furosemide (136) ___

Propranolol (137) ___

Digitalis (138) ___

Glucocorticoid (139) ___

Ovulatory suppressant (140) ___

Phenytoin (141) ___

COMPLICATIONS OF THERAPY

Insulin allergy (142) ___

Insulin resistance (143) ___

Insulin edema (144) ___

Hypoglycemia (145) ___

Lipoatrophy (146) ___

Hyponatremia (147) ___

Hepatitis (148) ___

Chlorpropamide flush (149) ___

Disulfiram effect (150) ___

FACTORS ADVERSELY AFFECTING CONTROL

Compliance diet (151) ___

medications (152) ___

Concurrent medications (153) ___

Financial constraints (154) ___

Patient insight (155) ___

Patient eyesight (156) ___

Infection(s) skin (157) ___

urine (158) ___

vagina (159) ___

Other (160) ___

FIGURE 2. Sample encounter form used to establish and update primary data base (history/physical examination/laboratory test data) for members of the patient cohort. Only a portion of the form is shown. The encounter form has been designed specifically for a diabetic cohort and is not intended to be a general health inventory document.

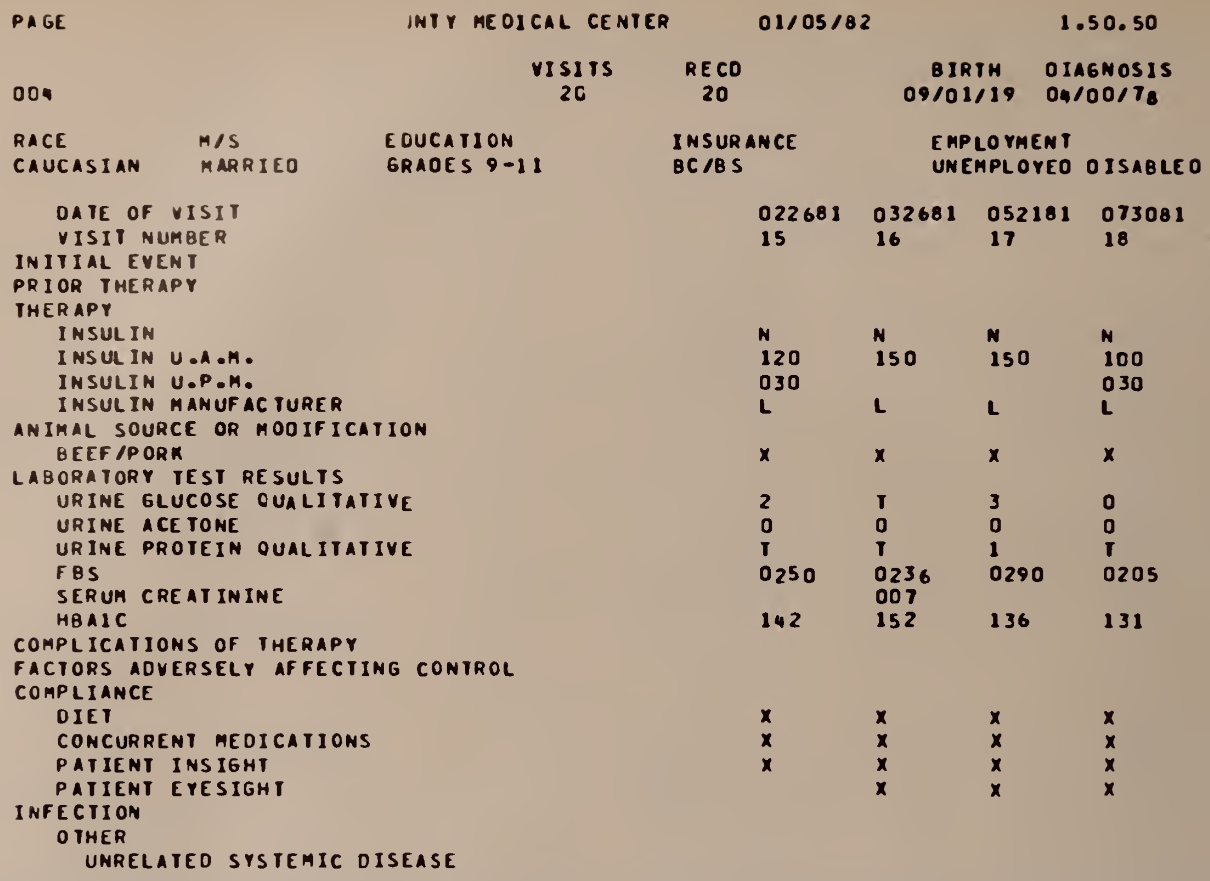
physical instrument (primary data base) (Fig 2), as well as more specific information relevant to each strategy, including results of testing of patients' knowledge of their disease before and after exposure to new educational packages. Members of the cohort are randomly allocated to control (traditional educational package) or experimental "tracks" to attempt to discern the importance of new personal health care information to disease course. Additional tracks in the protocol call for analysis of the impact of normalization of blood sugar level, of podiatric care, and of self-knowledge of blood sugar content—through home blood glucose monitoring—on control of body weight and other outcomes.

Discussion

The validity of patient education as a cost-effective medical strategy remains unclear, primarily due to the lack of quantitative instruments by which to estimate outcome and cost during the application of patient-education strategies. In this report, we describe a computer-assisted method of monitoring process and outcome in a cohort of patients, as well as apparent costs of such utilization. This instrument is enabling us to test for the impact of several educational programs on costs of management and on outcome. To our knowledge, this is the first such instrument to offer a comprehensive grasp of these variables. The analytic system can be easily adapted to deal with other questions and other disease processes—by altering the encounter forms—in institutions that already have computer-based billing and patient scheduling. We also tabulate results of tests of patient knowledge of disease process by approaches described elsewhere by one of the authors.[9] Such information is necessary if we wish to try to determine whether it is the acquisition of information by patients or simply exposure to the institution and information that may influence outcome.

The monitoring system is noninteractive; the health care providers and educators are not on line with the computer. Data are entered into the computer in batches and trend analysis outputs are available in batches in anticipation of next scheduled outpatient visits of cohort patients. This off-line approach has minimized costs of access of computer hardware.

Because the process of utilization review of narrative medical records in medical institutions is extraordinarily labor intensive, we believe that the trend analysis output feature of the program can be viewed as a cost justification for the entire package.



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CAUCASIAN      MARRIED       GRADES 9-11          BC/BS                UNEMPLOYED DISABLED

   DATE OF VISIT                                            022681   032681   052181   073081
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INITIAL EVENT
PRIOR THERAPY
THERAPY
   INSULIN                                                  N        N        N        N
   INSULIN U.A.M.                                           120      150      150      100
   INSULIN U.P.M.                                           030                        030
   INSULIN MANUFACTURER                                     L        L        L        L
ANIMAL SOURCE OR MODIFICATION
   BEEF/PORK                                                X        X        X        X
LABORATORY TEST RESULTS
   URINE GLUCOSE QUALITATIVE                                2        T        3        0
   URINE ACETONE                                            0        0        0        0
   URINE PROTEIN QUALITATIVE                                T        T        1        T
   FBS                                                      0250     0236     0290     0205
   SERUM CREATININE                                                  007
   HBAIC                                                    142      152      136      131
COMPLICATIONS OF THERAPY
FACTORS ADVERSELY AFFECTING CONTROL
COMPLIANCE
   DIET                                                     X        X        X        X
   CONCURRENT MEDICATIONS                                   X        X        X        X
   PATIENT INSIGHT                                          X        X        X        X
   PATIENT EYESIGHT                                                  X        X        X
INFECTION
   OTHER
     UNRELATED SYSTEMIC DISEASE
```

FIGURE 3. Sample trend analysis output on a member of the patient cohort. Only a portion of the output is shown. Four columns (right) summarize data from clinic visits 15–18 in the course of a study of effectiveness of patient education. Trend analysis reveals fasting blood sugar (FBS) ranged from 205 to 290 mg/dl over the course of these encounters and glycosylated hemoglobin (HBAIC) ranged from 13.1 to 15.2% of total hemoglobin.[10] A variety of adverse compliance factors were identified to be consistently affecting blood glucose concentration. Such outputs can substitute for much or all of the traditional narrative record as the latter relates to diabetes mellitus.

That is, inclusion of several additional patient cohorts—eg, hypertension, peptic ulcer disease, urinary tract infections—via appropriate encounter forms may provide reviewing agencies with adequate evidence for estimates of appropriate utilization of hospital services.

The power to monitor and tabulate charges related to patient management is a unique feature of the instrument. We are able to calculate the annual treatment-specific charges identified with a patient cohort and determine whether manipulation of the cohort increases or decreases this annual amount. The breakdown of charges on a service-specific basis allows us to identify where changes in utilization of services occur. The meaning of the dollar amounts tabulated is arguable. True costs of services (or of outcomes) involve a variety of factors that are not identified or accounted in costs arbitrarily applied by a hospital to each of the services it renders. It is naive to accept a total annual summary of changes based simply on service billings.[5] On the other hand, the dollar data we currently develop are one index by which to estimate cost-effectiveness. Weighting the labor intensity in AVUs of interactions of patients with health care deliverers is a theoretically more satisfactory alternative approach,[5] one which may be more valid interinstitutionally or across geographic/economic boundaries. While the specific weighting of AVUs for each service may also be debated, AVUs are likely to generate valid standards against which to assess the cost-effectiveness of clinical strategies such as patient education.

Justification for further investment in patient education should address, we believe, the variables that the currently described computerized instrument monitors—namely, medical outcomes and the utilization of services and costs, as well as the impact of patient education on patient knowledge and self-care.

Summary

A computer-based surveillance program has been developed to monitor process, clinical outcome, and cost of management of a well-defined patient cohort in a tertiary care setting. The instrument permits estimation of cost-effectiveness of educational and treatment strategies. The program consists of trend

```
EMCSTR               ERIE COUNTY MEDICAL CENTER              10/07/81

          DIABETES CONTROL PROGRAM     -- PATIENT COSTS --

PAT #          # VISITS       BIRTH DTE        DIAGNOSIS          TRACK       STRT DATE
002               19          01/02/33         06/30/77             3            121479

COST CENTER                                                 #    TOTAL COST

PHARMACY                                                   26        506.25
CLINICS                DIABETES                            12        192.00
CLINICS                OTHER                               17        994.24
CLINICS                GYN                                  1         11.00
CLINICS                OPHTHALMOLOGY                        1         16.00
ELECTROCARDIOGRAM                                           2         60.39
LABORATORY TESTS                                           38        263.26
X RAY                  EXCEPT DENTAL & EM DEPT              1         26.70
                                             TOTAL COST-           2,069.84

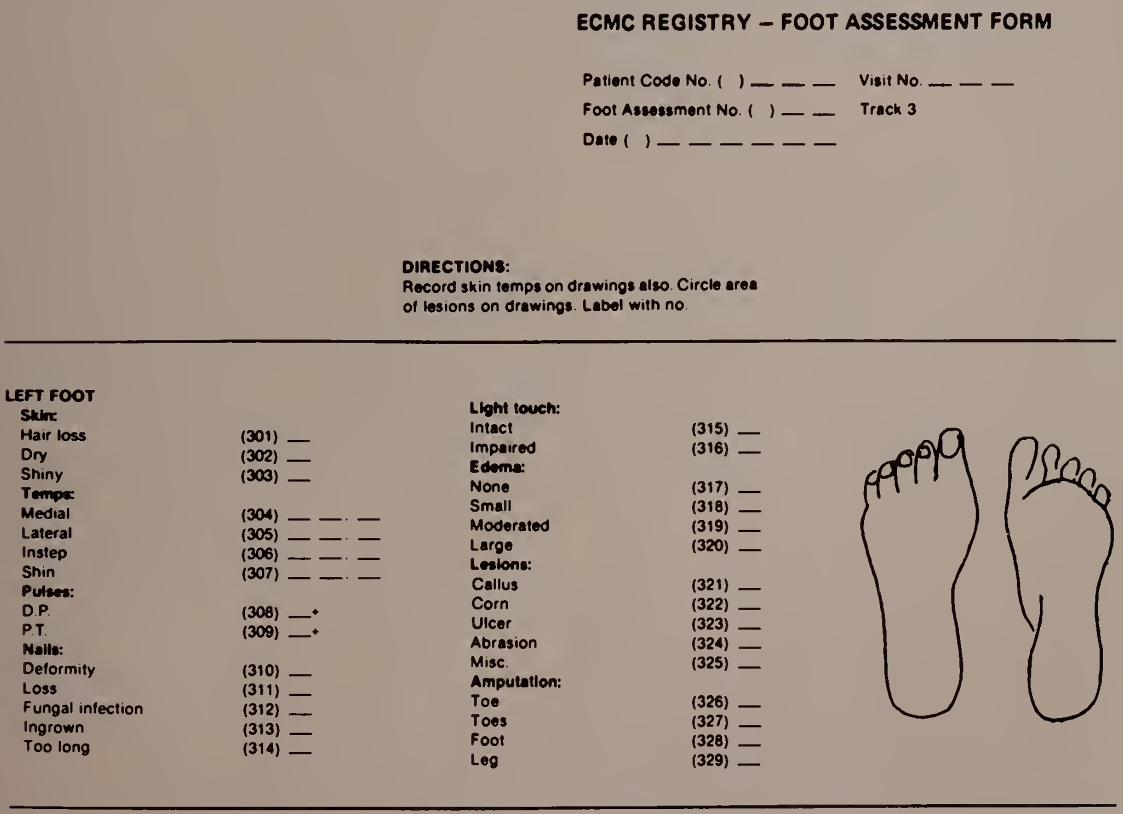
*****************************************************************************

PAT #          # VISITS       BIRTH DTE        DIAGNOSIS          TRACK       STRT DATE
0C4               18          09/01/19         04/30/78             3            121479

COST CENTER                                                 #    TOTAL COST

PHARMACY                                                   19      1,149.21
CLINICS                DIABETES                            12        192.00
CLINICS                OTHER                               10        128.00
CLINICS                MEDICAL WALK-IN                      1         13.00
CLINICS                GYN                                  1         11.00
CLINICS                OPHTHALMOLOGY                        5         64.00
CLINICS                DENTAL                              11        171.00
[illegible]                                                19      7,122.42
```

FIGURE 4. Sample management cost summary output on two members of the patient cohort.



ECMC REGISTRY – FOOT ASSESSMENT FORM

Patient Code No. ( ) ___ ___ ___ Visit No. ___ ___ ___
Foot Assessment No. ( ) ___ ___ Track 3
Date ( ) ___ ___ ___ ___ ___ ___

DIRECTIONS:
Record skin temps on drawings also. Circle area of lesions on drawings. Label with no.

LEFT FOOT
Skin:
Hair loss (301) ___
Dry (302) ___
Shiny (303) ___
Temps:
Medial (304) ___ ___. ___
Lateral (305) ___ ___. ___
Instep (306) ___ ___. ___
Shin (307) ___ ___. ___
Pulses:
D.P. (308) ___+
P.T. (309) ___+
Nails:
Deformity (310) ___
Loss (311) ___
Fungal infection (312) ___
Ingrown (313) ___
Too long (314) ___

Light touch:
Intact (315) ___
Impaired (316) ___
Edema:
None (317) ___
Small (318) ___
Moderated (319) ___
Large (320) ___
Lesions:
Callus (321) ___
Corn (322) ___
Ulcer (323) ___
Abrasion (324) ___
Misc. (325) ___
Amputation:
Toe (326) ___
Toes (327) ___
Foot (328) ___
Leg (329) ___

FIGURE 5. Example of additional track encounter form ("foot assessment") summarizing information required for evaluating a specific education-treatment strategy.

analysis, outcome, and cost-reporting components that are cross-correlated according to patient identifiers or cohort subgroup ("control" or "test" group) identifiers. Currently, the program monitors a cohort of 150 diabetic patients in which the effects of outcomes and cost of new patient education strategies and medical treatment strategies are compared to those of a control group. The trend analysis component facilitates day-to-day management of patients according to clinical records for diabetic management. Input to the data bank is from computer-compatible encounter forms completed by nonphysicians and includes clinical observations and expanded data bases relating to strategies that are being tested. All interactions of the cohort with the institution (clinics, pharmacy, wards) are computer monitored and cost accounted in dollars or AVUs. Routine program output consists of trend analysis of clinical parameters and total cost of management/patient/unit time; available outputs are clinical outcomes and cost analysis according to services utilized. Trend analyses are suitable for utilization review. Batch processing of data has minimized costs of program operation.

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Buffalo, New York 14215
(DR. DAVIS)

Acknowledgment. We wish to thank Mrs. Nancy Feind for providing expert secretarial help in the preparation of this manuscript and the support of Mr. Gerald Curtis.

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Sleepiness ranks first among sleep disorders nationwide study reveals

Many more people than previously thought may be suffering from an unusual sleep disorder that can have potentially life-threatening consequences, according to the largest study of its kind reported in the Feb. 19 issue of *The Journal of the American Medical Association.*

Slightly over 50% of the nearly 4,000 people who sought the attention of physicians over two years at sleep disorder clinics in the nationwide cooperative study suffered from the condition in which the major complaint is not trouble falling asleep, but just the opposite—falling asleep when they didn't want to.

Known as hypersomnia, the condition is characterized by falling asleep in situations such as conversations, during—not after—meals, watching an exciting television show, according to William Dement, MD, PhD, of Sanford University Medical Center in California, one of 17 coauthors of the study.

Falling asleep while listening to a dull lecture in an overly warm classroom would not be indicative of the condition, Dement said, unless it happened consistently and could not be avoided.

In the study, which was conducted under the auspices of Project Sleep and the Association of Sleep Disorders Centers in Washington, D.C., researchers analyzed records of patients who had sleep symptoms for at least four weeks and, in many instances, for more than a year.

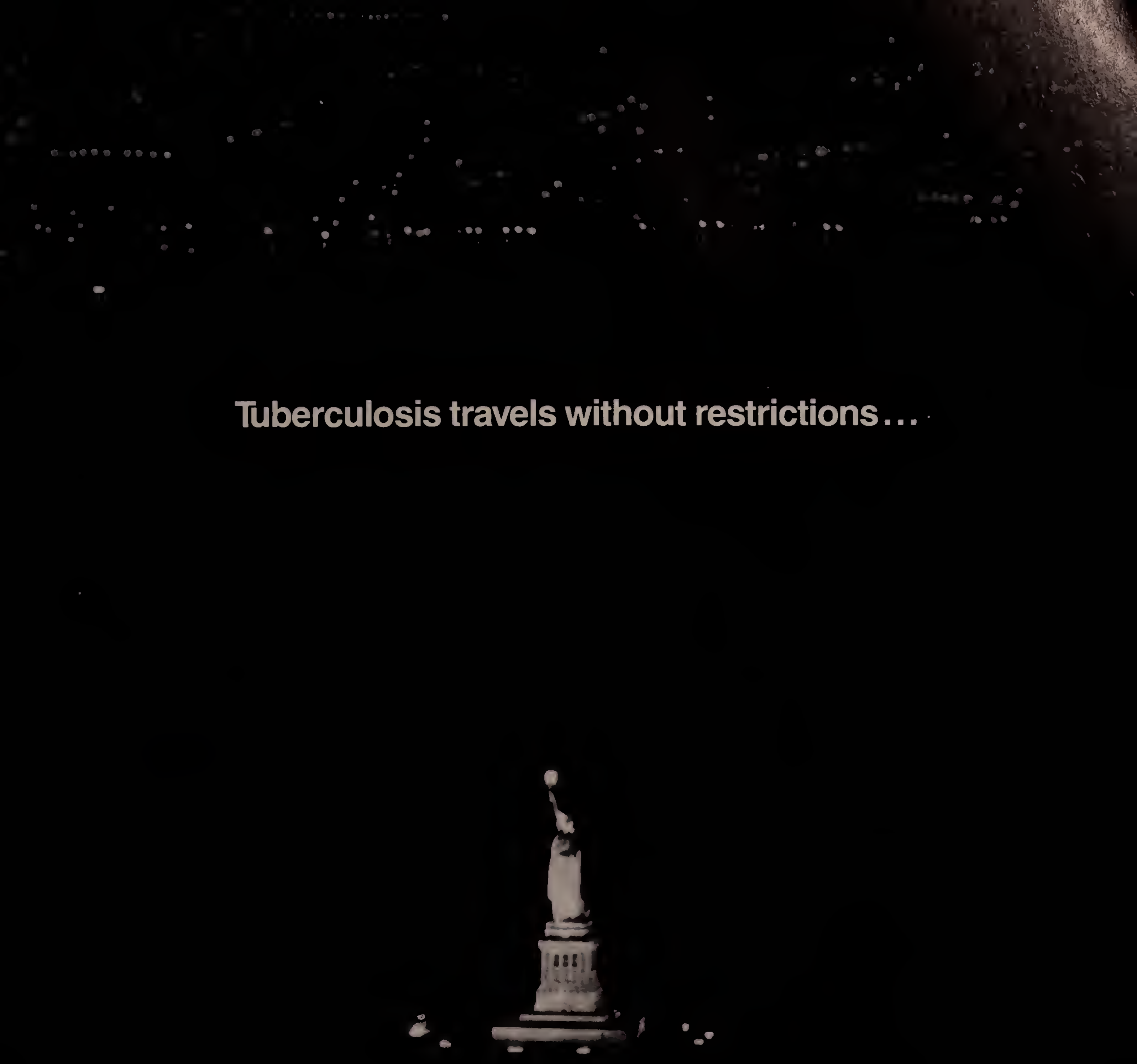
At each of the 11 participating clinics, an electronic device, known as the polysomnogram, was used to record the physiological processes during sleep in order to make an objective diagnosis. An all night polysomnogram is the basic diagnostic test in the sleep disorder field.

Within the category of hypersomnia, the two most frequent disorders that affected patients in the study were sleep apnea syndrome and narcolepsy. Sleep apnea, which also can affect people with insomnia, is the temporary cessation of breathing during sleep. In severe cases it can be life threatening.

Narcolepsy is marked by sudden, brief periods of sleep that strike repeatedly at any time during day or night, often with muscular weakness during the attacks.

Insomnia, which was the second most frequently diagnosed condition in the study, is estimated to affect between 14 percent to 35 percent of the general population, while hypersomnia is thought to affect only between 0.3 percent to 4 percent of people. In the cooperative study, however, hypersomnia accounted for 51 percent of the 3,900 diagnoses made.

The authors of the study concluded from this finding that the complain of daytime sleepiness is more common than heretofore acknowledged.



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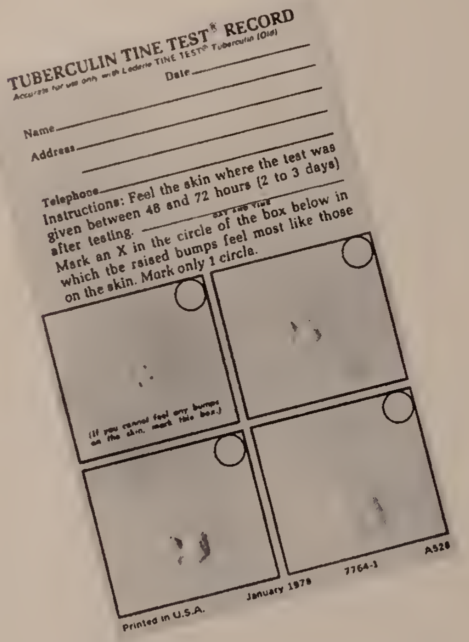

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Telephone
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Mark an X in the circle of the box below in which the raised bumps feel most like those on the skin. Mark only 1 circle.
(If you cannot feel any bumps on the skin, mark this box.)
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A528

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Adverse Reactions: Vesiculation, ulceration, or necrosis may appear at test site in highly sensitive persons. Pain, pruritus and discomfort at test site may be relieved by cold packs or by topical glucocorticoid ointment or cream. Any transient bleeding at puncture site is not significant.

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(*continued from page 1313*)

ages component (4.0% annualized). Medical care prices increased at an annualized rate of 11.5% for April, while the physicians' services component increased at an annualized rate of 7.4%.

NACA expanded

HHS Secretary Richard S. Schweiker today announced the appointment of 10 new members to the National Advisory Council on Aging (NACA), which was recently expanded from 12 to 18 members to meet its increased responsibilities.

The members include leaders in the basic and medical sciences, education, and public affairs.

The NACA reviews applications from scientists seeking financial support from the National Institute on Aging (NIA) for research and training relating to the aging process. It also consults with and makes program recommendations to the Secretary of HHS and the directors of NIA and the National Institutes of Health.

Due to the growth of the NIA since it was established in 1974 (from a $15.9 million budget in 1974 to $75 million in fiscal year 1981), the NACA's functions and responsibilities have increased, requiring a broader range of scientific expertise than the size of the original Council allowed.

"As America grows older as a nation, it becomes more important than ever for us to learn more about the aging process," declared Schweiker. "These distinguished new members of the National Advisory Council on Aging will give a boost to our ongoing effort to better understand aging.

By learning more about aging, we'll help assure that our older citizens will live lives of fulfillment during the 'graying of America'."

The 10 new council members are:

Carroll M. Brodsky, PhD, MD, professor of psychiatry, University of California Medical Center, San Francisco.

Alice Fenwick-Collier, deputy mayor of Akron, Ohio.

Robert Katzman, MD, professor and chairman of the department of neurology, Albert Einstein College of Medicine.

Dorothy T. Krieger, MD, professor, division of endocrinology, Mount Sinai Medical Center.

Ronald M. Lawrence, MS, MD, assistant professor of psychiatry, UCLA School of Medicine.

William K. McClelland, president, Grand Peoples Company, Los Angeles.

Adrian M. Ostfeld, MD, Lauder professor, Laboratory of Epidemiology and Public Health, Yale University School of Medicine.

Mildred L. Silver, president and administrator of Renal Hygienics, Tarzana, Calif.

Lewis Thomas, MD, chancellor, Memorial-Sloan Kettering Cancer Center.

Robert E. Windom, MD, internal medicine, cardiology, Sarasota, Fla.

13 States Adopt Modern "Determination of Death" Proposal

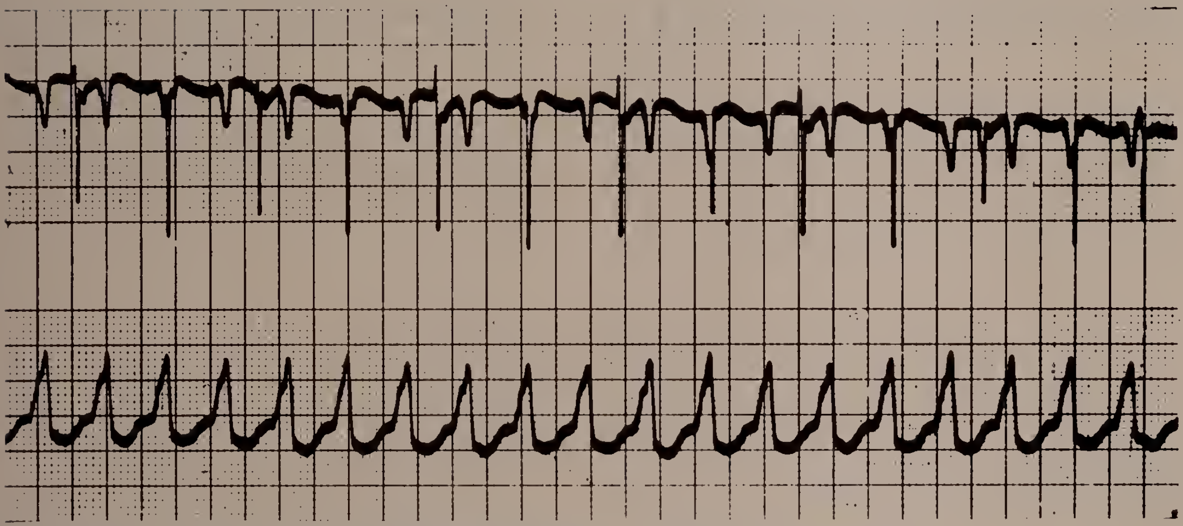
Wisconsin and Maryland have joined 11 other states and the District of Columbia in adopting the Uniform Deter-

(*continued on page 1358*)

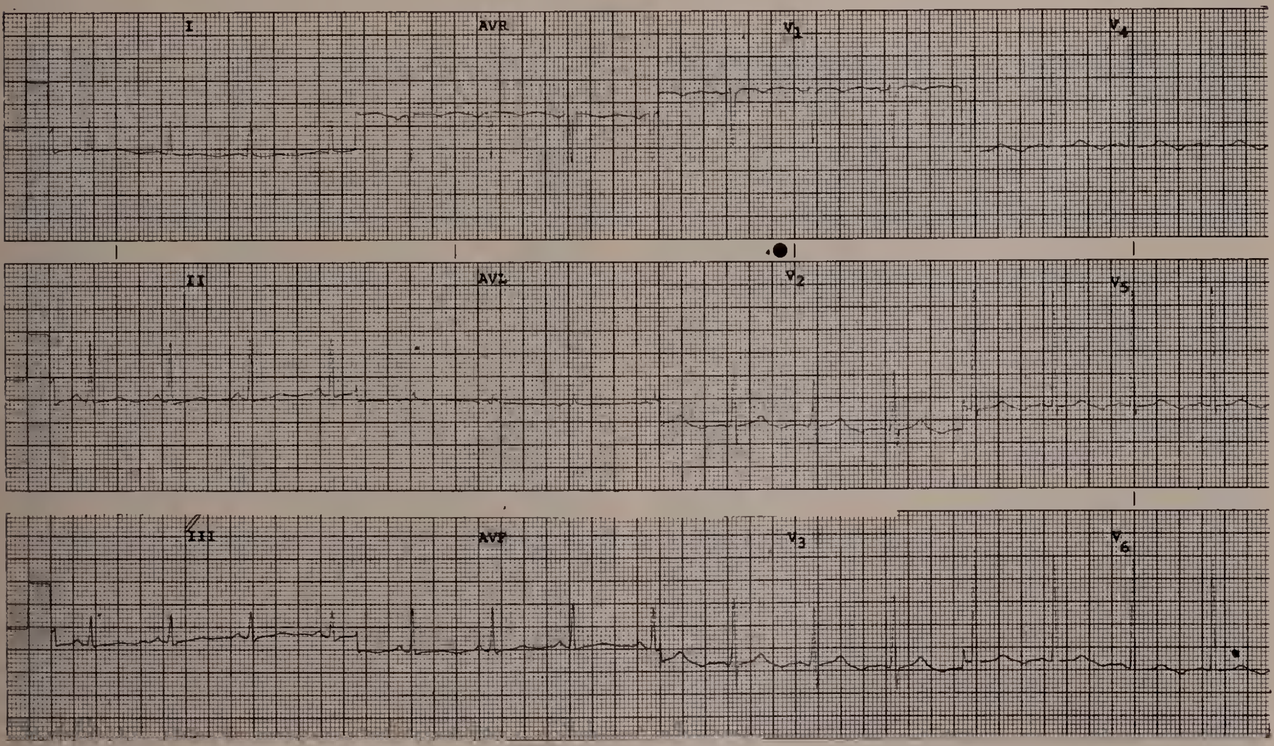
Electrocardiograms of the Month

Montefiore Hospital and Medical Center
The Bronx, New York

Editors
IRA L. RUBIN, M.D.
Head, Department of Electrocardiography
JULIAN FRIEDEN, M.D.
Associate Head, Department of Electrocardiography



QUESTION 343. Simultaneous right atrial lead and lead I. What is the interpretation?



QUESTION 344. The electrocardiogram was obtained from a 68-year-old hypertensive woman admitted for elective surgery. What is the interpretation?

Electrocardiograms of the Month

ELUCIDATION

Answer 343. Lead I (bottom lead) shows a regular tachycardia with a wide QRS of 0.12 sec. The rate is 180/min. The atrial activity is not discernible.

The top lead, a right atrial lead, shows the same tachycardia, as broad downward complexes. Between these QRS complexes are narrow waves at a rate of 125/min. These waves are P waves. They are independent of the ventricular complexes. There is slight variation in the form of the P wave.

The rhythm is ventricular tachycardia with an independent sinus tachycardia. Atrial or esophageal leads will usually identify P waves even when not seen in any standard lead. The amplitude of the P waves may be magnified up to 10 times.

Answer 344. The rhythm is regular sinus. The PR interval and QRS duration are normal. The voltage is slightly increased in the V leads. The T waves are normal.

There is a negative wave after the T wave best seen in I and V_4 to V_6. This wave is a negative U wave. A negative U wave is abnormal. It has been observed in patients with left ventricular hypertrophy, acute ischemia, and left main coronary artery disease.

Long term safety of ultrasound on fetus still unresolved

In the past ten years, ultrasound has developed from a research instrument into a valuable and widely used diagnostic tool, allowing obstetricians to "see" inside the womb. But at a symposium late last month concerning the effects of ultrasound on the fetus, reported in the April 23/30 *Journal of the American Medical Association*, researchers and clinicians shied away from recommending the routine use of ultrasound in prenatal care, citing their inability to quantify its risk.

Until physicians can say with assurance that ultrasound does not produce subtle or delayed harmful effects, it should be used only when medically indicated, most of the participants agreed.

The concern over the potential harmful effects of ultrasound is based on the results of animal and other laboratory studies in which abnormalities have been produced. For the most part, however, these abnormalities, which range from weight reduction in mouse or rat fetuses to damage in insect eggs, cannot yet be extrapolated to humans.

Ultrasound is known to produce biological effects in cells and in laboratory animals by at least two mechanisms — heat and a process called cavitation, in which air bubbles expand and contract in response to sound waves, according to the report in the *JAMA* Medical News section.

Despite the lack of an unqualified go-ahead for routine prenatal ultrasound testing, there apparently are not even anecdotal reports of harmful effects in children exposed to ultrasound before birth. Preliminary results from a large study in progress in Canada, reported at the meeting sponsored by Columbia University College of Physicians and Surgeons and the March of Dimes Birth Defects Foundation in New York, are similarly reassuring.

The study, begun five years ago at the University of Manitoba, Winnipeg, includes 10,000 women and their offspring who were exposed to diagnostic ultrasound *in utero*. According to Edward A. Lyons, MD, director of ultrasound at the university's Health Science Center, preliminary analysis of available data indicate nothing unusual in the exposed children.

Because it is now possible with ultrasound technology to perform a physical exam of the fetus in the womb, as Harold E. Fox, MD, of Columbia University said, the question in many obstetricians' minds is whether all pregnant women should be screened with diagnostic ultrasound.

Fox estimated that about half of all pregnant women receiving care in an institutional setting are examined by diagnostic ultrasound. Far fewer women, however, receive such examinations in the offices of their private obstetricians, according to preliminary results of a survey by the American College of Obstetricians and Gynecologists (ACOG). Only 30% of the patients of private practitioners in the ACOG survey received one ultrasound scan, and only 20% were scanned more often.

Among the respondents — about 12 percent of ACOG's 23,000 members — only 15 to 20% owned office scanners, and of those, only 10% said they scanned all of their patients.

While scientists grapple with ultrasound's unknowns, how should obstetricians respond? Prudently, the symposium panelists said. That translates as advice to use ultrasound when necessary, as in the evaluation of high-risk pregnancies, but not routinely for all pregnancies.

Radiologic Problem of the Month

Montefiore Hospital and Medical Center
The Bronx, New York

Editor

KAKARLA SUBBARAO, M.D.
Professor of Radiology at
Albert Einstein College of Medicine

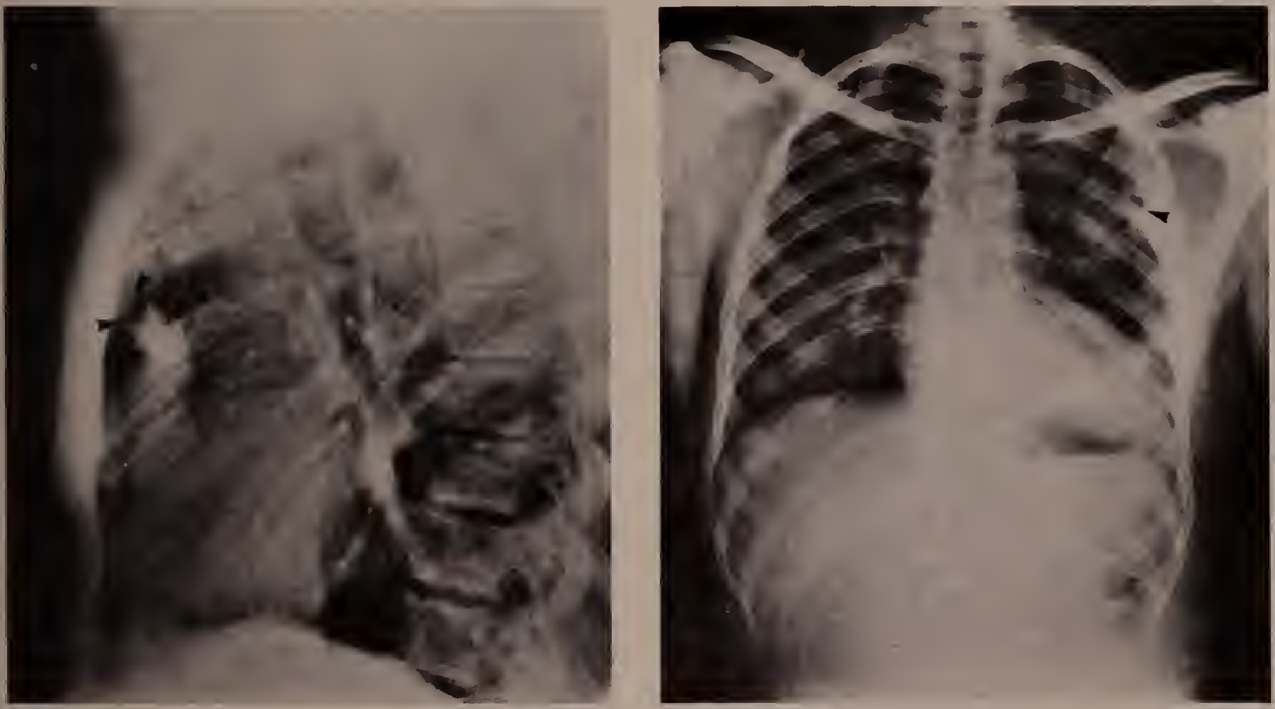
Abnormal Lucency in Lung

Elucidation

Posteroanterior and left lateral radiographs of the chest reveal a small and well circumscribed lucency (arrowheads) in the left upper zone anteriorly. Pleural reaction is noted in the frontal film along the lateral wall of the thorax adjoining to the lucency. In the lateral radiograph, the lucency (arrowheads) caps a cylindrical opacity. Although the lucency may suggest cavitation, this does not have the usual appearance of a cavity encountered in benign or malignant processes. In view of the history of a previous treatment for stab wounds and the unusual nature of the shadow in the lung, one should think of a residual density following indwelling chest tube.

Insertion of chest tubes has become a common procedure to relieve accumulations of fluid and/or air in the pleural cavity so that the lung remains expanded. Radiologists dealing with reporting of chest radiographs should be familiar with abnormalities encountered following the removal of chest tubes. Katzberg et al[1] reported tube-related opacities and lucent tracks subsequent to removal of tubes in cases of cardiopulmonary bypass surgery. Stahly and Tench[2] documented two cases of lung entrapment and infarction attributed to tube suction. Pilbrow[3] has analyzed 40 instances of abnormal shadows following insertion and removal of intrapleural tubes. A plethora of radiographic densities are identified that are definitely related to tubes.[1–3]

The common radiologic appearances of the chest, subsequent to insertion and removal of chest tubes, are mainly pleural densities, lucent tube tracks, and a combination of these two. These shadows generally disappear within weeks of removal of the tube. However, we have observed calcification of the pleura along the tube track that remained unchanged for a



A 28-year-old man had radiographs of the chest as a follow-up. Three weeks earlier, he was discharged from the hospital following successful treatment for multiple stab wounds.

number of years. The appearance or disappearance of the densities, which are mainly pleural in nature, depends on the nature of the fluid, whether it is thin and serous or thick and viscous, and also on the length of time the tube stayed in. The pleural reaction surrounding the tube may not resolve within days of removal of the tube when it contains a great deal of fibrin and pyogenic material. Tubes inserted for a short time may not have any residual scar. Tubes remaining for more than two weeks have a tendency to produce lucent tracks and pleural opacities. The radiolucency is produced by trapped air as the lung has not expanded at the site. The oblong or oval density is due to the pleural reaction filling the tube track. A number of combinations and configurations of lucencies and densities may be encountered.

In the differential diagnosis, a cavitary parenchymal lesion may be considered either benign or malignant in nature. The hole in the skin at the site of entry of the tube may occasionally produce a lucent shadow. However, this should be surrounded by a rim of opacity produced by the puckered skin. Healing rib fractures may occasionally simulate these shadows. Focal pulmonary infarction resulting from the entrapment of lung in the suction tube may produce an odd type of opacity. However, one should be aware of the various shadows produced by the indwelling chest tubes and rule out the possibility before entertaining other diagnoses.

Diagnosis

Chest tube-related shadow simulating a cavity

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Impaired physician program has high success rate

Impaired physicians who participate in an inpatient treatment program with intense monitoring and follow-up have a good prognosis for drug-free and alcohol-free life, according to a report in the April 23/30 *Journal of the American Medical Association.*

The Wisconsin study reports on a group of health professionals (36 physicians, three dentists and one nurse-anesthetist) who entered the Impaired Physician Treatment Program (IPTP) at DePaul Rehabilitation Hospital in Milwaukee during 1979–1980. Most were referred for treatment by colleagues; more than half the group faced the loss of all or some hospital privileges at the time of admission to the treatment program.

Of the 40 participants, 23 were diagnosed as abusers primarily of alcohol, 15 as abusers primarily of narcotics and two were found to be primarily dependent on other drugs. Overall, the data suggest a favorable outcome for at least two-thirds of the patients treated in a structured program and the possibility of an 82 percent recovery rate for those who remain in treatment after experiencing a relapse.

According to Roland E. Herrington, MD, who headed the study, the drug of choice was found to be irrelevant to the outcome of treatment, contradicting the popular notion that narcotic addicts have a poorer prognosis for recovery. Specifically, 25% of the narcotic-addicted patients and 34% of the alcoholic patients experienced a relapse.

Thirty-three (82%) of the group remain active in or have successfully completed the program. Of the seven who relapsed or dropped out, two had significant psychiatric problems and five were socially unstable in a variety of ways.

Of the 33 treated physicians, 31 have returned to full practice and 22 have experienced no relapse.

The authors identify several factors of the Impaired Physician Treatment Program as being important to its success. One is the length and nature of the program itself. It is divided into three phases: inpatient treatment for an average of 30 days, employing a fairly traditional multidisciplinary approach; a two-year, intensely monitored outpatient phase; and, finally, a cooperative effort by IPTP personnel, local medical and dental societies, and hospital medical staffs to assist the participant in resuming his or her practice.

The most important ancillary service throughout the extended treatment period is provided by Alcoholics Anonymous or Narcotics Anonymous. However, many IPTP participants, fearing recognition, declined to attend local chapter meetings and instead chose the regular weekly meeting of the physicians' AA group.

The authors cite family involvement as crucial to the treatment. "Family involvement in the patient's treatment, as well as treatment of family members themselves, is as significant in the recovery of physicians as it is in the successful treatment of any substance abuse," they say. "The notion of alcoholism as a 'family illness' has become a well-established tenet in the field .... Hence, Alanon, Alateen, counseling for couples, and family therapy are integral aspects of our IPTP."

Random monitoring of urine for the absence of alcohol and other drugs is identified as another critical element in the program. Despite initial objections, participants "eventually come to appreciate (the urine test) as a concrete and objective means of documenting their abstinence and reestablishing their credibility."

"We are convinced," the *JAMA* authors says, "that the urine monitoring is a key to the prompt and early detection of relapse, obviating the need to wait until behavior changes or other complications occur before confronting the patient."

Finally, the authors point to long-term, ongoing psychotherapy as a necessary element of the successful treatment program.

PUBLIC HEALTH
NEWS

County of Suffolk
Department of Health Services
MAHFOUZ H. ZAKI, M.D., Dr.P.H., Editor
Director of Public Health

Unusual Health Effects Associated With Surface Waters

MAHFOUZ H. ZAKI, M.D., Dr.P.H.
Hauppauge, New York

ROBERT NUZZI, Ph.D.
Hauppauge, New York

Long Island is unique in being able to offer a wide spectrum of entertainment, ranging from relaxation by the beach to boating, fishing, bathing, water skiing, and related activities during which the participant is often in contact with surface waters. Utilizing reasonable care, participants in water-related activities are generally safe from waterborne diseases.

The Suffolk County Department of Health Services monitors approved bathing beaches for bacteriologic quality, recommending closure of waters to contact recreation when organisms of the coliform group of bacteria (the questionable but widely used standard) exceed the limits defined in the New York State Sanitary Code. However, while bacterial and, more recently, viral contamination might be the most well known and certainly the most well publicized of the potential dangers of contact with natural waters, they are by no means the only ones. In fact, it is quite likely that other less severe, nonbacterial, nonviral afflictions do occur more frequently, although they often go unrecognized.

Following is a brief discussion of some of the health problems associated with surface waters.

Swimmer's itch

Each year, particularly during the bathing season (although not confined to that period), the department receives complaints concerning the development of rashes on exposed areas of the skin after direct contact with coastal waters. The complainent is generally apprehensive, fearing that he or she may have been in contact with polluted waters, and the complaint is often accompanied by a request to sample the waters in question for bacteriologic quality.

These rashes have often been caused by the penetration of certain schistosome cercariae, the larval forms of digenetic (requiring at least two separate hosts for completion of their life cycle) trematodes. The species responsible for cercarial dermatitis, or swimmer's itch, in this area is probably *Austrobilharzia* (*Microbilharzia*) *variglandis.*[1] The final larval form, known as *Cercaria variglandis*, develops within an intermediate molluscan host, which in Suffolk County is the marine mud snail, *Nassarius obsoleta.*

Environmental factors, including water temperature and light, trigger the release of cercariae from the snail into the surrounding water, at which point they swim about in search of a definitive vertebrate host, usually a water fowl but on occasion a terrestrial mammal such as a mouse, vole, muskrat or deer.[2] The cercariae attempt to penetrate the skin of any organism with which they come in contact, including man. Cercariae in man do not usually complete their life cycle, which includes systemic invasion, since man is not their natural host.

Epithelial penetration causes an immune response resulting in the production of an intensely pruritic maculopapular rash. Further infestations tend to become more severe as sensitization takes place. In the absence of secondary bacterial infection, treatment has consisted of the use of topical antipruritic drugs, and oral or parenteral antihistamines. Systemic corticosteroids have been used only in severe cases.

Cercarial dermatitis is not limited to marine waters but is also encountered in freshwater systems.

Seabather's eruption

While swimmer's itch has been found to occur primarily in enclosed embayments—the preferred habitat of the two hosts of the causative organism—seabather's eruption is more likely to be reported from ocean beaches. The rash associated with swimmer's itch appears on the exposed surfaces of the skin, while that associated with seabather's eruption is manifested on those areas covered by a bathing suit.

According to A. Freudenthal, Ph.D., Marine Biologist, Nassau County Department of Health, Wantagh, New York, the apparent cause of seabather's eruption is the sting of the larval form of the sea anemone, identified as *Edwardsia leidyi*. This organism, while only a millimeter or so in length, can often be seen attached to the inner surface of bathing suits and has been described as a "tiny pink egg." Most cases have been reported from mid-August through early September. Treatment of seabather's eruption has been similar to that of swimmer's itch.

Since both rashes are quite similar, the terms "swimmer's itch" and "seabather's eruption" have been used synonymously by some authors.

Crab larvae rash

Rashes on skin surfaces covered by a bathing suit have also been reported to occur as a result of swimming in enclosed embayments in Suffolk County. In the case investigated, the available evidence points toward the larval (zoeal) stages of crabs belonging to the suborder Brachyura, or "true crabs," as the causative agent. These larvae, with their sharply pointed spines, were found in large numbers in the water itself and on the inner surface of victim's bathing suits.

Since this association has only been recently recognized, no standard treatment has been recommended, although the application of vinegar has proved helpful in cases of calcific (invertebrate) skin penetrations. Antipruritic drugs could also possibly be prescribed.

Coelenterate (jellyfish, Portuguese man-of-war) health effects

The most common jellyfish in New York coastal water is the "lion's-mane," *Cyanea capillata*. The lion's-mane jellyfish is pink to purple in color and, in local waters, has a disk, or umbrella, that varies from one or two inches to about one foot in diameter. Numerous long tentacles trail the umbrella beneath the water's surface. Contact with this organism generally results in a mildly painful stinging sensation but on occasion can produce urticarial welts, shock, or even death, depending on the sensitivity of the victim and the amount of toxin introduced in relation to body weight.[3] In severe cases immediate treatment and relief are imperative. In some instances, the victim may not be aware of the causative agent since contact may occur with tentacles or portions of tentacles that have been fragmented by heavy surf and boat propellers, or contact may even occur with free-floating nematocysts capable of injecting the toxin into the victim.

The Portuguese man-of-war (*Physalia physalis*) is also found in this area, although less frequently. The symptoms produced by contact with this organism are more severe and include systemic manifestations, such as muscular pains, labored breathing, nausea, and backache, occasionally followed by collapse and death.[3]

In the absence of direct coelenterate contact, the release of allergenic materials into the water has been blamed for the dermatologic manifestations.[3]

Blue-green algae (cyanobacteria) health effects

Freshwater blue-green algae belonging to the genera *Anabaena*, *Microcystis*, and *Aphanizomenon* have been implicated in several gastrointestinal and allergic manifestations. The health effects of these organisms are not universal or constant, differing with species, genetic strains, physiologic conditions, and perhaps, bacterial associations.[4,5] In 1981, large blooms of *Anabaena sp* occurred in a number of freshwater lakes in Suffolk County that are used for contact recreation with no reported health effects. It should be kept in mind, however, that the general lack of knowledge concerning the toxicity of blue-green algae limits their consideration in differential diagnosis.

In Hawaiian waters, the marine blue-green algae *Lyngbya majuscula* has been identified as the causative agent of a contact dermatitis which has been labeled swimmer's itch, seaweed dermatitis, or *Lyngbya* dermatitis.

Dinoflagellate health effects

While it is generally known that paralytic shellfish poisoning (PSP) is caused by particular species of toxin-producing phytoplankton of the dinoflagellate group, it is not common knowledge that evidence exists associating high concentrations of certain dinoflagellates in sea water with human respiratory irritation.

As early as 1917, Taylor,[6] while investigating a fish kill on a Florida beach, experienced labored breathing and "a slight tendency to sneeze and cough," while his dog was "sneezing violently" as if it were in "acute asphyxiation." Symptoms similar to those described by Taylor have been repeatedly observed during outbreaks of red tides (water that appears discolored due to the presence of large numbers of pigmented phytoplankton) in Florida, and in 1948, Woodcock[7] determined that aerosolized water containing red tide organisms or filtered water from red tide areas could produce respiratory irritations.

Hemmert[8] has discussed the literature concerning respiratory irritations associated with red tides, describing the irritant as being "virtually odorless," with the respiratory attack being preceded by paroxysmal coughing and irritation of the eyes and nasal passages. Leaving the beach area or filtering the air breathed resulted in immediate cessation of symptoms. The clinical manifestations thus described appear to be of the nature of "contact/chemical irritation rather than an allergic phenomenon." [8]

Respiratory symptoms similar to those described above have been reported on at least one occasion in the recent past, but the cause has remained undetermined. In June 1976, an unusually high number of complaints of respiratory irritation were received by the Suffolk County Air Pollution Section. Investigation revealed no likely causative agent. It was, however, noted that the complaints coincided with a massive bloom of the phytoplankton species *Prorocentrum minimum* in portions of Great South Bay and Moriches Bay (both of which are confined by barrier beaches) as well as with periods of southerly, onshore winds. Further investigation revealed that the great majority of the complaints originated in the geographic area immediately north of these bays. Although no cause-and-effect relationship can be established at present, the strong possibility of an association should not be overlooked.

Conclusion

Increased awareness of these pertinent health effects, particularly among physicians practicing in areas where water-related activities are part of the life-style of the residents, will undoubtedly facilitate their differential diagnosis and proper treatment. Such an awareness on the part of the private practitioner coupled with notification of the public health agency in the area will help in delineating the impact of these marine and freshwater organisms on human health, and in defining the extent of the problem.

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Cholera on the Texas Gulf coast

Cholera, a disease marked by severe gastrointestinal symptoms, has made a reappearance in the low-lying coastal areas near the Gulf of Mexico, raising concern that the causative bacteria may be endemic to this region of the country.

Sporadic cases of cholera have been previously reported in Texas and Louisiana since 1973, after a sixty-year hiatus, according to an account of two recent cases in the March 19 *Journal of the American Medical Association.*

A team of investigators, headed by Michael T. Kelly, MD, of the University of Texas Medical Branch at Galveston, found that water and mud samples taken from the vicinity where the two recently infected patients lived in Texas contained the offending organisms.

Even though both patients had been exposed to the water, the authors could not say with absolute certainty that this was the source of the patients' infection.

Most of the other recent cases of cholera in the United States have been associated with the consumption of raw oysters and inadequately cooked crabs, presumably taken from water supplies contaminated by sewage.

The *JAMA* authors' findings support the suggestion that the bacteria responsible for cholera may be capable of existing and multiplying in the Gulf Coast environment in a free-living form. If so, this means that cholera can be contracted directly from water sources in certain Texas coastal regions and not only from eating food contaminated with the responsible organism.

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CONTRAINDICATIONS

1) bronchial asthma, 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e g , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes A precipitous elevation of blood pressure may accompany hypoglycemic attacks

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals. Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular, bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura *Central Nervous System* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress. *Respiratory* bronchospasm *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase alkaline phosphatase, lactate dehydrogenase

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Reference: 1 Freis, E D Hypertension (Suppl II) 3 230 (Nov-Dec) 1981

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Isosexual Precocious Puberty with Luteinized Follicular Cyst

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Precocious puberty has been defined as the appearance of secondary sex characteristics before the age of eight years. The symptoms of breast growth, accelerated bone maturation, and menstruation are readily recognized. These symptoms are caused by increased secretions of steroid hormones from the ovaries or adrenal glands.[1]

To differentiate idiopathic precocious puberty from sexual precocity due to autonomous tumors and other causes, it is necessary to understand differences in gonadal and pituitary hormones in these conditions. Idiopathic precocious puberty is characterized by increased plasma levels of gonadotropins and estradiol compared to prepubertal girls.[2,3] Feminizing gonadal tumors with estrogen production are expected to produce very high plasma levels of estrogen with normal gonadotropin concentrations. If ovarian cysts and slightly increased estradiol levels are detected in girls with isosexual precocity it is difficult to establish the sequence of abnormal development. It is conceivable that the positive feedback of estrogen on the pituitary gland in a case of ovarian follicle cyst formation could lead to premature activation of the hypothalamic-pituitary axis. In contrast the idiopathic premature activation of the hypothalamus and pituitary gland may stimulate the formation of ovarian follicle cysts that secrete estrogen. The most common cysts found in girls with isosexual precocity are follicle cysts.[4–6] We have observed one case of isosexual precocious puberty in a girl aged 7 years, 2 months, with luteinized follicle cysts and increased luteinizing hormone (LH) values. The ovarian cyst fluid was assayed for estrogens, progesterone, and androgens with the goal of correlating steroid hormone production and clinical symptoms.

Case report

A girl aged 7 years, 2 months, was referred for evaluation of premature development of secondary sex characteristics. Two episodes of vaginal bleeding for three to four days and breast growth had occurred during the preceding four months.

The patient's height was 132 cm and weight 71.5 lb (both 95th percentile). Mild strabismus was present. A few comedos were noted on the facial skin. There were no skin lesions of McCune-Albright syndrome. Breast development was consistent with stage B-3 according to Tanner.[10] There was no pubic or axillary hair present. The vulva and vagina were immature without enlargement of the clitoris. There was no palpable abdominal mass.

Baseline hormone concentrations in blood serum and urine are summarized in Table I. Normal values for chronologic age or pubertal stage are shown for comparison.[11] X-ray films of the skull, pelvis, and long bones revealed no abnormality. X-rays of both hands showed a bone age of 113 months (chronologic age 86 months). Ultrasound examination of the pelvis demonstrated a cystic mass of 3 × 4 cm on the right ovary. The left ovary measured 1.5 × 1 cm.

On laparotomy the left ovary and uterus were found to be immature. The right ovary contained one 4-cm cyst and four 2- to 3-mm cysts. The large right ovarian cyst was enucleated and the cyst fluid was aspirated for steroid hormone analysis (Table II). The cystic enlargement of the right ovary in comparison to uterus and left ovary is seen in Figure 1. Microscopic sections of the cyst wall revealed a luteinized follicular cyst as seen in Figure 2. Following surgical cyst removal, there was no further vaginal bleeding for 18 months. However, breast growth resumed 13 months after surgery and axillary hair growth started concomitantly.

Materials and methods

Steroid hormones in peripheral blood and ovarian cyst fluid were measured by previously established methods. Estrone and estradiol were separated on chromatography columns (Sephadex LH-20) and assayed by radioimmunoassay (RIA).[7] Testosterone

TABLE I. Hormonal Values of Patients and Normal Values for Chronologic Age and Pubertal Stage (Tanner)

	Patient Values	Normal Values for Chronologic Age		Normal Values for Puberty Stage B-3*	
Serum					
FSH, MIU/mL	6.1	3.5	(2–8.7)	8	(5–12)
LH, mIU/mL	25.3	9	(3.6–14.9)	8.4	(2.5–14)
TSH, μU/mL	7.7	<6		...	
Prolactin, ng/mL	20	5–20		...	
T_4, μg/dL	8	8.3	(4.9–11.7)	...	
Cortisol, μg/dL	5.9	2–20		...	
Estrone, pg/mL	26	27	(17–44)	30 ± 5	
Estradiol, pg/mL	26	<5	(0–17)	25 ± 5	
Testosterone, ng/dL	18	6	(3–14)	30 ± 2	
Dihydrotestosterone, ng/dL	7	3	(0–5)	14	(9–25)
Progesterone, ng/mL	<1	0.05	(0.3–0.23)	0.23	
Urine					
17-KS, mg/24 h	1.6	1.4		...	
17-OHCS, mg/24 h	3.4	1–5.6		...	
Estrogens, μg/24 h	5	1		...	

* Data shown as means ± SEM or normal range from Winter[11] and from Nelson et al.[12]

TABLE II. Steroid Hormone Levels in Peripheral Blood and Ovarian Cyst Fluid

	Estrone, pg/mL	Estradiol, pg/mL	Testosterone, ng/dL	DHT,* ng/dL	Progesterone, ng/mL
Preoperative blood	26	26	18	7	<1
Postoperative blood	37	29	46	11	<1
Ovarian cyst fluid	800	2,340	136	150	640

* Dihydrotestosterone.

and dihydrotesterone were measured by RIA after column chromatography (Sephadex LH-20) as described by Auletta et al.[8] Progesterone was assayed by the method of deVilla et al.[9] All other hormonal measurements were performed in the clinical chemistry laboratory of the hospital by routine assays.

Comment

Isosexual precocious puberty in this patient was studied by hormone analysis in peripheral blood, ovarian cyst fluid, and urine. Steroid hormone concentrations in the luteinized follicular cyst fluid demonstrated biosynthetic activity for progesterone, estrone, estradiol, testosterone, and dihydrotestosterone. Our measurements of estrone and estradiol in cyst fluid are higher than those reported by Wieland et al[13] but lower than the values by Richards et al[14] in similar case reports of sexual precocity. However, the ratio of E_2:E_1 of 3:1 was comparable in our case as well as in Richards' case. When follicular cyst fluid is compared to antral fluid of follicles from mature ovaries it becomes apparent that estrogen concentrations are at least ten to 100 times higher in antral fluid.[5] The progesterone concentration of 640 ng/mL in cyst fluid of our case can only be compared with antral fluid in mature ovaries, because no progesterone measurements have been reported in other cases of precocity. The progesterone concentration in follicular cyst fluid in our case was somewhat higher than the range of 16 to 362 ng/mL in antral follicle fluid from mature ovaries.[15] Androgen measurements in ovarian cyst fluid from girls with isosexual precocity have not been reported to date. Therefore, our measurements can only be compared with antral follicle fluid of mature ovaries. Our values of testosterone and dihydrotestosterone are approximately ten to 100 times lower than measurements for antral follicular fluid.[16] We detect more dihydrotestosterone than testosterone in the cyst fluid of our patient. This is in agreement with findings of antral fluid from mature ovaries.

The result of lower estrogen and androgen concentrations and higher progesterone concentrations in the cyst fluid of our case compared with antral follicle fluid of mature ovaries suggests that the biosynthetic enzyme systems which convert pro-

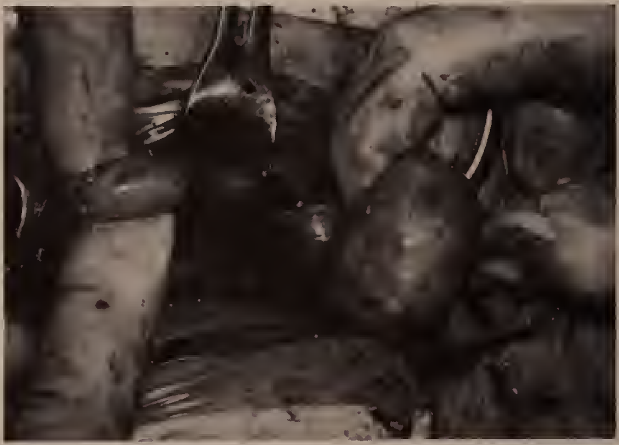

FIGURE 1. Enlarged right ovary with cyst of 4 cm diameter.

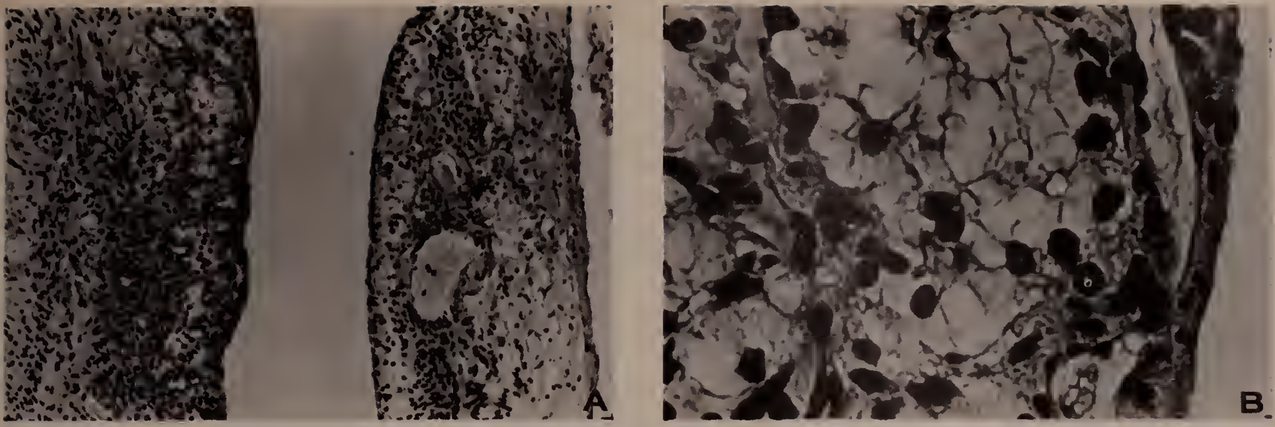

FIGURE 2. (A) Right ovarian cyst wall with luteinized theca interna cells (hematoxylin-eosin, original magnification ×50). (B) Higher magnification of luteinized theca interna cells (hematoxylin-eosin, original magnification ×300). Photomicrographs reduced about 50%.

gesterone to androgens and estrogens function quantitatively not as efficiently as in the adult ovary. However, the relative ratios of estradiol:estrone and testosterone:dihydrotestosterone are similar in our case of a follicle cyst and in follicles of mature ovaries. Therefore, it can be assumed that activation of follicular biosynthesis is qualitatively comparable in the ovary during pubescence and adulthood but functions at a lower efficiency.

The findings of increased LH levels, multiple small ovarian cysts in addition to one large luteinized follicle cyst, and the resumption of sexual development following a dormant interval after surgery suggest a central activation of the hypothalamic-pituitary-gonadal axis as cause in our case. The acquisition of the positive-feedback action of estradiol on gonadotropin release is a late maturational event which occurs after midpuberty.[7] For this reason it is unlikely that initiation of precocious puberty is caused by this mechanism. Although we did not perform pituitary tests in our case, it has been suggested that responsiveness to luteinizing hormone-releasing factor (LRF) may be helpful in differentiating idiopathic causes from other forms of sexual precocity. Reviews of some available reports indicate that test results have been highly variable. Richards et al[14] reported a prepubertal response of LH to LRF in another case of sexual precocity associated with ovarian follicular cysts. Reiter et al[18] found a greater response of LH to LRF in girls with idiopathic precocious puberty than in normal prepubertal and pubertal children. He also reported a prepubertal LH response in girls with premature thelarche and adrenarche. Therefore, it is apparent that LRF stimulation of the pituitary gland is not conclusive in differentiating central and peripheral autonomous causes of sexual precocity.

If other studies confirm our impression that sexual precocity associated with ovarian follicle cysts is due to central activation of the hypothalamic-pituitary-ovarian axis it may become useful to suppress the pituitary and hypothalamus with drugs like medroxyprogesterone acetate[18] or inhibitory LRF analogs[19] before surgical removal of ovarian follicle cysts is performed.

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The heavy burden of low birth weight babies

The United States does not fare very well in a listing of countries ranked by their infant mortality rates. We could do no better than tie for 16th place in 1979, the most recent year for which we have statistics, placing lower than most of the countries in northern Europe.

This is partly due to differences in the reporting of infant deaths and in the definition of a live birth versus a stillbirth. We frequently report infant deaths through the first 28 days after birth, while in Europe infant mortality usually is reported only through the first seven days after birth.

Although there is no consensus on the reason for our poor showing (it has never been clear what role medical care, or its lack, plays in it) a likely cause has been traced to the high number of low birth weight babies born into economically deprived families, according to an article in the February 19 *Journal of the American Medical Association.*

That was what J. David Erickson, PhD, at the Centers for Disease Control in Atlanta, Ga., and Tor Bjerkedal, MD, at the University of Oslo's Institute of Hygiene in Norway, found when they compared birth weight and infant mortality data from both countries.

Using figures adjusted for the mortality at each birth weight (instead of comparing overall mortality statistics) they found that babies of the same weight, on average, had lower death rates in the U.S. than in Norway, which ranked fifth internationally in infant mortality in 1977.

What this means, in essence, is that infant care in this country is as good or even better than it is in Norway, but because of the number of low birth weight babies in the U.S. we do not come out all that high in the standings.

This situation, the *JAMA* authors says, is unlikely to change unless the proportion of U.S. babies born at low birth weight is reduced.

The authors say that in the U.S., mortality for black babies far exceeds that in white babies. In 1977, for example, mortality among white babies was 12.3 per 1,000 births, while the rate for other races was 21.7. In an international ranking, the authors state, the white race would have placed tenth, but the other race rate would not have placed among the first 25 nations.

Research has convincingly shown that smaller babies have a higher risk of early death, as Nigel Paneth, MD, of Columbia University, says in an editorial accompanying the *JAMA* article. He calls low birth weight America's number one pediatric public health problem, and says that it will not go the way of diphtheria and polio without a similar concerted and well-funded effort.

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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flurazepam HCl/Roche
15-mg/30-mg capsules

Efficacy objectively demonstrated in the sleep laboratory—the most valid environment for measuring hypnotic efficacy.

In numerous sleep laboratory investigations patients fell asleep sooner, slept longer and woke up less during the night[3-12] with

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Compared with temazepam and other hypnotics, onset of sleep is more rapid[4] with

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Fewer middle-of-the-night awakenings[4] with

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More total sleep time on nights 12 to 14 of therapy[4] and continued efficacy for up to 28 nights[5] with

Dalmane®

Rebound insomnia is avoided upon discontinuation [3,4,7] of

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Low incidence of morning "hangover"[14] with

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The efficacy of Dalmane has been studied in over 200 clinical trials with more than 10,000 patients.[3-15] During long-term therapy, which is rarely required, periodic blood, kidney and liver function tests should be performed. Contraindicated in patients who are pregnant or hypersensitive to flurazepam.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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(*continued from page 1342*)

mination of Death Act, or legislation considered "substantially similar."

"In those jurisdictions, physicians can rely on a single standard for determining death," said John M. McCabe, the Chicago-based legislative director for the National Conference of Commissioners on Uniform State Laws. "They grant the same legal recognition to brain death as the 'common law' has traditionally granted to heart-lung death."

Wisconsin had no legislation permitting physicians to determine death on the basis of brain criteria before its adoption of the Uniform Determination of Death Act.

Maryland was one of about half the states that had adopted some form of "brain death" legislation before the Uniform Law Commissioners (ULC), American Bar Association, and American Medical Association agreed to support the Uniform Determination of Death Act in 1980. That legislation replaced all earlier models developed by the organizations. Maryland amended its "brain death" legislation, originally adopted in 1972, to conform to the Uniform Act.

Development of medical machinery that can artifically maintain respiration and blood circulation beyond the time of the death of the brain created the need for the legislation.

Other states which now have implemented the Uniform Determination of Death Act include: Alabama, Arizona, Colorado, Idaho, Indiana, Mississippi, Nevada, Vermont, Washington, West Virginia, and Wyoming.

The Uniform Determination of Death Act states:

An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards.

ULC members are scheduled by each of the 50 states, the District of Columbia, and Puerto Rico to draft and urge adoption of proposals designed to solve problems common to all states. Membership includes about 300 practicing lawyers, judges, and law professors.

ACP announces new clinical efficacy recommendations

The America College of Physicians' Board of Regents today announced approval of four new Clinical Efficacy Assessment Program (CEAP) recommendations. They are:

1. *Cardiokymograph:* An electronic device capable of detecting cardiac regional wall motion noninvasively. Although promising, cardiokymography for the diagnosis of artery disease must be considred investigational at this time. The status of this test should be re-examined after more experience has been gained with it in a broad spectrum of patients (patients representing both sexes and exhibiting a range of ages, symptoms, extent and distribution of disease, and cardiac diagnoses) and after performance procedures and standardized criteria have been firmly established, comparing it to other modalities available for the diagnosis of coronary artery disease. (1982) (Summary of full statement).

(*continued on page 1400*)

Diaphragmatic Cyst of Bronchial Origin

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There have been no intradiaphragmatic cysts of bronchial origin reported in the English literature in the past 20 years. Bronchial cysts of the diaphragm are rare and not easily differentiated clinically from solid masses. The diagnosis is usually made at the time of operation. The following case illustrates an unusual intradiaphragmatic cyst of bronchial origin, its diagnosis and management.

Case report

A 47-year-old white female was admitted complaining of progressive dyspnea and left-sided pleuritic pain of three days' duration. There was no cough or hemoptysis. Physical examination revealed dullness to percussion over the left-lower lung field posteriorly and decreased breath sounds. Diffuse epigastric tenderness was also present. The white blood cell count was 11,000 with a normal differential. Her hemoglobin was 12.6 g/100 cc, and the rest of the laboratory data were within normal limits. Electrocardiogram was normal. Admission chest x-ray (Fig 1) and fluoroscopic examination of the chest revealed a left pleural effusion.

A thoracentesis was done and 400 cc of straw-colored transudate was aspirated. The amylase level of the fluid was normal. Gram stain revealed no organisms. Upper-GI series (Fig 2) showed the fundus to be displaced laterally, with a 5-cm pressure defect on the medial and superior aspect of the gastric fundus. The rest of the stomach was well outlined and normal. A celiac angiogram was performed and was inconclusive (Fig 3). The lesion was not visualized on gastroscopy.

A thoracoabdominal exploration was performed on the seventh hospital day. A 7 × 6-cm cystic mass was found to occupy the posterior and medial aspect of the diaphragm, with adhesions to the lower lobe of the left lung as well as the fundus of the stomach. The adhesions were divided and the mass was then observed to be entirely intradiaphragmatic. A wide excision was accomplished, and the diaphragm was approximated with a standard diaphragmatic closure.

Initial examination of the surgical specimen revealed two cystic cavities: one filled with cloudy, free-flowing fluid, the other containing greenish, gelatinous material (Fig 4). Histologic examination of the specimen revealed the cystic spaces were lined with ciliated epithelium and small mucus-secreting bronchial glands. The wall of the cyst contained cartilage with areas of ossification (Fig 5). The final pathologic diagnosis was bronchial cyst of the diaphragm.

The patient's postoperative course was uneventful, and she was discharged on the ninth postoperative day.

Comments

Embryologically, the diaphragmatic cyst develops during the final closure of the pleuroperitoneal or pleuropericardial openings when mesothelial surfaces are fused. A loculus may be formed by these two surfaces initiating the formation of a cyst. The bronchial cyst, in particular, is probably due to a sequestration of primitive lung-bud tissue caught up in the fusion process of the future components of the diaphragm, which occurs during the fourth to sixth week of fetal life.

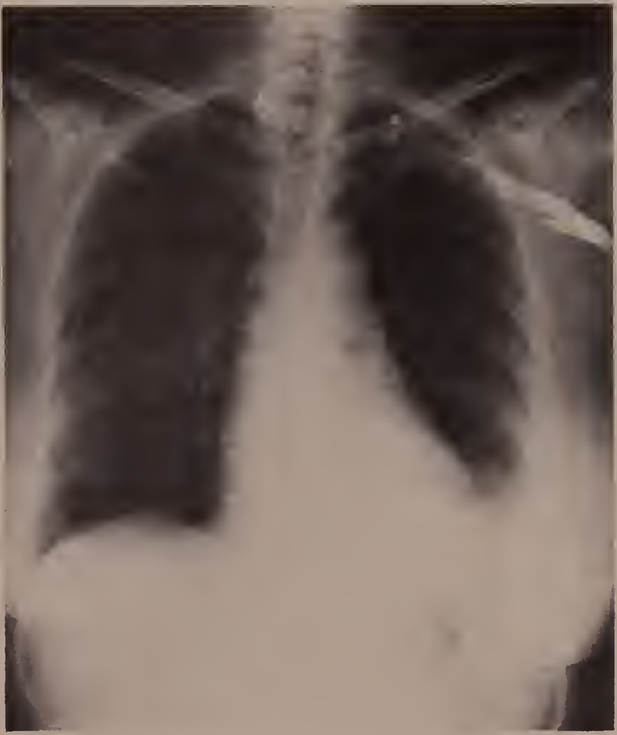

FIGURE 1. Chest x-ray showing left pleural infusion.

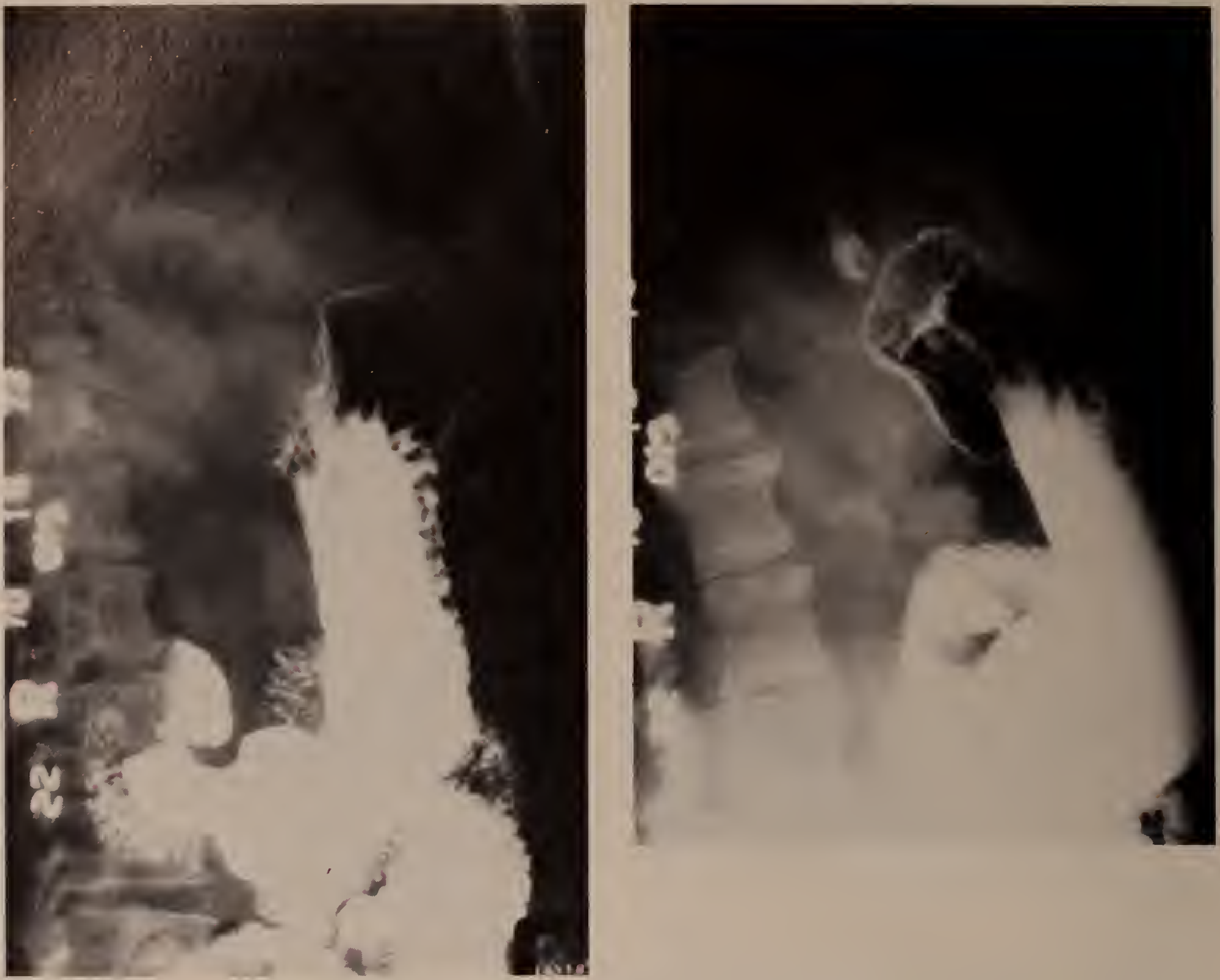

FIGURE 2. Upper-GI series demonstrating a pressure defect on the medial and superior aspect of the gastric fundus.

Bronchogenic, esophageal, and gastroenteric cysts are of similar origin. The tracheobronchial tree arises as a median diverticulum from the primitive foregut. Accessory buds may be pinched off from the foregut or from its tracheobronchial branches. These subsequently develop as isolated cystic structures, which may be carried into the lung but more commonly remain in the mediastinum. When these cysts are lined by tall, pseudostratified, ciliated columnar epithelium, they are referred to as cysts of bronchial origin.

The mediastinal bronchogenic cyst usually occurs in the posterior portion of the mediastinum. Approximately 50% of these cysts are found somewhere along the course of the esophagus, including the distal end. Occasionally, they exist outside the mediastinum and may become adherent to the diaphragm where they derive their blood supply or may even be intraabdominal. The cyst contents are fluid or viscid. In this case, each compartment contained a fluid of different consistency: One was gelatinous, the other was watery.

The cyst wall may be thickened by infection.

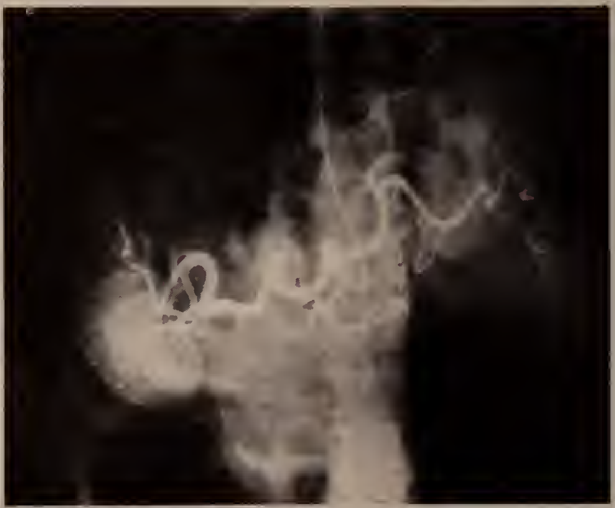

FIGURE 3. Celiac angiogram showing a mass near the gastric fundus.

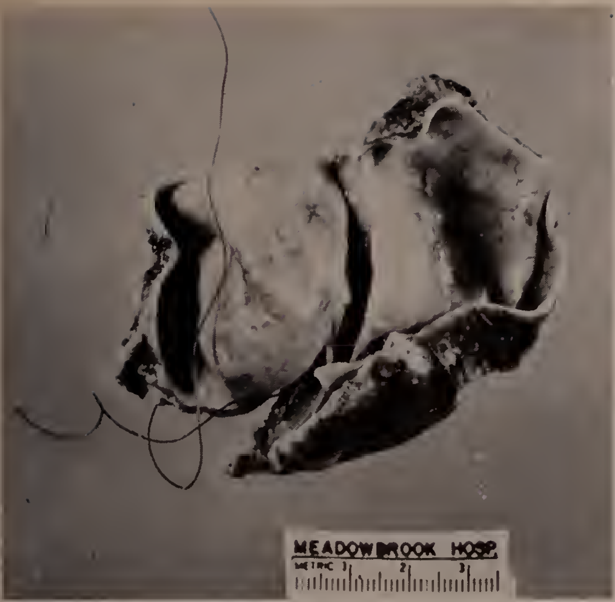

FIGURE 4. Gross aspect of surgical specimen.

FIGURE 5. Histologic features of surgical specimen.

When these cysts are embedded in the esophageal wall, dysphagia is usually the presenting symptom.

Symptoms. Symptoms may or may not be present, depending on the size, location, and presence or absence of infection. Chest pain, cough, wheezing, and dysphagia are just a few possible manifestations. Dysphagia is more severe with intrinsic lesions of the esophagus.

When infection supervenes, the clinical picture varies widely. It may resemble lung abscess, encapsulated empyema with bronchopleural fistula, or even malignancy.

It may be assumed that infection had occurred in this case, leading to local reaction causing the pleural effusion and symptoms.

Treatment. These cysts should always be removed, even when asymptomatic, unless some strong contraindication to surgery exists. This view is based on the not-infrequent secondary infection, hemorrhage, and other secondary complications that may occur.

The posterolateral thoracotomy approach is the most useful. Care must be taken to recognize any vascular or bronchial abnormalities. Usually, the dissection is rather simple, but adhesions due to infection may complicate the procedure.

Primary tumors of the diaphragm are so rare that no one surgeon can have had much experience with them. There were only 50 primary tumors of the diaphragm recorded in the world literature up to 1960, and of these, about half were malignant and half benign. Of the benign tumors, congenital cysts, lipomas, fibromas, neurofibromas, and neurilemmomas have accounted for most. Malignant tumors were of vascular, neurogenic, or striated muscle origin.

Summary

An unusual case of intradiaphragmatic cyst of bronchial origin is reported. The difficulties encountered in the differential diagnosis and management have been presented. The embryogenesis, symptoms, and treatment of these cysts are briefly reviewed.

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Low-Grade Infections of the Spine With Neurologic Involvement Masquerading as Tuberculosis

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Tuberculosis and tumors of the spine frequently affect more than one vertebral body, with the intervertebral disk being caught up in the disease process. These conditions should feature high in the differential diagnosis, especially in older persons in whom neurologic compromise becomes evident. It is only by retaining an awareness that other low-grade infections can simulate these conditions that a surgeon is enabled to make the correct diagnosis and initiate appropriate therapy. To illustrate this point, four cases seen during a two-year period at Montefiore Hospital are described.

Case 1 (Figs 1A–1E)

A female, age 74 years, experienced increasing paraparesis that progressed over a period of three months. On admission, she had complete motor paralysis of the lower limbs, a sensory level at T-11, increased knee and ankle jerks, and bilateral Babinski responses. She was not pyrexial, and apart from the paraplegia, her general condition was satisfactory. Radiographs revealed a destructive lesion at T-9 and T-10 with an associated paravertebral mass. Chest films revealed a lesion in the left-lower lobe. Tuberculosis and metastatic disease were considered as likely diagnoses.

Tomography showed marked destruction of the bodies of T-9 and T-10, with apparent widening of the intervertebral disk space favoring a low-grade infective process, rather than metastatic disease. On the lateral tomogram, density of the posterior part of the body of T-9 was noted. A CT scan was performed, which indicated displacement of a bony fragment into the spinal canal, in addition to the destructive lesion of the bodies. Needle biopsy revealed no evidence of tumor; no organisms were cultured from the aspirate. A short course of radiotherapy was prescribed by the internists in the belief that she was suffering from a metastatic lesion. There was no response to this treatment.

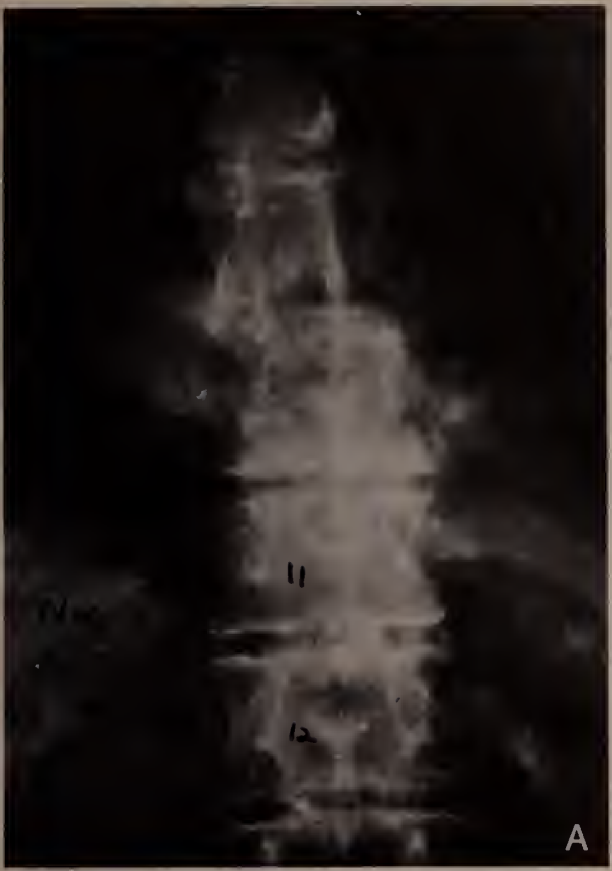
It was decided that a thoracotomy should be performed to elucidate the precise nature of the disease and that the spinal cord be decompressed. The lower lobe of the left lung was palpably indurated and tightly adherent to the area of spinal disease. The diseased vertebrae were totally excised, together with the intervening T9-10 disk, and the spinal canal was opened. Pachymeningitis externa was noted, with a transverse kink at the level where the fragment of the body of T-9 had displaced against it. The pachymeningitis externa was incised longitudinally and the cord completely decompressed. A three-strut rib graft was inserted between the bodies of T-8 and T-11. Histology of the excised disease specimen revealed evidence of chronic low-grade osteitis, and *Escherichia coli* was cultured from several specimens. Within three days of the operation, the patient had weak active movements in her lower limbs, and at the time of discharge from the hospital three months later, she was able to ambulate with a walking aid and was also able to climb stairs.

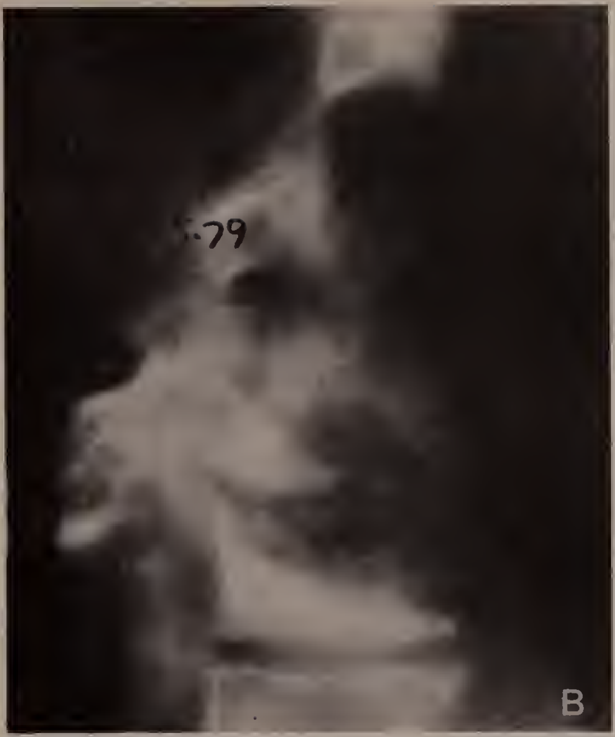
Case 2 (Fig 2)

A 74-year-old male complained of midthoracic pain with radiation around the chest that occurred spontaneously. Progressive paraparesis developed over the ensuing weeks, and a few days prior to admission, he experienced a sudden total loss of use of his lower limbs, as well as acute retention of urine. Clinically, there was complete motor paralysis of the lower limbs. Minimal patchy sensation was present with a level at T4-5, and knee and ankle reflexes were markedly increased. Radiographs of the spine revealed diffuse thoracic and lumbar spondylosis, with evidence of a destructive lesion at T4-5, highly suggestive of tuberculosis. There was no evidence of a paravertebral soft tissue abscess. The possibility of malignancy was also considered. Myelography revealed a partial block at the site of the bone lesion.

A left thoracotomy was performed. Some thickening of the paravertebral tissues was noted at the level of the lesion, and on incising this, a small amount of creamy yellow pus was seen. Diseased bone and intervening disk were excised. A large plug of necrotic material that was projecting posteriorly into the spinal canal came away with the bone. Complete decompression of the spinal cord was achieved and a two-rib strut graft was inserted between the vertebral bodies. *Staphylococcus aureus* was cultured from the biopsy specimens.

The patient made excellent progress, and when last seen, ten months after the operation, was ambulating without the use of a cane but did have mild residual spasticity in his lower limbs.





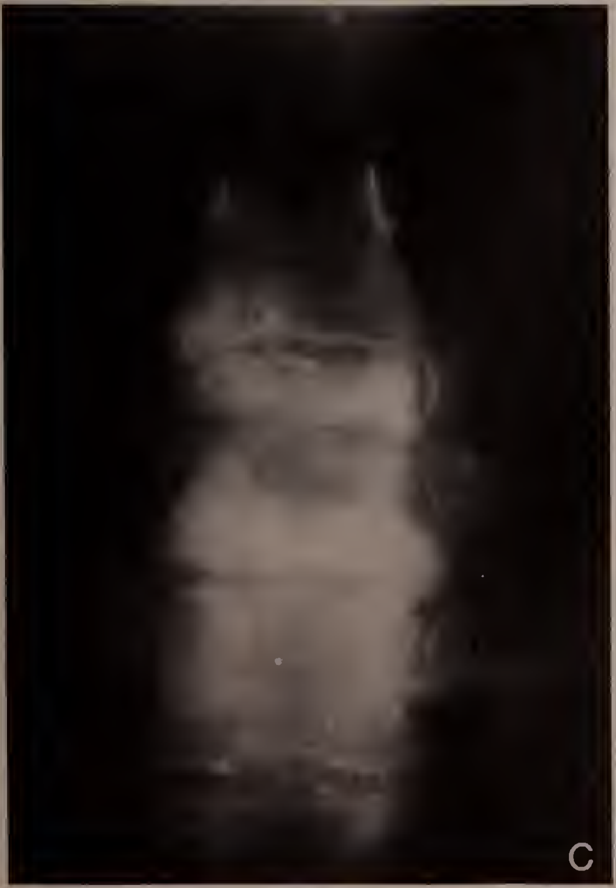
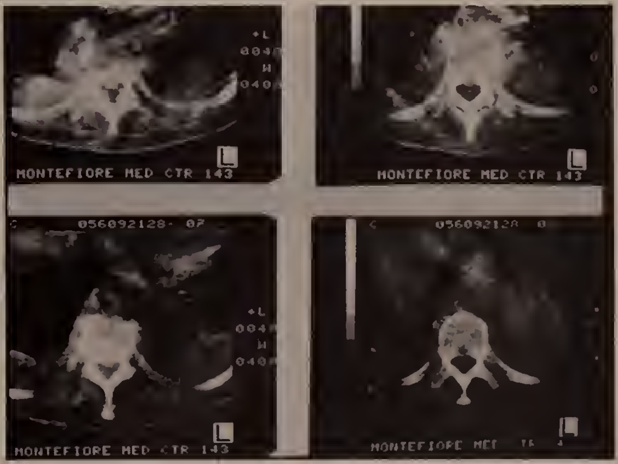


FIGURE 1. (A) Destructive lesion T8-10 with paravertebral mass. (B) Lateral tomogram. Disk spaces appear widened. Remnant bodies T-9 and T-10 sclerotic. (C) AP tomogram. Appearance suggestive of low-grade infection such as tuberculosis. (D) CT scan. Destruction of vertebral body evident with sequestrated piece of bone in spinal canal (top left).



Case 3 (Figs 3A, 3B)

This patient, a 62-year-old male, had previously been treated for pharyngeal carcinoma. Some months later, he developed severe pain in the upper thoracic region with an increasing kyphosis. Sensation was diminished with a level at T-6. Motor power was minimally reduced in the lower limbs, although subjectively he complained of marked weakness. Knee and ankle reflexes were normal, but positive Babinski responses were noted. Radiographs revealed a destructive lesion at T6-7, and

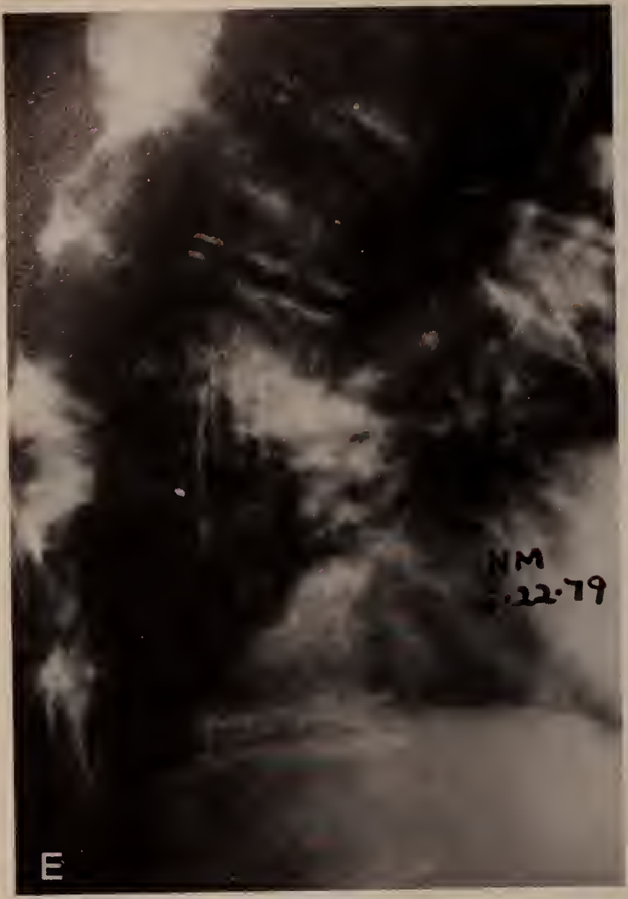


FIGURE 1E. Posttransthoracic spinal decompression with insertion of rib grafts.

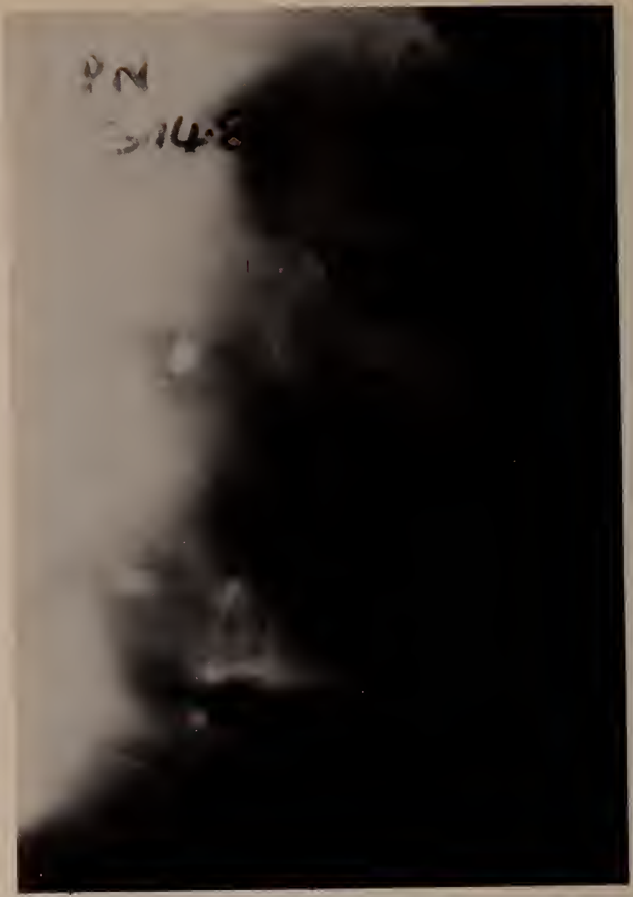


FIGURE 2. Lateral radiograph showing consolidation of grafts.

myelography showed some anterior compression of the cord at this level. There was no block. The neurologists suspected a metastatic lesion and prescribed radiotherapy. The orthopedic department was consulted and, together with the radiologists, felt that chronic infection, such as tuberculosis, was more likely. A Craig needle biopsy was performed and *S aureus* cultured.

A transthoracic decompression was performed with excision of the diseased vertebral bodies and the intervening disk. The latter had been totally replaced by soft granulation tissue. Approximately 3 cc of pus exuded from between the necrotic disk and the anterior aspect of the dura. A three-strut rib graft was inserted for stability. *S aureus* was again cultured from the biopsy specimen.

The patient had an uncomplicated recovery with no evidence of further neurologic compromise.

Case 4 (*Figs 4A, 4B*)

A female patient, age 58, developed spontaneous onset of low back pain in December 1980. She consulted a chiropractor over the ensuing weeks, but without benefit. A month later, she began to experience night sweats and fever and was admitted to hospital in March 1981. At that time, she had an unremitting fever, at times as high as 104 °F, and a right pleural effusion was noted. In addition, there was a history of weight loss and persistent low back pain.

The only abnormal neurologic symptom in this patient was pain in the lumbar region, which radiated down the lateral aspect of the right thigh and the anterior aspect of the leg. This was quite severe at times. Her sedimentation rate was markedly elevated, as was her white count, and her hematocrit was low. Radiographs of the lumbar spine revealed a destructive lesion of the bodies of L-4 and L-5 and the intervening disk. In view of the pleural effusion, coupled with the radiographic features in the lumbar spine, tuberculosis was strongly suspected. Biopsy of the pleura failed to reveal any organisms, and there was no evidence of tuberculosis or malignant disease. Blood cultures revealed anaerobic organisms in gram-positive chains on two occasions. A Craig needle biopsy was performed and 20 cc of pus aspirated. Gram-positive cocci in chains and groups were noted on direct examination, and culture of several specimens grew peptostreptococci. No acid-fast bacilli were noted and there was no anaerobic growth. A diagnosis of streptococcal osteitis was made.

Her spinal lesion was treated conservatively, with

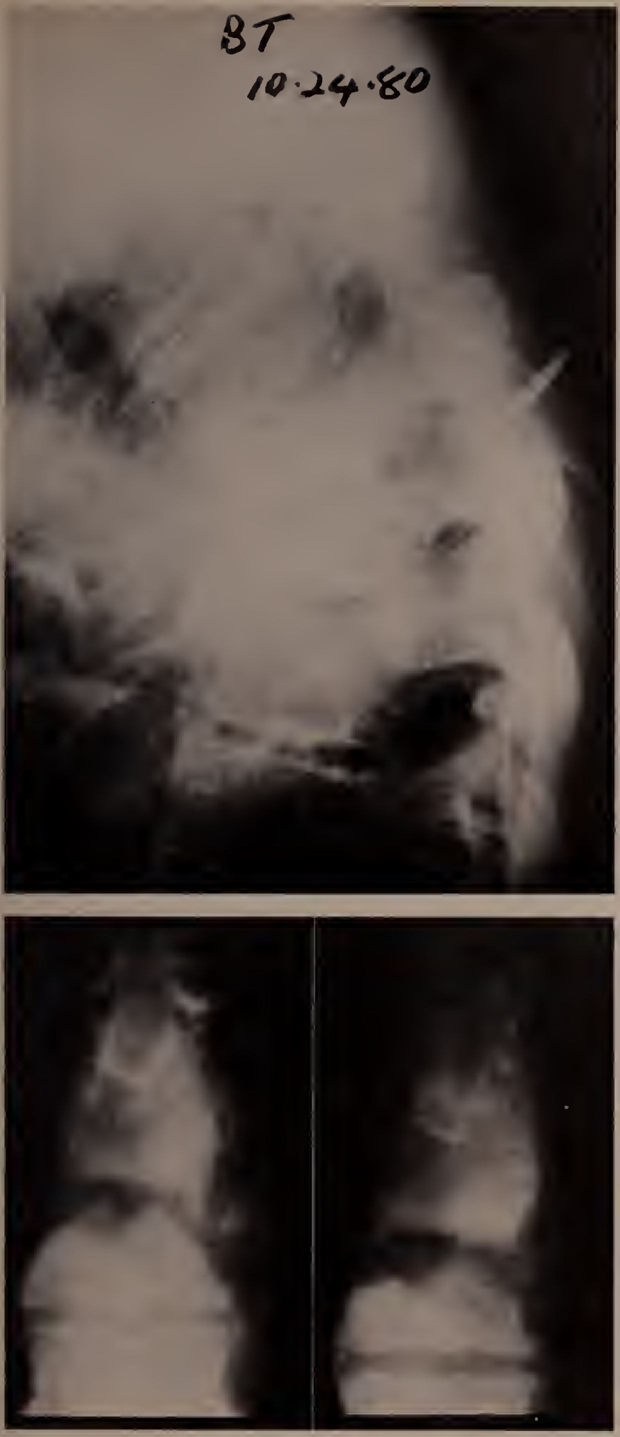


FIGURE 3. Lateral radiograph. Collapse of vertebrae and narrowing of disk space. AP tomography. Apparent widening of disk space. Some sclerosis of vertebrae.

application of a fiberglass body cast and appropriate antibiotics. Further intensive investigation was undertaken to determine the source of the streptococcal infection. Eventually, a barium enema revealed a perforation of the descending colon with barium tracking out toward the L4-5 region. A laparotomy was performed, the effected segment of descending colon excised, and a chronic abscess cavity evacuated. This was completely sealed off from the vertebral bodies. A perforation was found in the descending colon but no cause for this was evident. The patient continues to be reviewed and is making excellent progress at present.

Summary

I spent 13 years as a part-time consulting orthopedic surgeon in a large TB hospital in Durban, South Africa, prior to coming to Montefiore. During this period, literally hundreds of tuberculous spines were seen, the great majority responding well to

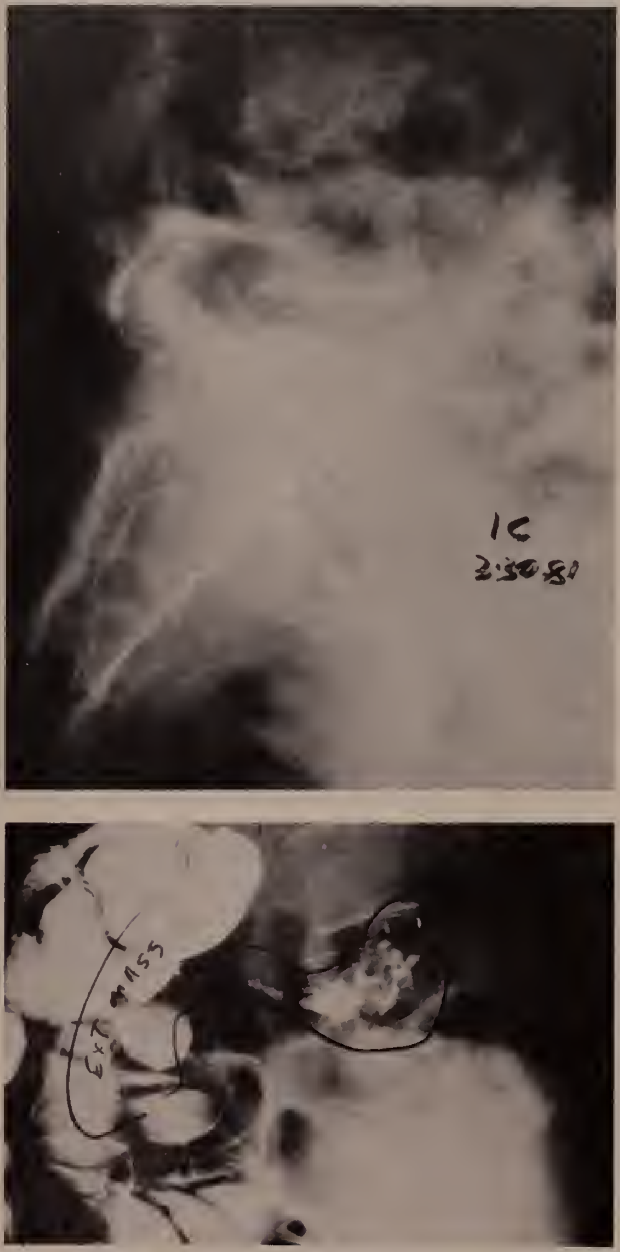


FIGURE 4. Lateral radiograph. There is destruction in body L-4 and narrowing of L4-5 disk space. Barium enema. Extrinsic mass is outlined.

conservative management. Neurologically involved patients, usually suffering from total paraplegia, who did not respond to conservative treatment were operated on. More than 200 transthoracic decompressions were performed personally over the 13 years. There were a few cases that presented with "classic" tuberculous lesions on x-ray—destructive disease, collapsing vertebrae with kyphosis, paravertebral shadows suggestive of abscess formation—and with other clinical evidence of tuberculosis, yet were discovered not to have spinal tuberculosis at surgery. Primary and metastatic neoplasms were unexpectedly encountered, as well as the occasional nontuberculous low-grade infection. This was a humbling experience and made me realize that one can never be totally dogmatic in diagnosing tuberculous spondylitis.

In Case 1 presented here, no primary tumor was found. The radiographs, especially the tomographs, revealed evidence of destruction of contiguous vertebrae but with widening of the disk space. This, to my mind, was not compatible with a diagnosis of tumor but was suggestive of low-grade infection, such as tuberculosis, with granulation tissue formation. Failure to identify an organism, lack of improvement in the neurologic status, and evidence of a bone fragment within the spinal canal were all indications for surgical intervention.

Rapidly increasing compromise, with myelographic evidence of a partial block was the indication for surgery in Case 2. Again, preoperative radiographs revealed destruction of bone on both sides of the disk, with relative widening of the disk space. Irrespective of the cause of the destruction, cord decompression was imperative.

Case 3 is highly instructive. Although this patient had been treated for pharyngeal carcinoma, the spinal features suggested low-grade infection, probably tuberculosis. The straight lateral radiographs revealed wedging of the adjacent vertebrae with narrowing of the disk space. Tomography, however, showed the disk space to actually be increased, having fluffy irregular margins. Craig needle biopsy revealed chronic infection and *S aureus* was cultured. I suggested that the patient be treated conservatively with the appropriate antibiotics and a spinal brace. The infectious disease attending physician, however, was insistent that immediate surgery be performed to avoid sudden irreversible paraplegia, and I could not convince him that this would not occur with a chronic low-grade infection, short of sudden sequestration of a piece of bone into the spinal canal. As surgical treatment would hasten recovery and provide immediate decompression, I did not feel strongly against performing early surgery and proceeded with the operation.

The radiographic features in Case 4, together with the history, were again suggestive of low-grade infection. Tuberculosis was strongly suspected in view of the pleural effusion, but all investigations for tuberculosis were negative. The Craig needle biopsy proved the diagnosis, the organism being identified, and appropriate conservative treatment then prescribed.

Conclusions

Four cases presenting clinically as tuberculosis or possible metastatic disease of the spine are described. In all of these, presumptive diagnosis was made and was proved wrong on subsequent investigation. It is stressed that every effort be made to prove a diagnosis prior to definitive therapy being instigated.

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Medical Genetics

The Jewish view

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> And God blessed Noah and his sons, and said to them, *Be fruitful, and multiply, and replenish the earth*—(Genesis 9:1).

General principles

It is a cardinal principle of Judaism that life is of infinite value and that one moment of life is equal to 70 years thereof. It is, therefore, permitted and even mandated to desecrate the Sabbath to save the life of someone who will only live for a short while, and certainly for a patient who may recover from illness or accident. In Jewish law, all Biblical and Rabbinic commandments are set aside for the overriding consideration of saving a life.

A second fundamental principle of Judaism concerns the sanctity of human life. Man was created in the image of God, and, hence, human beings are holy and must be treated with dignity and respect, in life and after death. Our bodies are God-given. We are commanded to take care of our bodies and to preserve our health and our lives.

A third Judaic principle is that there are three partners in the creation of a human being: the mother, the father, and God. Cloning of man negates identifiable parenthood and would thus seem objectionable to Judaism.

Are we in fact tampering with life itself when we perform invitro fertilization of a human egg and human sperm? Are we interfering with the Divine plan for humanity? If God's will is for a man or woman to be sterile, who are we to undertake test tube fertilization and reimplantation of a fetus into the natural or genetic mother, or a host mother, to overcome the sterility problem? Nature was created by God for man to use to his advantage and benefit. Hence, animal experimentation is certainly permissible in Jewish law, provided one minimizes the pain or discomfort to the animal. The production of hormones in animals for man's benefit by recombinant DNA techniques also seems totally permissible. Gene therapy, such as the replacement of the missing gene in Tay-Sachs disease, if and when it becomes medically possible, may also be sanctioned in Jewish law. But is man permitted to alter humanhood and/or humanity by genetic manipulations?

How does Judaism view test tube babies (formerly referred to as babies conceived by artificial insemination), genetic manipulation or engineering, egg transfer from a wife inseminated by her husband and then transferred to another woman's womb which serves as an incubator (host mother), invitro fertilization and artificial gestation in a test tube or glass womb, sex organ transplants, gene transplants, genetic screening and genetic counselling, and the like? These are new areas of concern made possible by the enormous recent advances in medical technology.

Artificial insemination

Artificial insemination using the semen of a donor other than the husband is considered by most Rabbinic opinion to be an abomination and strictly prohibited for a variety of reasons, including the possibility of incest (the child born of such insemination may later marry a sibling unknowingly), lack of genealogy (father's identity is unknown); and the problems of inheritance (does the child inherit the real father, the adopted father, or both). Some authorities regard such insemination as adultery, requiring the husband to divorce his wife and her forfeiture of the marriage settlement (*ketubah*), and even the physician and donor are culpable when involved in this act akin to adultery. Most Rabbinic opinion, however, states that without a sexual act involved, the woman is not guilty of adultery and is not prohibited to cohabit with her husband.

Regarding the status of the child, Rabbinic opinion is divided. Most consider the offspring to be legitimate as was Ben Sira, the product of conception *sine concubito;* a small minority of rabbis consider the child illegitimate, and at least two authorities take a middle view. Considerable Rabbinic opinion regards the child (legitimate or illegitimate) to be the son of the donor in all respects (inheritance, support, custody, incest, Levirate marriage, and the like). Some regard the child to be the donor's son only in some respects but not others. Some rabbis state that although the child is considered the donor's son in all respects, the donor has not fulfilled the commandment of procreation. A minority of Rabbinic opinion asserts that the child is not considered the donor's son at all.

There is near unanimity of opinion that the use of semen from the husband is permissible if no other method is possible for the wife to become pregnant. However, certain qualifications exist. There must have been a reasonable period of waiting since marriage (2, 5, or 10 years or until medical proof of the absolute necessity for artificial insemination) and, according to many authorities, the insemination may not be performed during the wife's period of ritual impurity.

It is permitted by most rabbis to obtain sperm from the husband both for analysis and for insemination, but difference of opinion exists as to the method to be used in the procurement of it. Masturbation should be avoided if at all possible and *coitus interruptus*, retrieval of sperm from the vagina, or the use of a condom, seem to be the preferred methods.

Test tube babies (*invitro fertilization*)

Test tube (invitro) fertilization of a human egg removed from a woman's ovary with the husband's sperm and the reimplantation of the fertilized zygote or tiny embryo into the same woman's womb with the subsequent birth of a healthy baby has been accomplished in England and elsewhere. The Sephardic Chief Rabbi of Israel, Ovadiah Yosef, gave his qualified approval to this procedure. The Ashkenazic Chief Rabbi, Shlomo Goren, asserted that conception in this manner is morally repugnant but *halachically* (legally or traditionally) unobjectionable.

This procedure may be employed in a situation in which the husband produces far too few sperm with each ejaculate to impregnate his wife, or where a woman is unable to move the egg from the ovary into the uterus because of blocked Fallopian tubes. This type of barrenness is akin to physical illness and therefore justifies acts which entail a certain amount of risk, such as the procurement of the eggs from the mother's ovary by a minor surgical procedure called laparoscopy.

There is certainly no question of adultery involved since the sperm used is that of the husband. Sperm and egg procurement for this procedure are permissible because the aim is to fulfill the Biblical commandment of procreation. The offspring is legitimate and the parents thereby fulfill their obligation of having children. However, certain serious moral and Jewish legal problems relate to this type of test tube baby. If one uses sperm other than that of the husband, objections as discussed above under artificial insemination exist. Furthermore, if one obtains several eggs from the mother's ovary at one time and fertilizes all of them so as to select the best embryo for reimplantation, is one permitted to destroy the other fertilized eggs? Do they not constitute human seed and therefore should not be "cast away for naught"? Is one permitted to perform medical research on the unused fertilized eggs?

Is the test tube fertilized egg considered to be a fetus? The procurement of the egg and its manipulation invitro may damage it, leading to the birth of a deformed or even monster baby. Is it ethical to subject the mother to this risk of a damaged egg? What is the Jewish viewpoint toward risk-benefit ratio? As the procedure becomes perfected, the risks will probably diminish. Would a 95% success rate of invitro fertilization and healthy offspring justify the 5% that might be born deformed? A sterile woman who is eager to conceive is likely to accept the risk of 5% abnormality. A sterile woman may feel a greater need to conceive and, consequently, be willing to assume a greater risk than in normal conception. Couples who are unable to have children in the usual manner are willing to adopt deformed infants and therefore a slight risk of abnormality is not sufficient to mitigate against the benefits that would accrue from invitro fertilization and the birth of a child.

Another question cited heretofore relates to the possible need for removing ten eggs from the ovary to achieve at least one successful invitro fertilization. What is the status of other fertilized ova in the Petri dish? Is the destruction of such fertilized ova tantamount to abortion? Is such a fertilized ovum regarded as mere water during the first 40 days of its development? There is no concept of waste applied to tens of millions of superfluous sperm! Perhaps an excess fertilized egg might be implanted in a nonovulating woman. What, then, should be the approach if no woman is available for an additional implant and there has been more than one successful fertilization? If a fertilized ovum is "more than nothing," would Jewish law mandate invitro procedures with fewer than ten ova?

There may well be a Jewish legal and ethical distinction between a fertilized egg in a Petri dish and a fertilized egg in a uterus. If there is no human fetal life outside the uterus, a superfluous fertilized ovum can be disposed of by any means, such as flushing down the drain. An alternative course of action would be to refrain from supplying nutrients to the ovum, thereby allowing it to perish. One can redefine the question in terms of whether or not an unfertilized egg may be deemed to be of ethical import as potential life. Since the vast majority of unfertilized sperm and eggs are never fertilized and do not constitute new life, only a fertilized ovum might be considered as potential life. If a fertilized ovum were equated with human life, Jewish law would require even the expenditure of substantial sums of money to transport a superfluous fertilized ovum even great distances, if necessary, for implantation in a nonovulating woman. The question of the possible independent existence of a zygote has legal import. Jewish law requires the desecration of the Sabbath to preserve the existence of an embryo in the mother's womb even less than 40 days old. Is there Jewish legal distinction between a fertilized ovum reposing within the mother and a similar ovum lying in a Petri dish? Since it is not currently feasible to move an embryo from Petri dish to Petri dish, from test tube to test tube, or from incubator to incubator, for the full nine months of gestation, a fertilized egg in Jewish law is only considered as a potential embryo prior to its implantation in a human uterus. Such a fertilized egg is more closely akin to an unfertilized egg than to a fertilized egg within the uterus. In such a hypothetical situation, it may be said that there is no ethical concern for a fertilized egg that has not been implanted.

If and when science develops more advanced techniques of test tube gestation, it may be necessary to reexamine these questions. In the meantime, sterility in Judaism is to be deemed as the equivalent of a state of medical abnormality. Sterility may also cause severe psychic trauma. Therefore, since sterility is akin to illness, it should be treated by the most advanced scientific modality of therapy. There is, therefore, no present basis in Jewish law to prohibit invitro conception as a medical cure for sterility. It is still necessary to cope with all the ethical problems related to this procedure.

It may soon be possible to separate male- from female-producing sperm and thereby to predetermine the sex of one's baby, either by artificial insemination of male- or female-producing sperm or the use of the appropriate sperm to fertilize an egg in the test tube for reimplantation into the mother. Is such sex predetermination permissible in Jewish law? The freezing of human sperm and eggs for later use is another subject not yet addressed by Jewish authorities.

Host mothers

The case of host motherhood in Jewish law concerns the implantation of a fertilized egg or tiny embryo into the womb of a woman other than the donor of the egg, perhaps because the true mother is unable to carry a fetus to term. The host mother thus serves as a surrogate and incubates the fetus for the true mother. The fetus can either be transplanted from one mother to another, or the egg and sperm are united invitro in a test tube or Petri dish and directly implanted into the host mother. There is a serious question in Jewish law whether or not the biological mother is allowed to give up her child for transplantation into another womb, and whether or not the host mother is allowed to accept it. What is the legal parenthood of the child? If a married woman becomes a host mother, would Jewish law require her to abstain from sexual relations with her husband for 90 days, to insure that the child is not his, that is to say, that she did not miscarry the implanted fetus and become pregnant by her husband? The husband would certainly not have to divorce his wife for serving as a host mother since no act of adultery was committed.

To apply the laws pertaining to the first-born, it is important to know whether the biologic or host mother is regarded as having given birth to the infant. If fetal transplantation is performed after 40 days postconception, the child is considered to be the legal offspring of its biologic parents since the child became "completed" while still in the biologic mother's body and she is regarded as having given birth to it. Jewish law may view differently the situation of a fetal transplant prior to 40 days after conception or invitro fertilization followed by host motherhood.

Sex organ and gene transplants

There are Rabbinic sources that discuss Jewish legal aspects of ovarian transplants. A case is described in which the ovary of a fertile woman was transplanted into the body of a previously barren woman to enable her to become pregnant and bear children.* Adultery was not involved on the part of the recipient woman even if the donor of the ovary was a married woman. A transplanted organ is ordinarily deemed to become an integral part of the body of the recipient. For this reason, the recipient of an ovarian transplant would also be considered the legal mother of any child subsequently conceived and born.

Another view is that the ovary alone is an inert organ and incapable of reproduction were it not for the physiologic contributions of the recipient. Furthermore, in the case of fetal transplantation, the host mother nurtures the embryo and sustains gestation and, perhaps, should be considered the legal mother of the offspring. According to other authorities, the donor-mother alone may be viewed as the mother in the eyes of Jewish law since the prohibition against feticide is applicable from the moment of conception. These authorities deem the fetus to be a human being with identity and parentage from the earliest stages of gestation. One can also raise the possibility of two maternal relationships existing simultaneously, the child thus having two mothers, the donor or biologic mother and the host mother.

Jewish sources do not discuss testicular transplants but similar principles would probably apply. The question of paternity in the case of a testicular transplant, and maternity in the case of an ovarian transplant, is tangential but related to the question of the parenthood of a fertilized egg or fetus implanted in a host mother. There may be a distinction between the transplantation of a sex organ and the transplantation of any other organ. Ordinarily, a transplanted organ becomes an integral part of the body of the recipient. This rule may not apply to the implantation of a zygote or embryo into a host mother's womb or to the transplantation of an ovary or testicle. Sperm and egg retain the full identity of their donors. The process of fertilization, whether invivo or invitro, does not alter the paternity or maternity of the eventual fetus. An "incubator mother" does not have maternal status. If it were possible for a full nine-month gestation to occur in a large test tube or incubator, the test tube or incubator would not be considered to be the mother of the infant.

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* Kamelhar, YA: *Ha Talmud u'Mada'ei ha-Tevel* pp 44–45.

Since sperm is produced within the testicle, after the first ejaculation in a case of testicular transplant, the sperm is produced by the recipient rather than by the donor. Similarly, following an ovarian transplant, the nourishment and maturation of eggs within the ovary depend on the recipient and not the donor. There may, however, be a difference between a testicular transplant, where the sperm is to be produced in the future, and an ovarian transplant where the ovary already contains the primordial egg cells at the time of the transplant. A transplanted ovary is an organ which functions within the existing physiology of the recipient, whereas a transplanted testicle is more like germ-plasm which constitutes a reservoir of genetic material. However, one should note that a gamete maintains its own individuality and retains the genetic code of the donor without reflecting the genetic code of the recipient. Because of genetic constancy, the transplanted ovary or testes is not free of the donor. For example, if the donor is a carrier of a detrimental trait, such as hemophilia or Tay-Sachs disease, the trait might appear in the offspring. A possible Jewish legal locus for an understanding of the integrity of a gamete within an organism might devolve from the Talmudic discussion (*Tractate Chullin* 96b to 100b) of the neutralization of a substance within a dominant quantity of another substance (Hebrew: *batel*) as opposed to the retention by a substance of its recognizable characteristics even within a greater substance (Hebrew: *nikar*). Is there a difference in Jewish law between a testicular transplant from a random donor and one from an identical twin brother of the recipient, in which case the genetic material of the donor is identical to that of the recipient? One might find an answer in the Jewish legal concept of *min bemino* (mixture of the same species) and *min she'eno bemino* (mixture of different species). The concepts of "same" and "different" are defined by Jewish legal, rather than existential, distinctions. Therefore, even genetically identical twins are distinctive in Jewish law as to paternity and individuality.

Since sterility is considered to be equivalent to an illness in Jewish law, one is certainly permitted to perform an ovarian or testicular transplant even though sterility is not a life-threatening situation. The conclusions of this discussion and presentation are as follows: an infertile state is akin to illness, both physical and psychologic. Thus, Jewish law would condone some risk that may be necessary to treat this condition. In the case of invitro fertilization, the paternity of the child would devolve from the donor of the sperm. Similarly, where the donor of the ovum also incubates the egg, there is no doubt that the donor is the mother. In the case, however, of a transplanted ovary or ovum, after the first menstruation, the "incubator-mother" would be considered to be the mother of the child. Similarly, in the event of a testicular transplant, paternity, after the first ejaculation, would devolve from the recipient of the transplant. Where cells exist in a primordial state, Jewish law would be of the opinion that the identity of such cells would be neutralized and absorbed into the body of the host. The matter of genetic constancy would not be a factor in determining legal paternity.

With regard to the question of surplus zygotes, which were fertilized for potential use in a procedure of invitro fertilization but were not needed for this purpose, it would be meritorious to offer such fertilized cells for implantation in potential host mothers. If, however, such implantation is not feasible (within reason), these surplus zygotes can be allowed to go to waste. There is a certain wastefulness in nature and the waste of such zygotes is akin to the inevitable waste of millions of surplus sperm and is not to be equated with early abortion. In the present state of scientific knowledge, there is no ability to prolong the existence of such zygotes. If and when science develops more advanced techniques of test tube gestation, it may be necessary to reopen this question.

The considerations of ovarian and testicular transplants, fetal transplants and host mothers relate to a medical situation where the conception and birth of a child are not possible in any other manner. To abort a mother's naturally fertilized egg and to reimplant it in a host mother for reasons of convenience for women who seek the gift of a child without the encumbrance and disfigurement of pregnancy is, according to Britain's Chief Rabbi Sir Immanuel Jakobovits "offensive to moral susceptibilities . . . to use another person as an 'incubator' and then take from her the child she carried and delivered for a fee is revolting degradation of maternity and an affront to human dignity."

Gene transplants

The medical problems of removing the ovum, modifying some of its genes by microsurgical techniques, and replacing the viable ovum in the mother have not yet been surmounted. However, assuming such surgery can be successfully performed, one can contend that gene surgery might be permissible in Jewish law because genes are submicroscopic particles and no process invisible to the naked eye could be forbidden in Jewish law. Laws of forbidden foods do not apply to microorganisms. The priest only declares ritually unclean that which his eyes can see. On the other hand, a newborn infant with ambiguous genitalia would probably need a chromosome analysis (microscopic examination) to establish genetic sex.

Another argument for the permissibility of gene surgery is the fact that the ovum, or sperm, is not a person since conception has not yet taken place. Thus, gene manipulation would not be considered as tampering with an existing human being but only with a potential one. Some authorities, however, would argue that the destruction of even a potential human being, either the unborn fetus or the unfertilized human seed, is prohibited in Jewish law.

One can also argue that any surgery performed on a live human being must certainly be permitted on an ovum, or sperm, before conception. For example, if a surgical cure for hemophilia or Tay-Sachs disease were possible, it would surely be permissible; hence, it would certainly be permissible to cure hemophilia or Tay-Sachs disease by gene surgery.

If it were possible to perform gene transplants by transplantation of genes from one person into the ovum or sperm of another, the following Jewish legal questions would arise: Are gene transplants considered to be a type of perverted sex act between the gene donor and the recipient? Would such transplants be forbidden, in particular, if donor and recipient were close relatives? Would a child conceived from such a manipulated ovum or sperm be regarded as related to the gene donor? Can one draw parallels from the Rabbinic responsa dealing with ovarian transplants and conclude that since no sex act is involved in a gene transplant, the recipient is not forbidden to marry the donor's relatives and the child conceived and born following a gene transplant is not related to the gene donor. In most organ transplants, kidney, cornea, heart, ovary, or gene, the organ becomes an integral part of the recipient. The only exception may be the brain since there is evidence to support the position that the legal identity of a person follows the brain.

Genetic screening and counseling

The multifaceted problems of genetic screening and counseling can best be exemplified by describing Tay-Sachs disease, a congenital disorder that occurs primarily, but not exclusively, in Jewish families from Eastern Europe. The disease is characterized by weakness beginning at about six months of age, progressive mental and motor deterioration, blindness, paralysis, dementia, seizures, and death usually by three years of age. The cherry-red spot in the macula of the eye is the clinical sign most frequently associated with Tay-Sachs disease. The diagnosis of Tay-Sachs disease requires the identification of the accumulated lipid material and documentation of the specific enzymatic defect.

The inheritance of Tay-Sachs disease follows laws of Mendelian genetics. The transmission appears to be autosomal recessive, since both parents of patients are clinically normal, sex ratios are equal, and both parents have enzyme levels that are intermediate between those of patients and normal controls. Thus, a child who inherits one recessive gene from only one parent is a carrier or has the trait, but is clinically completely normal. Only a child who inherits two Tay-Sachs genes, one from each parent, will have the fatal disease. If two carriers marry, there is a 25% chance with each pregnancy that the child will have the disease and a 50% chance that the child, like the parents, will be a carrier. There is also a 25% chance that the child will be totally free of the disease as well as of the carrier state. If a carrier marries a noncarrier, none of the children can have the fatal disease, but half the children will be carriers.

Concerning the gene frequency, it has been estimated that one in 30 Ashkenazi Jews, and one in 300 non-Jews is a carrier of the Tay-Sachs gene. If a Jew, one in 30 risk, marries another Jew, one in 30 risk, the chance that both husband and wife are carriers is one in 900. Therefore, one in 900 Jewish couples is at risk for having children with Tay-Sachs disease. For such a couple, each pregnancy had a 25% chance of producing a child with the fatal disease. Hence, the incidence of Tay-Sachs disease in the Jewish population, assuming there is no intermarriage with non-Jews, is one in 3,600 births. The disease is 100 times less common in non-Jews. In view of the high rates of intermarriage between Jews and non-Jews in the United States, the incidence of Tay-Sachs birth is probably much less than one in 3,600. One expert has calculated that 30 children with Tay-Sachs disease are born annually in North America.

Intrauterine diagnosis of Tay-Sachs disease in an unborn fetus is possible by a procedure called amniocentesis, in which a small quantity of amniotic fluid, which bathes the developing embryo, is removed from the mother's uterus. The fetal cells in this fluid are grown in the laboratory and tested for the presence or absence of the specific enzyme lacking in Tay-Sachs disease, hexosaminidase A. Whether or not it is permissible to abort a known Tay-Sachs fetus is a matter of dispute among Rabbinic authorities. Certainly, blanket permissibility cannot be condoned. Amniocentesis is associated with a small incidence of fetal complications and should also not be undertaken without specific and valid indication.

The various objections to amniocentesis and abortion in Jewish law are predicated on considerations surrounding the fetus. Extreme emotional stress in the mother leading to suicidal intent might constitute one of the situations in which abortion might be sanctioned by even the most orthodox rabbi. If a woman who suffered a nervous breakdown following the birth, or death, of a child with Tay-Sachs disease becomes pregnant again, and is so distraught with the knowledge that she may be carrying another child with the fatal disease that she threatens suicide, Jewish law would allow amniocentesis and, if the procedure reveals an unaffected fetus, the pregnancy would continue to term. If the result of the amniocentesis indicates a homozygous fetus with Tay-Sachs disease, Rabbinic consultation regarding the decision of whether or not to perform an abortion should be obtained. No general rule of permissiveness or prohibition can be enunciated in regard to abortion in Jewish law. Each case must be individualized and evaluated on the basis of its merits, taking into consideration all the prevailing medical, psychologic, social, and religious circumstances.

Screening for the carrier state of Tay-Sachs disease in healthy individuals should also not be undertaken on a mass scale without proper precautions and preparations because of the possible social problems that carrier identification might create. What are the psychologic problems created by the information that one is a carrier for a fatal genetic disease? Should a known carrier refuse to marry a mate who has not been tested? Should two carriers break up an engagement or a marriage if they learn they are both carriers as a result of a screening program? Should a young person inquire about the Tay-Sachs status of a member of the opposite sex prior to meeting that individual on a social level? When does a person who knows he's a carrier tell this fact to the girl that he expects to marry? Should one sacrifice primary prevention of Tay-Sachs disease by mate selection to avoid psychosocial consequences, as some advocate? Is this method of disease prevention the most attractive aspect of genetic screening for recessives, as others state?

One must remember that 29 of 30 people tested for the carrier state are found to be free of the Tay-Sachs gene. It is certainly desirable for these 29 of each 30 tested to have peace of mind. Is the anxiety of the 30th person on learning that he or she is a carrier sufficiently great to warrant not testing at all? Obviously not. However, one cannot minimize the possible psychosocial trauma to such an individual.

The social stigma of being a carrier of the Tay-Sachs gene is not fully appreciated. Misinformed and/or uninformed people may look at carriers in the same manner as patients with epilepsy and leprosy were looked at half a century ago, that is, as individuals afflicted with a "taboo" disease, to be shunned and ostracized from normal social contact. Discrimination against carriers of Tay-Sachs disease may also occur in a variety of areas, such as employment, life, accident, and health insurance.

The selection of target groups to be screened for the Tay-Sachs gene, the planning, organization, and implementation of such screening events, the educational activities that must precede screening, the laboratory aspects of the testing, and the referral of people for counseling are beyond the scope of this essay. Suffice it to say that compliance with screening for Tay-Sachs disease is dependent not only on the motivation of the client, his or her perception of the susceptibility to and seriousness of the inherited condition, the possible consequences of noncompliance and the potential benefits from participation, but also on the moral, ethical, and religious background of the Jewish people who are the clients at risk.

If the purpose of Tay-Sachs screening is to provide eligible clients with genetic counseling about reproductive and mating options, few will argue against screening. If the purpose, however, is to introduce couples at risk to the benefits of prenatal diagnosis by amniocentesis with the specific intent of recommending abortion of affected fetuses, a procedure that may be contrary to the religious dictates of the client, then screening should not be performed. The religious teachings of the Jewish people must be considered if cooperation from the rabbinate and compliance from the clients is to be obtained in any screening program.

The birth of a child with a serious congenital deformity or mental deficiency or a lethal metabolic error, such as Tay-Sachs disease, is a terrible shock to any parents. The personal decisions involved are very difficult: whether to marry; whether to have children; whether to have a further child; whether to adopt a child. For the general Jewish population, not only must medical, genetic, and psychologic factors be considered in any given case, but the religious attitude of Judaism toward such matters as abortion, contraception, amniocentesis, genetic screening, and procreation, to name but a few, must be taken into account. Hence, Rabbinic consultation and advice should be sought concomitantly with the medical-genetic counselling.

Conclusions

The explosion of medical knowledge and technology in the past decade have made sex organ tranplants, genetic engineering, invitro fertilization, and host mothers and their like a reality of the present and not a dream for the future. The potential risks, potential benefits, and ethical considerations of such advances in biomedical technology must be carefully considered. Tampering with the very essence of life and encroaching on the Creator's domain are considerations worthy of extensive discussion from the Jewish standpoint. In the meanwhile, the following sentiments of Britain's Chief Rabbi Jakobovits should be taken to heart: "Man, as the delicately balanced fusion of body, mind and soul, can never be the mere product of laboratory conditions and scientific ingenuity. To fulfill his destiny as a creative creature in the image of his Creator, he must be generated and reared out of the intimate love joining husband and wife together, out of identifiable parents who care for the development of their offspring, and out of a home which provides affectionate warmth and compassion."

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Glossary

batel—neutralization of a substance within a dominant quantity of another substance

coitus interruptus—interruption of normal coitus prior to ejaculation to prevent the woman from becoming pregnant

Conception sine concubito—conception without sexual intercourse as exemplified by artificial insemination

ketubah—marriage settlement

min bemino—mixture of the same species

min sh'eno bemino—mixture of different species

nikar—retention by a substance of its recognizable characteristics even within a greater substance

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Commentary

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Fred Rosner, M.D., addresses himself to a long series of questions in the areas of genetics, sexuality, and procreation. Since many of the questions concern matters that, but a short time ago, would have been dismissed as belonging to the realm of fantasy, it is not surprising that definitive answers to some of these questions are as yet unavailable. They are however, the subject of on-going discussion in the literature of Jewish legal scholarship.

For Jews, it is axiomatic that all areas of human concern are governed by *Halakhah*, the corpus of Jewish law, and that answers to these questions may be found in the rich tradition of Jewish scholarship. The problem is one of analysis and application. Sources and precedents must be marshaled, examined, and applied in uncovering timeless resolutions to novel questions.

Not infrequently, principles that are fundamental in the conceptualization of legal theory are not at all obvious even to a knowledgeable layman. The nature of the obligation with regard to procreation is a case in point. The Bible commands man to "be fruitful and multiply"; yet it may be demonstrated that, in the Jewish legal tradition, the essence of the obligation is understood to be, not the siring or birth of children, but the coital act.* The birth of children simply serves as a *terminus ad quem*, that is, to terminate the fundamental procreational imperative associated with the coital act, although continued cohabitation may be mandated on other grounds. To be sure, cohabitation with a woman physiologically incapable of bearing children does not serve to fulfill the Biblical commandment; the act must be accompanied by at least the possibility of conception. Nevertheless, neither a male nor a female can be considered obliged to engage in heroic measures or to employ extraordinary means to attain parenthood. Thus, a husband suffering from moderate male infertility is under no obligation to collect and combine ejaculates to inseminate his wife artificially. A woman is clearly under no obligation to submit to a surgical procedure for the removal of ova for purposes of invitro fertilization.

This is not to say that procedures such as artificial insemination or invitro fertilization are perforce to be abjured. However, recognition of the nature of the Biblical injunction does imply that the availability of such procedures generates no imperative for their employment and hence poses no dilemma in terms of reconciling conflicting religious values. Were the siring and birth of children to be considered fundamental obligations, in and of themselves, there would be ample reason for consideration of whether or not other values may be deemed subservient. However, in the absence of an overriding obligation to produce offspring, no conflicting moral or religious values may be sacrificed to satisfy a desire for parenthood, although the latter goal, in itself, is entirely laudatory.

Fertilization of multiple ova does present a significant Jewish legal and moral problem. Rabbinic authorities are divided with regard to the question of whether or not destruction of a fertilized ovum within the first 40 days of gestation constitutes an act of feticide. There are, however, grounds for arguing that all authorities would concede that no such prohibition obtains during the earliest stage of development. In general, Jewish law takes no cognizance of subclinical phenomena. Thus, although the Bible forbids consumption of "creeping things," one may drink water with impunity despite the presence of myriads of microbes in each drop. An organism that cannot be perceived by the naked eye is regarded as naught. (Parenthetically, for reasons that are not unrelated, in cases of ambiguous genitalia, it is highly doubtful that the Jewish law would assign a role to chromosomal analysis in the determination of gender.) Similarly, it may be argued, a fertilized egg may be discarded so long as it has not reached a stage of microscopic development. However, I fail to discern Jewish legal grounds for distinguishing between a fertilized ovum in a Petri dish and a fertilized egg in the uterus. Jewish law forbids hastening the death even of a nonviable fetus.* If the zygote is considered to be an embryo when present within the uterus, it must be considered to be an embryo outside the uterus as well. Hence, although it may be possible to sustain life outside the uterus for the full nine months of gestation, overt extinction of such life could not be sanctioned. Edwards and Steptoe† report that they followed the procedure of permitting the fertilization of but a single ovum at a time. Considerations of Jewish ethics would certainly augur in favor of such a method.

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* Maimonides: *Mishneh Torah*, Hilkhot Ishut, 15:1

The primary consideration negating invitro fertilization, at least for the present, is the degree of increased risk of chromosomal abnormalities leading to physical and mental defects that may result when the ovum is fertilized outside the body. It is entirely possible that some aspect of the experimental technique may cause genetic damage. Moreover, it is estimated that as many as a half of all pregnancies are spontaneously terminated by the time of implantation. The mechanism responsible for this phenomenon is not fully known, but there is reason to believe that in many instances this is nature's method of providentially preventing the development of a deformed fetus. Artificial maintenance of the zygote outside the body during this early stage of gestation may prevent the natural elimination of a deformed fetus.

The ethical implications of experimentation which may result in the birth of a defective fetus have been analyzed by a leading bioethicist, Professor Paul Ramsey of Princeton University. Professor Ramsey argues that invitro fertilization followed by implantation is an immoral experiment on a possible future life since no researcher can exclude the possibility that he will do irreparable damage to the child-to-be: "We ought not to choose for another the hazards he must bear, while choosing at the same time to give him life in which to bear them and to suffer our chosen experimentations."

This argument, insofar as it applies to artificial conception, is entirely consistent with the norms of Torah ethics. Jewish law does not sanction abortion motivated solely by a desire to eliminate a defective fetus, nor does it sanction sterile marriage as a means of preventing transmission of hereditary disorders. However, it does discourage marriages that could lead to the conception of such children. The Talmud (*Yevamot* 64b) declares that a man should not marry into an epileptic or leprous family, that is, a family in which three members have suffered from these diseases. This ruling is predicated on a belief that epilepsy and leprosy are hereditary disorders and is obviously a eugenic measure designed to prevent the birth of defective children. It follows, *a fortiori*, that overt intervention in natural processes which might cause defects in the fetus would be viewed with approbrium by Judaism.

Despite the happy initial success in the case of Louise Brown, the first infant born as a result of invitro fertilization, it will require the birth and maturation through adolescence and into adulthood of a significant number of healthy and normal test-tube babies before the technique may be viewed as morally acceptable. When, and if, it has in fact been demonstrated that the procedure poses no risk to the fetus, there can be no objection to the utilization of this technique on the basis of the fact that the original experimentation was morally unconscionable. As observed by Daniel Callahan, M.D., "The history of medicine is full of instances where things were done unethically but led to benefits for people." An obvious example, from the perspective of Jewish law, is that of postmortem examinations which were unwarranted in Jewish law at the time of their performance, but which have led to acquisition of potentially life-saving information. Jewish ethics knows of no *Miranda* principle that would bar the use, after the fact, of information obtained by illicit means.

Establishment of maternal or paternal identity is a complex legal question but does not affect the ethical nature of the procedures in question. The issue is not merely which parent is entitled to a Mother's Day or Father's Day card, but involves questions of inheritance and possible consanguinous marriage. In cases of ovarian or testicular transplants, it seems to be well settled that Jewish law recognizes a filial relationship between the child and the recipient of the organ, rather than between the child and the donor, despite the incontrovertible fact that the gamete reflects the genetic code of the donor. It appears to me that the principles that result in ascription of parental identity to the recipient pertain equally in the case of a transplant between identical twin siblings.

For reasons that are more technical, it appears that the weight of authority would lead to an identical conclusion in the case of fetal transplantation regardless of the state of fetal gestation at the time of transplantation, provided that the fetus has not attained a state of viability prior to transplantation. Although there is some disagreement among the authorities, the weight of evidence adduced from Jewish legal sources serves to establish that maternal identity is established at the time of parturition rather than at the moment of conception. Thus, the host mother who has experienced labor and the pain of childbirth is regarded as the mother in Jewish law.

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* R. David ben Zimra: *Teshuvot Radbaz*, I, no. 695, and R. Eleazar Fleckles, *Teshuvah me—Ahavah*, 1, no. 53.

† Edwards, R, Steptoe, P: *A Matter of Life*. New York, William Morrow & Co., Inc., 1980.

Considerations of Jewish ethics certainly augur in favor of premarital screening to determine carriers of genes responsible for congenital disorders. It must, however, be remembered that Jewish law does not sanction either sterile marriage or abortion of defective fetuses. As indicated earlier, Jewish law would strongly discourage, but would not forbid, marriage that is likely to result in defective children. It would be wise for genetic screening to take place during childhood, prior to the age at which emotional bonds may already have been formed. Disclosure of this information to parents during childhood, rather than to an adolescent or young adult, would serve to enable parents to act in an appropriate manner and minimize the possibility of psychologic trauma.

There may well exist social or psychologic problems which are associated with carrier identification, particularly with regard to Tay-Sachs carriers. Although such problems may be real, they are devoid of either medical or rational basis. There is absolutely no objective ground on which to discourage marriage between a Tay-Sachs carrier and a noncarrier. Of course, on the basis of Mendelian principles, it may be anticipated that 50% of the children of such couples will be carriers. Nevertheless, no medical or psychologic disadvantage is intrinsically associated with the carrier state. Of course, prudence would dictate that a child of a carrier undergo screening procedures and, if found to be a carrier, that he exercise precaution in selecting a marriage partner who is not a carrier as well. The only responsible response to social or psychologic problems that may occur is to eliminate their cause by dispelling apprehension and fear born of ignorance.

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Laboratory conceptions

The problem discussed in the questions and answers section of the *Journal of the American Medical Association* is decidedly not one you hear about every day. It concerns a woman who wants to have a baby despite the fact that her ovaries are barren of eggs.

Would it be feasible, her doctor wonders, to implant in her uterus another woman's ovum that has been fertilized by the sperm of the patient's husband (the patient being the woman who wants a baby)?

Theoretically, this "once removed" fertilization is possible, according to Howard W. Jones, Jr, MD, of Eastern Virginia Medical School in Norfolk, Va, who responded to the question in JAMA. But as far as he is aware, it has never been done and furthermore it presents problems, mainly due to the fact that the woman who wants to become pregnant would need hormone therapy not only before but also after the implantation.

In the laboratory fertilization procedures that have already been done, an egg from a woman's ovary is removed, fertilized with her husband's sperm, and the resulting embryo is implanted back into the woman's uterus. No egg donor is involved.

The first American birth from such a procedure (known as *invitro* fertilization) is expected around January 9. The fertilization took place in a special clinic, set up to help women who are incapable of conceiving in any other way, at the Eastern Virginia Medical School.

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1. *Promoting Health/Preventing Disease. Objectives for the Nation.* U.S. Department of Health and Human Services, November 1980.
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Labeling the Mentally Retarded

Ethical analysis

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From the Office of Health Research Reports, U.S. National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases (NIADDK), Washington, D.C.

In its literal sense, "label" refers to a descriptor that distinguishes a certain group from the rest of humanity.[1] The institutionalized application of a label, as interpreted by Potter[2] a decade ago, is necessary to establish eligibility of those labeled for special treatment conducive to fulfillment of human potential. If neutral and devoid of arbitrariness, such a label may occupy a useful niche in a classification system designed to improve communication, research work, and administrative planning. However, the reception of a label as pejorative by the public at large can lead to stereotypic thinking culminating in "stigma"—a characteristic that devalues individuals and makes them less worthy in the eyes of others.[3,4] Public perception (or misperception) of a given label may result in the assignment of the labeled to segregated lower status or misclassification, depending on the uniqueness of the person(s), his or her social class, and/or the distinctive behavior exhibited. Society reacts differently to the labeled because of perceived violation of social norms and the assumption of a deviant social role.[5] In fact, persistence of a label may so stigmatize the subject as to elicit further neglect from outsiders, and thereby exacerbate any existing impairment of function.[6] In addressing the ethics of labeling the mentally retarded (MR), this essay will seek to maintain the conceptual distinction between "labeling" and "stigmatization." It will also endeavor to keep labeling separate from another controversial procedure, namely, placement of the MR in special classes.

The label "Mentally Retarded" (MR)

The issue of labeling, or even more simply, *calling*, a person mentally retarded remains controversial and of unclear significance. Much early litigation, as well as research in special education, behavioral and social science, particularly that of Ross et al,[7] Dunn,[8] Farber,[9] Hebeler,[10] and Worchel and Worchel,[11] claimed devastating effects of labeling a child as MR. In comprehensive review articles, Guskin[12] and MacMillan et al[13] test the validity of the assumption underlying this claim, namely, that a denigrating label: (1) suppresses performance measures below the level at which a child would score in spite of behavioral limitations that led to his or her being labeled MR, (2) lowers a child's self-evaluation, (3) dampens teacher expectations, (4) incurs peer rejection, and (5) causes difficulties in later adjustment to marriage and employment. Their conclusions will be discussed in a later section of this article. The point here is that, in the past, undue magnification of low IQ test scores engendered the negative attitude that persons thereby labeled MR were unfit for participation in community life. Recently, however, a series of successful court actions affirming the rights of the MR as full-fledged citizens, and increasing pressure for their normalization, have yielded the following revised official definition of MR[14]: "significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period." The adaptive deficits range from development of motor, communication, and self-help skills during infancy and early childhood, to the appropriate reasoning and judgment required to master the physical and social environment during adolescence and adult life. This enlightened definition has helped to create the current climate of optimism with respect to the prospects of the MR for self-realization.

Assessment of human reactions to MR label

If a vigorous delabeling campaign is to be undertaken on a national scale, ethical soundness will require a demonstration that the evils supposedly perpetrated by the labeling phenomenon per se far exceed the benefits wrought by this practice. The instant section will review a representative (by no means exhaustive) body of research data attesting to the effects of MR labeling of children on parents, teachers, college students, peers, the community in general, and the persons labeled themselves.

Reactions of parents. According to Jacobs et al,[15] the "XYY karyotype" label, incriminated in extremely aggressive behavior by retarded males, so frightens parents and generates so much social pressure that it inhibits further investigation into the nature of the condition. However, it was not clear whether this chromosome constitution was related to aggressive behavior or mental deficiency, or to a combination of the two.

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West[16] recounts how a father in New South Wales killed his infant son after being informed that the diagnosis was Down's syndrome.

Siperstein and Gottlieb[17] found that, despite lack of empirical proof, parents believed labeling MR children resulted in increased isolation of the latter from nonretarded children.

Olshansky[18] recorded parental displays of ambivalence, grief, hopelessness, denial, anger, and guilt in response to learning of their child's mental handicap.

Most recently, Rubin and Rubin[19] describe how the manner in which physicians convey the diagnosis of MR to parents significantly influences the reactions of the latter. More than 50% of parents interviewed expressed great distress because their physician had referred to their Down's syndrome baby as a "thing" or "vegetable," "the worst thing in the world," "not worth treating," and so forth.

Reactions of teachers. Maloney and Ward[20] neatly explain how labeling the MR sets up a self-fulfilling prophecy for teachers, who come to entertain presuppositions regarding the academic performance of pupils so labeled. Knowledge of the MR label leads them to expect poor performance, and, hence, they assign such pupils simpler and smaller amounts of learning material, resulting in poorer performance on standard achievement tests. Thus, teachers' knowledge of the MR label diminishes chances of children's intellectual success.[21] On the other hand, as Beez[22] points out, enhancing teachers' expectations for pupil performance induces them to multiply learning opportunities, resulting in increased amounts of material learned.

According to Foley,[23] previous research indicated that teachers tend to retain stereotypes of exceptionality[24] and find the "learning-disabled" label more acceptable than the MR label.[25]

Smith and Greenberg[26] compiled data showing that bias against the lower socioeconomic classes led a large number of teachers to label as MR for school placement a disproportionate number of lower-class children who had demonstrated adequate adaptive behavior in their neighborhoods.

Reactions of college students. In this category, the heterogeneous data comprise a curious mixture of the neutral, negative, and positive. Kirk[27] noted that labels did not greatly affect college students, who were more interested in the overt behavior of the labeled persons.

Aloia[28] showed his students a photograph of a child with physical stigmata, and told one third that the child was MR, one third that the child was normal, and the remaining one third only the child's age. It turned out that the physical stigmata, but not the MR label, had influenced students' judgment of subnormality.

Gottlieb and Siperstein[29] measured student attitudes toward mild and severe retardation. Least favorably perceived were the severely retarded; the mildly were viewed more favorably.

A recent report from Gibbons et al[30] reveals that although student observers believed an unsuccessful MR-labeled girl to be a hard worker, they were not convinced that she had much control over her life. Consequently, this retarded person, relative to a nonlabeled person, received less blame when she failed and less credit when she succeeded. Such treatment exemplifies the practice of "patronization," which inhibits self-development of the MR. Successful outcomes are not expected from individuals thus labeled, hence they are not given commensurate credit when they do succeed at performing a task because the success is believed due to external factors beyond their control.

Farina et al[31] found that psychology students instructed to shock subjects when they made errors in paired learning tasks delivered less intense shocks of shorter duration on being told that the students were MR. This demonstrated an effect of artificially induced beliefs about competence on human interaction, as well as the "sympathy effect,"[32] whereby people tend to accord more favorable treatment to the stigmatized.

Reactions of peers (nonretarded children). Data from these studies are inconclusive because they do not differentiate between peer rejection or acceptance as a response to an MR label or behavior.

Wilson[33] determined that the rejection of retarded children competing for popularity with nonretarded in a regular school environment was not due to the MR label, but to antisocial behavior, such as bullying, fighting, swearing, and so forth. Similarly, Willey and McCandless[34] heard fifth-grade students describe special education children unfavorably, but attributed negative traits (such as bullying and teasing) to normal classmates. Subsequently, Budoff and Siperstein[35] saw low-income children react more positively to normal-appearing nonlabeled children than to MR children.

Videotapes of actors simulating MR behavior have generated considerable information on children's reactions to labeling. Gottlieb[36,37] showed two groups of elementary school children two sets of videotapes. One set depicted hostile behavior and socially acceptable behavior; the other set showed an actor as a respectively competent and incompetent participant in a spelling bee. Half the children in each group viewing the sets of tapes were told that the actor was a normal fifth-grade student, and the remaining half were told he was an MR in a special class. Attitudes measured according to the Social Distance Scale revealed more positive views of the aggressive actor identified as a normal fifth-grade student, but more favorable judgments of competent spelling behavior, irrespective of the assigned label. Foley[23] presented fourth-grade subjects with a videotape depicting academic and social faux pas of a child. He then told different subjects that the child on the tape was either "normal," "MR," or "learning-disabled." The mean scores turned out to be significantly higher for the MR label than for the other identifiers. These findings contradict those of previous researchers.[38–42]

The most recent data on peer acceptance of labeled MR children have been supplied by Siperstein et al.[43] These investigators showed each of 136 elementary school children photographs of spelling-bee participants labeled "competent" or "incompetent," "MR" or "retard," and having either a normal or Down's syndrome appearance. The children responded more positively toward the target child labeled "MR" than toward the one labeled "retard," regardless of academic competence. Boys were extremely negative toward the incompetent and abnormal-appearing target child. They were also adversely affected by the label "retard" and the physical appearance of Down's syndrome, whereas girls reacted neutrally to the incompetent target child when formally labeled "MR" or when physically stigmatized. The investigators theorized that the "MR" label was much more conducive to social integration than "retard," presumably because the former denotes objective aspects of problems, whereas the latter connotes more negative, emotional concerns.

Community Reactions. Here again we are confronted by a nearly balanced mixture of negative and positive findings. Albizu-Miranda and Stanton[44] compared IQ ratings and indicators of economic success for six communities, ranging from rural to urban, in Puerto Rico. Mild MR was not a problem in the more agrarian and peasant-like communities because of the minimal intellectual demands imposed on their inhabitants. As the communities grew more complex, however, increased demands for competency led to labeling and, predictably, the percentage of poor persons among the MR grew consistently larger.

Hollinger and Jones[45] conducted a study in which members of the community attributed poor performance of persons labeled MR to lack of ability rather than to lack of motivation.

Phelps[46] and Mamula et al[47] provide documented histories of negative discrimination against the labeled MR in employment and in the community at large.

Recent studies by Kastner et al[48] and Locker et al[49] (in England) illustrate how members of communities feel threatened by the prospect of a hostel for the MR in their immediate vicinity. Although respondents in the Kastner study showed pronounced negative bias across the questionnaire, those who had had previous encounters with the MR displayed significantly more positive attitudes.[48] The Locker study dealt with organized opposition to the proposed erection of a hostel for the MR in a London borough.[49] This opposition took the form of a petition, public meetings, and repeated attempts to persuade the local authority not to grant planning permission for the hostel. One third of the residents interviewed thought that the hostel would bring advantages to the community in the form of education, awareness of mental handicap, and better understanding of related problems. On the other hand, one fourth of the interviewees speculated that the hostel would have such negative repercussions as anxiety, violence, traffic hazards, and a fall in property values. Moreover, only 25% had a clear idea of "mental handicap," only 39% had heard the term "community care," and 54% felt that such hostels should not be opened without the approval of the local residents. The Kastner and Locker studies illuminate the desirability of fostering more public education and exposure to the MR to encourage more positive attitudes.

To mitigate the predominantly negative reports on community reactions to the MR label cited thus far, reference may be made to the report by Haywood[50] on postschool adjustment of the MR, and to the Justice and Tjossem[51] survey of four cities in the state of Washington. The latter survey revealed the astonishing fact that among 96% of citizens favoring a place for retarded persons in the community, 70% of the community leaders were willing to vote increased taxes for development of special schools, social centers, and supervised work programs, and 84% urged that parents take proper care of their retarded children at home. However, the restrictions imposed by some parents on the activities of their children outside the home magnify the need for remedial programs designed to ensure a richer social life for the MR.

Reactions of MR persons to being labeled. Maloney and Ward[20] identify this area as fertile field for research. At lower levels of intelligence, many MR persons do not know what the label means and implies. Earlier studies of self-derogation among MR children did not take into account prelabeling failures or rejections that might have lowered self-esteem before the subjects were labeled and/or placed in special classes.[52,53] Jones[54] concludes that the majority of those labeled MR prefer to dissociate themselves from the label. Meyerowitz[55] questions whether or not inferential statistics can delineate reliable differences in self-denigration between groups of young labeled retardates and those placed in special classes. Edgerton and Sabagh[56] found that children from minority families of low socioeconomic status frequently deny validity of the MR label. In reviewing data on labeling gathered over a 12-year period, MacMillan et al[13] speculate that an MR child ridiculed by teachers and peers prior to identification may have such a poor self-concept that labeling cannot lead to any further depreciation of self. However, both Maloney and Ward[20] and MacMillan et al[13] conclude that there is no evidence of a direct relationship between self-concept and labeling.

Argument for judicious use of labels

In the judgment of this author, the research findings reviewed here do not justify abandonment of the practice of labeling the MR, for they fail to substantiate the claim that such a practice has "overwhelmingly deleterious effects" on the individuals labeled as well as on the society. Admittedly, the MR label may have evoked negative reactions from certain parents and communities, and mentally retarded individuals may dislike being called retarded, but it would be gross misrepresentation to portray these as "devasting" effects constituting a serious menace to them or to society.

According to Goldstein,[57] labels are, in a positive sense, keys to service, not merely diagnosis. They are also indispensable to classification systems needed as a basis for measuring incidence, prevalence, and the effectiveness of treatment programs. It is of paramount importance to stress the necessity of accuracy in labeling, which, as Potter[2] stated so eloquently, "must always express the contingency of the future."

Perhaps a more palatable substitute for the MR label would be "adaptively deficient" ("AD"). The modern view of mental retardation as a dynamic adaptational disability determined by the complex interaction between the demands of the environment and traits of the whole personality implies possibilities for remedial intervention at different stages of the developmental period. Inasmuch as many cases of mild MR (AD) are environmentally determined, enrichment of the retardate's familial, educational, social, and cultural milieu, in accordance with the principle of normalization, could conceivably improve coping behavior and bring about full personal adjustment. If such an holistic approach is to be effective, it will require patience and cooperation from multiple sources—parents, teachers, friends, employers, and public agencies.

Sagacious counseling of parents could assuage their groundless fears of danger attached to the MR label, and, in a spiritual context, motivate them to care for their children with a love that respects the destiny of the latter for independent existence and the acquisition of proficiency in coping with the demands of everyday living. In Erickson's[58] depiction of emotional development during early childhood, the child initially engages in a struggle to attain autonomy and a sense of self and separateness. The family could support this process by offering an appropriate balance of restraint and freedom facilitating the child's learning to exercise control over "holding on" and "letting go." Also, Coopersmith[59] has described how children raised by parents who make them feel significant and point out their successes tend to develop high levels of self-esteem, advantageous in overcoming negative effects of labels.

Guided by the cardinal ethical principles of respect for persons and justice, teachers could learn to banish their negative presuppositions of inferior academic performance from the retarded (AD) and cultivate a sense of objectivity in prescribing generous amounts of learning material intended to maximize the AD's potential for achieving mastery of the curriculum. Particularly relevant in this context is the "Itinerant Resource Program,"[60] which predicts that AD children will function well in regular classroom settings if the teacher is provided with ancillary resource personnel to aid in diagnosing and prescribing remedies for educational problems. This program is tailored to the individual needs of each child and dispenses with the usual labels of MR, learning-disabled, and so forth.

The original presumption that the social incompetence of retardates is due proximately to subnormal intelligence has been mollified by the current de-emphasis on the low IQ label found in the position statement by the Division on Mental Retardation of the American Psychological Association,[61] which stresses the fact that behavioral inadequacy overshadows the common denominator of low intelligence. This shift in focus from IQ score to social role has generated a more realistic concept of mental retardation reinforcing the justification for replacement of once disparaging and discriminatory epithets by salutary identifiers of human behavior culturally evaluable as different, but no longer "deviant."

In the preceding section, brief reference was made to past discrimination against the labeled retarded persons in employment. Although the improbable conquest of residual intellectual and adaptive deficits does not render the AD promising candidates for the highest salaries in the American labor force, their potential for greater self-realization and attainment of higher levels of competence, as well as fairly recent legislative initiatives, provides cause for reasonable optimism. Specifically, Section 504 of the 1973 Rehabilitation Act launched a primary assault on discrimination against the handicapped by public and private employers. In signing the pertinent regulations on April 28, 1977, then Secretary of Health, Education and Welfare Joseph Califano stated[60]:

> The 504 Regulation attacks the discrimination, demeaning practices and injustices that have afflicted the nation's handicapped citizens. . . . It will usher in a new era of equality for handicapped individuals in which unfair barriers to self-sufficiency and decent treatment will begin to fall before the force of the law.

The Secretary was particularly emphatic about Subsection 84.11:

> No qualified handicapped person shall, on the basis of handicap, be subjected to discrimination in employment under any program or activity to which this part applies.

Proliferation of employment opportunities for, and increased frequency in hiring of, the retarded following passage of this legislation undoubtedly contributed to enhanced efficiency of the American work force. According to Zigler,[63] motivation has superseded cognitive ability as the critical determinant of the AD's success at his or her chosen occupation. This is consistent with the earlier observations of Sali and Amir,[64] who found that perseverance transcended other personality characteristics in relation to performance level of retarded persons in the Israeli work force.

Response to critics of labeling

Many investigators cited in this essay convey the impression that they would be much happier if the formal agencies charged with labeling the retarded were to cease and desist from following such a practice. This author cannot agree, simply because he does not believe that the weight of the material reviewed sustains the thesis that labeling has overwhelmingly devastating effects on the retarded and on the society of which they are a part. Irrational fears of parents and threats imputed by communities to the current MR label could be remedied by extensive public education and counseling from various sources. Further, the comparatively small number of recorded negative reactions by nonretarded children were largely linked to antisocial behavior and unsightly appearance rather than to the label itself. To reiterate Potter,[2] accurate designation of the retarded acknowledges them as special persons eligible for special assistance from society. In addition, retention of such formal designations by responsible institutional officials is essential to planning and evaluation of treatment programs. Most important, the labels are essential to communication within and among disciplines, without which our contemporary society could not operate.

The recently revised definition of mental retardation conveys the remedial prospect of harmonizing the demands of a complex environment and traits of the whole personality.[14] It also justifies replacement of the anachronistic MR label by "AD," implying prospects for the fullest possible participation in the life and work of the community. Maximal self-realization of the AD will depend on a steadfast commitment of parents, teachers, friends, employers, and public officials to the time-honored values of respect for the dignity of persons, fairness, equality, autonomy, and compassion.

Some public policy considerations

The positive labeling and support strategies advocated for the AD in this essay are intended to maximize potential for human development and concomitant benefits for society. Normalization and progressive humanization of treatment of the AD should lead to minimal use of the traditional IQ test as a yardstick of social value. As Judge Peckham has stated, the history of the application of this test involved a scientific "mystique" to legitimate prejudices against certain groups that differed from the rest of humanity.[66] Unfortunately, enlightened public policy toward the AD will not arise from the body of research data on labeling. To the contrary, viable public policy will be based on the truth that emerges from the outcome of confrontation between values. Accordingly, more financial resources should be allocated toward monitoring programs for the AD in family, school, employment, and community settings. Results of such an enterprise should then enable administrators rationally and prudently to establish priorities in the interest of a coherent national policy.

Summary

Review of a representative body of research data concerning the effects of the mentally retarded (MR) label on parents, teachers, college students, nonretarded children, communities, and persons labeled fails to support the extravagant claim of other investigators that the labeling process has "overwhelmingly deleterious" effects on the individuals labeled as well as on society. Negative reactions to labels could be minimized by extensive public education and by counseling from various sources. Labels should be retained as formal instruments essential to establishing the eligibility of the retarded for special assistance, and for maintenance of communication within and between disciplines, without which contemporary society could not operate. An argument for the judicious use of labels is fashioned, recommending replacement of the MR label by "AD" (adaptively deficient), in keeping with the modern view of mental retardation as a psychosocial challenge de-emphasizing IQ and requiring complex interaction between environmental demands and traits of the whole personality, such as coping skill and motivation. Parents, teachers, friends, employers, and public officials could support the AD's struggle to maximize self-realization and participation in community life through commitment to the enduring values of respect for human dignity, fairness, equality, autonomy, and compassion. As a result of monitoring the success of such programs in all settings, public policy administrators could formulate rational approaches to improvement of service programs in the national interest.

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Children's Thought and Language

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What is the relationship between human thought and language? By 1920, when Piaget and Vygotsky were just beginning their research studies of children, this question had been addressed by the various schools of psychology that were popular at the time. Each school had a different answer. For Watson, the spokesman for behaviorism, thought was equated with inner speech. Gestalt psychologists posited that thought consists of structured wholes, which are innate and not dependent upon language. Freud and the psychoanalysts discussed two types of thought, primary and secondary process, which were said to be characteristic of infancy and adulthood, respectively. The role of language was not specifically addressed in Freud's account. Thus psychology, like philosophy before it, had not reached a consensus on the nature of the relationship between thought and language.

Although Piaget's *Language and Thought of the Child*[1] and Vygotsky's *Thought and Language*[2] did not, once and for all, settle these issues, they offered a perspective on the question that is still in vogue in psychology today. Piaget and Vygotsky each believed that if psychology were ever to understand the nature of the relationship between mature thought and language, it must study their growth in the period between infancy and adolescence, ie, during childhood.

Prior psychological research on children's language acquisition had focused on quantitative differences among children of different ages, such as word counts and vocabulary skills. Implicit in this work was the notion that children's thought and language differ from those of adults in degree only. Piaget and Vygotsky wondered whether children's thought and language differed from adults not only in degree but also in kind. That is, perhaps childhood has its own unique style of thought and language.

To investigate this hypothesis, Piaget and Vygotsky studied children's use of language, a topic that had been overlooked by prior researchers. Their early books present, in particular, findings on how children of different ages conduct conversations, form concepts, and solve problems. The authors observed that language did indeed serve different functions in childhood than in maturity, and they described the role of other persons (parents and peers) in the growth of thought and language in children. This article summarizes and compares Piaget's and Vygotsky's developmental perspectives on thought and language.

Piaget

Language and Thought of the Child was Piaget's first book on child psychology. Of his early work, Piaget later wrote that he had at last found his field of research. His aim of discovering a sort of "embryology of intelligence" fitted in with his earlier biological training. The text of *Language and Thought of the Child* consists of a collection of observations on children's use of language in the company of other children at school, a naturalistic setting. At the outset of the work, the various functions served by children's language in spontaneous conversations were classified into two main types, socialized and egocentric. The major difference between these two types is that in socialized speech the child's remarks take the audience into consideration, whereas in egocentric speech the child does not consider the other person's point of view.

Five categories of socialized speech were identified: adapted information, a true exchange of thoughts with another; criticism, remarks made about another's behavior; commands, requests, and threats; questions; and answers. Three categories of egocentric speech were identified: repetition (echolalia), the child repeats words for the pleasure of talking but is not attempting to communicate; monologue, child talks to himself as if he were thinking aloud; and collective monologue, another person is associated with an action or expressed thought, but is expected neither to attend nor to understand. Piaget found that approximately 40% of the conversational speech of four- to seven-year-olds was egocentric. By age eight, nearly all spontaneous speech was social rather than egocentric.

The additional chapters of *Language and Thought of the Child* as well as its companion volume, *Judgment and Reasoning in the Child*,[3] showed that older children's speech (ages seven to twelve) also had an egocentric quality in settings that were not spontaneous and dependent upon verbal response from another person. For example, when Piaget told a story to one child and asked him to relate it to a second child (parents and teachers might recognize the "telephone game"), or when he asked children to select a sentence that best expresses the meaning of a proverb such as, "When the cat's away the mice will

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play," results showed that much of a child's verbal understanding and explanations were not truly social but egocentric.

Employing these findings on children's use and understanding of language to describe the nature of their thoughts, Piaget maintained that egocentrism is a state of development in the growth of children's thoughts, which is reflected in their use of language. In looking back at this early work, Piaget criticized his methods as being too dependent on language.[4]

Whereas infants were described (by psychoanalytic theorists) as "autistic," ie, irrational, self-centered, unsocialized beings, and adults were described as rational and social, children were said, by Piaget, to be egocentric. Egocentrism refers to a cognitive inability to differentiate one's own perspective from that of another. Piaget pointed out that adults think socially even when alone, whereas children think individually even in the company of others. Thus, egocentrism represents a stage of intellectual development midway between infant autism and the logical thought of adulthood. It is a stage in which a child's mind is qualitatively different from the mentality of both the infant and the adult. This theme broke important new ground in psychological accounts of intellectual development.

In later works Piaget noted that an initial failure to differentiate points of view is not peculiar to children's use of speech or even to children; it is a characteristic of the development of knowledge in general. For example, geocentrism was a theory of planetary motions that was too tied to man's own perspective on the universe. Thus, both the growth of intelligence in the child and the growth of ideas in science may be described as a movement from individualistic to relative viewpoints.

In *Language and Thought of the Child* Piaget did not examine the origins of childhood egocentrism, but he did speculate that social experiences, which of course rely heavily on language, play an important part in facilitating the shift from egocentric thought to logical thinking, in which another person's point of view is considered. Piaget did not suggest that children were taught how to think and speak rationally instead of egocentrically. In fact, he argued that situations in which children interact with other children, rather than with adults, are especially important for intellectual growth. For the egocentric child thinks, talks, and acts as if others could read his mind. Adults often perpetuate such tendencies by responding to egocentric messages as if they were truly communicative and by anticipating what a child intends to do before any signs of the intention are given. A fellow child, in contrast, does not respond "appropriately" because he, too, is egocentric and does not understand the original "message" or intention.

Piaget speculated that children come to realize that there has been a failure to communicate, based upon their interactions with other children. With this realization attempts are made to consider—even to anticipate—viewpoints other than one's own and to speak accordingly. Open-ended social exchange among peers, then, was posited as an important factor in the growth of thought and in the use of language. Although Piaget did not offer data to support this view until 1932, when he compared child-child to child-adult relationships,[5] this idea constitutes the second major theme of his early work. In his later studies of adolescent thinking Piaget allowed that once past the stage of egocentrism, further development of thought to the level of abstract reasoning may be dependent upon one's command of language.

Vygotsky

Thought and Language was first published in the Soviet Union in 1934, soon after Vygotsky's death from tuberculosis at age 38. The book presents a summary of ten years of Vygotsky's research and analysis of the relationship between thought and language which, in part, contrasted his ideas with those that Piaget had presented in *Language and Thought of the Child.* (It has recently been suggested that *Thought and Language* should have been translated as *Thought and Speech.* In other words, Vygotsky was interested in speech, not language.[6])

Vygotsky applauded Piaget's research on children's thought and language. He felt that egocentric speech was an important phenomenon, which prior investigators had overlooked. Vygotsky agreed with Piaget that there are qualitative differences between children's and adults' use of speech, with egocentric speech being an intermediate or transitional level of development. However, unlike Piaget, Vygotsky did not believe that egocentric speech suddenly disappeared in late childhood.

Vygotsky maintained that Piaget misunderstood that significance and eventual fate of egocentric speech because of his initial assumptions taken from psychoanalytic theory. That is, Piaget assumed that intelligence begins in the individual level of autism and grows to the social level of rationality in a psychoanalytic sense. Vygotsky argued that the direction of intellectual development went from social to individual, rather than vice versa: early forms of thought and speech are first performed in a social context, and only later are they used on an individual basis. Once mastered on a social plane, psychological functions are gradually transformed (internalized) to an individual plane.[7] Thus, Vygotsky saw egocentrism as marking the shift from social to individual intelligence. Since he read Piaget's egocentrism as an individualism that preceded social relations, he felt that Piaget's account went in the wrong direction and was contrary to the facts.

On the development of thought and speech, Vygotsky adhered to the view that in the adult the two are closely connected. However, he maintained that it is important to realize that the connection of thought and speech is not primary in that it does not always exist. The crying and babbling of human infants, or the mindless chatter of a parrot, show that there is a preintellectual phase of speech. That is, there are forms of speech that are unconnected to thought. On the other hand, the insightful problem-solving behaviors of chimpanzees, and the similar types of practical intelligence evidenced by human infants, show that there is a prespeech phase of intellect. That is, there are forms of thought that are not dependent on speech. Thus, in the evolution of species (phylogenesis) and in the growth of the individual (ontogenesis), thought and speech have independent origins. From this assumption Vygotsky proceeded to describe and explain the merger of thought and speech during ontogenesis.

In infancy and early childhood, the early forms of thought and speech are manifested and perfected on a social plane, in the company of more competent others, such as in parent-child interactions. The early forms of children's speech are social in that they serve a communicative function. As for the early forms of thought, Vygotsky indicated that parents often serve as monitors as they assist and direct their child's problem-solving and goal-directed behaviors. Note that speech is the primary mechanism used by adults to monitor a child's behavior.

These independent capacities for speech and thought are each slowly perfected during the early years. More importantly, as a consequence of social experiences with parents, speech and thought are also gradually integrated into one psychological function (rather than remaining separate). Specifically, children begin to use speech not just to communicate with others but also to monitor their own goal-directed behavior. That is, children begin to use speech in the service of thought rather than rely on adults to guide their thoughts and purposeful actions.

Vygotsky's research identified three stages in this process of the merging of speech and thought. At first, speech merely follows a child's purposeful actions. Next, speech accompanies a child's actions (This is the egocentric speech that Piaget described.) In the final stage, speech precedes actions and serves to organize them ahead of time. At this point, speech "goes underground;" it is no longer egocentric but becomes inner speech. Egocentric speech is the first form of speech in the service of thought. When it becomes internalized as inner speech, the shift from the interpersonal to the intrapersonal plane of functioning is completed.

The fate of egocentric speech is thus clarified in Vygotsky's account. It becomes inner speech, which differs from social speech in both structure and function. Whereas the function of social speech is communication, inner speech serves as the individual's own tool for thought. As such, the structure of inner speech is abbreviated and telegraphic in comparison to social speech. To document these points, Vygotsky cited the results of research on children's problem solving. In one type of study, a child's preferred method of attaining a goal was blocked. Such impediments resulted in an increase in the frequency of egocentric speech. That is, with normal functioning impeded, children needed to externalize inner speech—to speak egocentrically—until an alternative solution was found. Thus, egocentric speech does not disappear as Piaget had implied. It can be made manifest by interference with functioning that would normally rely on inner speech.

Unlike Watson, Vygotsky did not equate thought with inner speech. The two functions have independent origins and remain distinct. Even after being merged, thought and speech were likened to two overlapping, not coincidental circles. In the final chapter of *Thought and Language* Vygotsky described the dynamic ebb and flow between the "two circles" in childhood and adulthood. For example, he points out that in the child, a single word often expresses a complex thought, whereas in the adult several sentences are often used to express a single thought.

The legacy

The table summarizes a few points of comparison between Piaget and Vygotsky on children's thought-and-language development. Although this table emphasizes the differences in their views, these differences are, to some extent, more apparent than real. Note that Piaget said very little about child-adult relations (eg, children's use of language in the company of their parents and teachers), and he chose to ignore the 50% to 60% of the time when children's use of speech in the company of their peers was social rather than egocentric. By focusing on egocentrism, Piaget may have underestimated children's cognitive abilities. However, in the early 1920s, the idea that children's thought is qualitatively different from that of adults was new and merited emphasis. Conversely, Vygotsky focused on child-adult relationships and said very little about child-child interac-

Comparison of Piaget (1923) and Vygotsky (1934) on the Development of Thought and Language

	Piaget (1923)	Vygotsky (1934)
Sequence	individual-egocentric-social	social-egocentric-individual
Key social relationship	child-child	child-adult
Language-thought relationship	structure of thought determines use and understanding of language	dynamic and changing; from relative independence in early childhood to merger and integration in adulthood
Major focus	cognitive competence; nature of egocentrism	cognitive performance; uses of speech

tions. In so doing, Vygotsky surely missed an important part of children's lives and may have overestimated their cognitive competencies.

In a broader context, there is a basic similarity between Piaget and Vygotsky's views that tends to overshadow the points of contrast. Piaget and Vygotsky were at the forefront of a movement in psychology that recognized that both sides of the nature-nurture controversy were too simplistic to account for change and growth of human abilities. According to the nature or nurture view, a human ability such as language had to be innate and unfold in a maturational fashion or else it had to be acquired on the basis of experiences via processes of learning (conditioning, imitation, and so on). Without denying that either innate ability or maturation and learning are necessary components of the growth of thought and language, Piaget and Vygotsky argued that they were not sufficient.

Although the relationship between human thought and language has yet to be fully unraveled, Piaget and Vygotsky did shed light on its early stages. Their work led to a focus on children's active involvement in the growth of their own intelligence. For although heredity provides potentials and possibilities, it is up to the child to realize them. Similarly, although the environment attempts to provide ready-made answers and solutions, transmission of information or knowledge is rarely smooth or automatic when children are the pupils. Besides, what adult teaches a child to think or speak egocentrically? Since egocentric speech is apparently not acquired through imitation or direct instruction, is it innately given? The latter explanation also seems unlikely, for if egocentrism is innate why does it take so long to become manifest and what causes it to wane?

Piaget and Vygotsky pursued the idea that the growth of thought and language separately and in the service of each other involves a process of change that is more than a matter of maturational unfolding (nature) or mechanical and rote learning (nurture). In the case of human beings, the child himself orders and regulates the contributions of his maturing native endowments and of the environment. This process of change is called development.

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Health risk seen in children sedated for CAT scans

Youngsters sedated to keep them still during a CAT scan have developed serious, and in some instances life-threatening, drug-induced reactions.

In a collaborative study of Boston-area pediatric patients, researchers at Harvard Medical School and Boston University School of Medicine found that 13 of 106 children who were sedated prior to a CAT (Computed Axial Tomography) scan of the head developed adverse reactions. The risk appeared greatest when multiple drugs and high doses were used in combination, although the youngest infants reacted severely to normal doses of a single drug.

Allen A. Mitchell, MD, director of the Pediatric Drug Surveillance Program run by the two Boston schools, was principal investigator for the study, which appears in the May 7 *Journal of the American Medical Association.*

The CAT scan itself involves only a low dose of radiation but, as the Boston study shows, drugs used to keep the young patients motionless during the 15 to 30 minute procedure caused a wide range of problems from vomiting to life-threatening respiratory arrest. Children with more severe reactions required treatment with another drug to reverse the effects of the narcotics. There were no fatalities, however, and no apparent long-term consequences.

The children who developed adverse reactions to the premedication ranged in age from two days to 15 years and received up to five drugs in combination. Life-threatening events occurred in only the four infants younger than three months. Two of these infants received only single injections of morphine.

"We're not suggesting that CAT scans be avoided," Mitchell said in a separate interview. "The CAT scan is a noninvasive procedure that we've found invaluable in assessing problems like congenital malformations, brain tumors and injuries to the head. It is more accurate and less traumatic than older diagnostic techniques it replaces.

"What's important is choosing the right drugs and dosages for sedating the youngsters before a scan and then carefully watching them for signs of reaction both during the scan and afterward on the hospital ward," Mitchell concludes.

Professional Liability Insurance and Practice of Medicine

For survival, physicians must become part of process

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Without fundamental reform in the present tort law/medical liability insurance system in the State of New York as recommended by the McGill Commission in 1975,[1] the best of medical practice has become an uninsurable risk. As predicted, this system has broken down and insurance costs have risen to unacceptable levels. This may be why, with almost 1 billion dollars in reserves, the present Mutual Medical Liability Insurance Company cannot survive without a huge annual increase in premiums,[2] or without debasing the quality of the insurance offered.[3,4] Since the system gradually grew into the mess it is now in, the motivations of the various parties that made it what it is today should be reexamined.

Adequate Insurance

Considering the present difficulties of the companies offering professional liability insurance in New York today, physicians who feel that they are adequately protected may be greatly mistaken. The reality is that this "protection" may be illusory. Not only are the companies themselves in danger, but, because of that, each of their constituent members is as well! The professional and economic insurance dimensions of medical practice have become inextricably entwined. Indeed, in some hospitals physicians are not permitted to practice their profession without proof of adequate insurance coverage . . . often in the maximal amounts available.

In today's climate the prudent physician will not practice medicine without the economic protection of professional liability insurance. Based on a five-year experience, no professional liability company can continue to exist without the ongoing personal involvement of the insured physicians in the process of professional risk and loss avoidance. The physicians and the insurance companies have become a symbiotic team, dependent on each other for survival. The importance of this obvious de facto relationship seems to have been poorly appreciated by both the individually insured physician and by the insuring companies.

Hippocrates once said, "Medical diagnosis is always difficult; the results of medical treatment always uncertain." The motivation of attorneys in the professional liability world is obvious. They regularly continue to exploit the admitted uncertainties of the very best of medical practice and grow rich in the process. For a contingent legal fee that is sufficiently large to make the attorney a litigious partner and an important beneficiary to the patients' monetary awards (one-third to one-half, off the top), they are highly motivated to protect the rights of their clients and provide access to the court house for them.

Incompetence v indifference

But patients themselves are sometimes motivated to sue when they think they may have been made to suffer unnecessarily through what they perceive to be either indifference or incompetence on the part of their physician. If I am seriously disabled, they reason, it must be the physician's fault; a type of *res ipsa loquitor* logic. They are actually incapable of recognizing true professional *incompetence*, but almost anyone can perceive physician *indifference*.

Therefore, it is my belief that more often than not litigation is engendered by the patient's perception of physician indifference. The attorney routinely further alleges physician negligence and incompetence; he then attempts to prove it to a lay jury of men and women of average medical ignorance by testimony of "medical experts" who are paid by, and are "friendly" to, the plaintiff.

It has been charged that liability insurance does nothing less than protect and perpetuate the practice of some "suit-prone" practitioners. Although they often are not negligent and incompetent, these unfortunates are frequently aloof, scientific, and apparently unfeeling. They have never learned the importance of a close personal relationship with their patients. When the results of treatment are satisfactory, there is no patient complaint. But when adverse medical results occur, it is then that the patient remembers that the physician was inaccessible, flippant, insensitive to their fears, anxieties, time, and money, and also lacked sufficient empathy or sympathy when it was most needed by them.

Physicians ought to care *about* their patients as well as caring *for* them, and most do. But for pragmatic reasons physicians must also be concerned with avoiding risks and losses in professional medical liability insurance—if not on humane, ethical, and moral grounds, then on materialistic ones, if that is the only thing that will appeal to them. It actually has become a matter of professional survival. The ultimate dilemma for physicians still remains: if there is no insurance protection, there will be no medical practice. The unavailability of such insurance in the early spring of 1975 almost terminated medical care in New York City.

By obtaining the physicians' concern, cooperation, and active participation in avoidance or risk and losses due to professional liability on an ongoing basis, some, if not many, suits could be avoided with considerable savings in money. Offering the type of insurance that makes the practitioner an active partner with his insurance company on a year-round basis might provide sufficient motivation, a sort of contingency arrangement between the insured and the insurance company. A coinsurance policy (as is presently available in other types of coverage) might spontaneously generate or force physician concern, cooperation, and involvement. The following will demonstrate how such a plan might work.

Method

A policy with a coinsurance clause for the first $40,000 lost would be offered without an increase in premium for any physician in Insurance Class No. 8.* The physician would be held liable for 5% of the first $10,000 awarded ($500); 10% of the next $10,000 of the award ($1,000); 15% of the third $10,000 lost ($1,500); and 20% of the fourth $10,000 awarded ($2,000), for a total maximum coinsurance liability of $5,000 in any one premium year. The company would pay all other costs, including all legal fees; losses in any one year for any single physician would be limited to his premium payment plus the additional $5,000 in coinsurance at risk should that become necessary. But *if no losses occurred for any three years in a row, the fourth year's premium would be free.* An appropriate schedule could be worked out for each of the insurance classes or specialties.

Comment

A coinsurance form of insurance seems more appropriate than, for example, a deductible type of insurance, popular in present automobile insurance, because the coinsurance risk necessarily involves the insured more closely and personally in the inevitable decision to settle or not settle a case for a limited sum. The physician would be involved in the risk-reward changes of pursuing the matter to trial. In this situation not only is the physician importantly involved in evaluating the merits of the patient's allegations and case, but he also would be importantly involved in at least the initial cost of the settlement.

Limited coinsurance would reward physicians who are careful and perhaps lucky enough to successfully avoid suits and settlements, and it might actively involve physicians in helping to elude avoidable suits; those who did not would be penalized. The avoidance of suits would then be of interest and concern not only to the insurance carrier (as it most certainly is at present), but to the insured physician as well. It might force a marked change in some physicians' present attitudes.

To be effective, avoidance of risk and loss in medical liability insurance would require an ongoing medical, as well as legal, education, coaching, and indoctrination. The less than enthusiastic response of the medical profession to recently offered courses on "How to Avoid Professional Liability Suits" indicates a lack of proper motivation. The courses are legalistic and boring, but a potential monetary reward through premium savings might change the present complacency and/or indifference. Thus, liability risk and loss avoidance would be a matter of self-serving self-interest. Beyond that, however, it would be a mandatory requirement by the insurance company for those who wish to avail themselves of limited coinsurance and its potential savings in premiums.

Although it may be somewhat uncomfortable for physicians to contemplate becoming part of the ongoing process of risk management, it seems essential for the potential success of such an arrangement. It may in fact be one of the few alternatives left for the survival of the insurance company, the individual practitioner, and the practice of medicine! The only real and permanent solution to the risks of medical practice in the present state of the art is to effect legislative changes in the medical liability tort law system. This is essential if the people of the State of New York are to continue to benefit from the high quality of medical care they presently receive at a still affordable cost.

Summary

We physicians must realize that we can no longer afford to pay an annual insurance premium and then walk away from the problem of maintaining the solvency of the insuring company. We have become mutually dependent; therefore, at least for the present, the physician who pays the premiums for medical liability insurance must also become part of the ongoing process of insurance risk and loss avoidance.

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* Class No. 8 presently pays about $5,000 in annual premiums for one third of $1 million coverage in the New York City area.

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Gains in physician population in four western states foreseen

Four western states registered the greatest percentage gains in physician population during 1981, according to preliminary figures released by the American Medical Association.

Although the figures will not be finalized until all the data on individual physicians from the practitioners themselves and from various organizations are cross matched, some significant trends already have become evident.

If the latest figures hold, as they are expected to, Nevada will lead all other states with a 10.3% increase in its physician population over a year ago, followed by Wyoming (8.2%), Alaska (6.9%), and New Mexico (6%).

Since 1970, the physician population has more than doubled in Nevada, Alaska, and Arizona, and it has nearly doubled in Florida.

The total number of physicians in the United States at the beginning of this year, according to the preliminary data, reached an all-time high of 482,900 — some 15,000 more than a year earlier.

Nearly half of the 386,000 practicing physicians — as opposed to those, for instance, in teaching or research — are involved in delivering primary care. Of these, internal medicine leads all other fields with some 74,000 physicians, followed by family practice and general practice, each with slightly more than 30,000 physicians; pediatrics with 29,000; and obstetrics and gynecology with nearly 27,000.

The remainder are spread throughout more than 30 specialties from aerospace medicine with 630 physicians, to urological surgery with 7,800 physicians, according to the preliminary figures.

Large increases in the number of physicians from 1970 through 1982 have been noted in four specialties. Diagnostic radiology registered the largest increase — more than 320% — during that period, followed by gastroenterology (116%), neurology (97.5%), and therapeutic radiology (97%).

California continues to have the largest physician population with slightly more than 63,000, a lead it has held at least since 1975. New York with 50,770 physicians and Texas with 25,270 follow in the ranking.

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IS OBESITY A GENETIC DISEASE?

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Obesity is one of the most common "nutritional" diseases in Western society. With rare exceptions, the proximate cause is energy imbalance. It must be admitted that our society fosters such imbalance, for food is abundant, and palatable, and readily obtainable (hence the name "fast foods") for the vast majority of our citizens. The modern situation is compounded by our sedentary life-style and lower energy need of our population with its increasing proportion of elderly. Given this conducive environment, one may well ask why more of us don't get fat. The fact that most of us do not points to some inherent feature of the individual as being of critical importance.

There is a considerable body of data which suggests that a tendency to obesity is inherited. Even the most casual observer cannot fail to notice family resemblances in body size and configuration. Family groups at church picnics, eating in restaurants or attending sports events give a clear indication of "togetherness" for many physical attributes. Then if one considers various mammalian species, it is obvious that body fatness varies: contrast the horse and the pig; the greyhound and the bulldog; the seal and the shark. By determining the body-fat content in 49 species of free-living mammals, previous workers found considerable interspecies variation.[1] Carcass analysis showed that 34 species had less than 11% body fat, 10 had 11-20% fat, and the remainder more than 20%. Another study analyzed a number of newborn animals and here, too, there were species differences, ranging from about 1.5% fat in the rat to 16% in the human, with intermediate values for the pig, cat, rabbit, mouse, seal, and guinea pig (10% fat), the fattest of the sub-human mammals which were studied.[2] It turns out that man ranks among the fattest of mammals!

Young adult males contain 15-20% fat and the females 20-30%. The existence of a sex difference in body fatness, even in the human newborn, points to the influence of the sex chromosomes.[3]

Since animal species breed true, one cannot escape the conclusion that body fatness is inherited. Such is also the case, at least in man, for characteristics as stature, bone cortex thickness[4] and muscle strength.[5] The question of interest, however, is whether obesity *per se*, i.e., supranormal fatness, is inherited. Several lines of evidence can be brought to bear on this question.

Evidence from Animals

A number of hereditary syndromes have been identified in mice and rats. Most are associated variably with hyperphagia, diabetes, inactivity, infertility, hypercholesteremia and poor resistance to cold, in addition to obesity.

The autosomal recessive syndromes include the ob/ob, the db/db, and the ad/ad strains of mice, and the Zucker rat; dominant inheritance occurs in the lethal-yellow, and two viable-yellow mouse mutants, and it is of interest that the degree of obesity is proportional to the number of yellow hairs present.[6,7]

Through selective breeding experiments carried out over many generations in mice, it has been possible to segregate "large" and "small" groups of animals.[8] The former are 1-1½ times larger and 3 to 4 times fatter than the latter group with no difference in food efficiency. When the fertilized egg from animals in one group is transplanted into the other, it turns out that the offspring genotype is more important in determining body size and fatness than is the foster mother's genotype. There are also strain differences in the adipose response of rats to high-fat diets.[9]

Evidence from Man

Family resemblance in body size and adiposity has been noted in the literature. According to one study, in the absence of parental obesity, the incidence of obesity in their children was about 14%; if one parent was obese, this rose to 40%, and if both were obese, it was higher yet (80%).[10] In another, the values were 5%, 19%, and 32% respectively.[11] Still another study found steadily rising values for abdominal skinfold thickness as parental fatness combinations proceeded from lean x lean to obese x obese.[12] The present author's experience (unpublished) with 46 obese children seen in consultation showed that 33 of their 86 parents were obese, and only 8 were slender. Based on triceps skinfold thickness, siblings of obese children tend to be obese themselves, and siblings of thin children tend to be thin.[13]

It must be admitted, however, that such data do not prove the genetic hypothesis since close members of a family share a common environment. Indeed, it has been shown that husband-wife pairs do tend to resemble each other with regard to triceps skinfold thickness; however, the fact that this tendency was also manifest in younger couples indicates that assortative mating may have been as important as a shared environment.[13]

While it is not possible to do the type of breeding experiments in man that have been carried out in animals, observations on twins and adoptees can provide some insight.

Studies of Twins

Monozygotic twins share common genes, whereas dizygotic twins are comparable to ordinary siblings in this respect. Monozygotic twins (MZ) are more concordant for body size in man than dizygotic twins (DZ) of the same sex[6,14,15] as the elegant photographs by previous workers have clearly shown.[16] In answer to the argument that most pairs of twins share the same environment, MZ twins reared apart are more concordant than DZ twins for body size. One study found that heritability of skinfold thickness was greater for older child twins than for younger.[17] This suggests that environment (household-feeding patterns) played an important role in the younger child, while eventually the child's genotype becomes pre-eminent.

Another way to approach this question is to study *adopted* children: do they resemble their biological parents or their foster parents in body size? Here the evidence is conflicting. One study found that the correlation of child size with that of the biologic parent was significant, while that for the foster parent was not.[18] Another study claimed that infants reared by obese foster mothers were fatter than those reared by nonobese foster mothers, but close inspection of their data shows that this was true only for certain periods of the first year; at one year of age there was no difference.[19]

On the other hand, the abdominal skinfold data from a third study show the same trends for foster parent-child relationships as those for the biologic parent-child: triceps skinfold thickness progressively increases as foster-parental combinations move from lean x lean to obese x obese.[12] However, in this study no data were available on body fatness for the biologic parents of these adoptees, and if perchance the foster parents were selected by the adoption agencies to mimick the biologic parents, the described foster parent-child relationship cannot be used in support of the environmental hypothesis. In a study of 256 families, it was concluded that while height and weight showed significant parent-child correlations, body fatness did not.[20] A later study which purports to show insignificant heritability for percent overweight is marred by reliance on history rather than actual measurement and by lack of distinction between foster and adopted children.[21]

Although published only in abstract form, there is one report of histocompatibility leukocyte antigen types in obese children.[22] HLA B13 antigen was found to be more common in those who had a family history of obesity than in those who did not.

Obesity a Disease of Appetite

Eating behavior can be broken into two components, namely, hunger, a physiological phenomenon, and appetite which is a psychological one.[23] Since obese individuals eat in excess of physiologic need, it is the appetite mechanism which is at fault. Incidentally, the very sedentary life-style of many obese individuals does not invalidate this premise. The frequent claim that obese people do not eat to excess has been nicely put to rest by direct observations of home eating patterns: In two sibling families, the fatter sibling did eat more.[24] Thus one must view obesity as a behavioral disorder and can look for evidence for inherited tendencies of other types of behavior. While an extreme example, schizophrenia is known to be genetic, but the same is true for alcoholism,[25] for depression[26,27] and for disturbed behavior.[28] Indeed, a positive family history is one of the criteria used in the diagnosis of depression. Is it so far fetched, then, to assume that eating behavior is also inherited?

The Hypothesis

The United States produces more food than its citizens can consume, and it is this surfeit which makes possible their generous food intake. For the first time in the history of mankind, Western society has an abundance of palatable food at its disposal. The contribution of palatability is nicely shown by experiments in which laboratory rats did gain weight when given free acess to highly palatable foods, only to lose it again upon resumption of a chow diet.[29] Why, then, don't all of us get fat? The present author's thesis is that appetite control is an important factor and that this is faulty for some of us.

Based on the available evidence from animals, including species differences, and from man, it is evident that the tendency to obesity is inherited, and that the gene(s) responsible find expression through modern food abundance. Indeed, "We need not argue any more about whether genes play a significant role. They do."[6]

The mechanism(s) through which the genes (the evidence best fits a polygenic model) exert their influence remains to be elucidated. Does the increased appetite represent a means of coping with the vicissitudes of life – a response to frustration, to feelings of inadequacy? Is eating the prime source of pleasure for some people? Whatever it may turn out to be, the mechanism is obviously a powerful and persistent one, for obesity once established is very resistant to treatment.

Many conditions result from an interaction of genes and environment. Susceptibility to dental caries (a familial trait) is best expressed by frequent consumption of fermentable carbohydrates. Scurvy, which is commonly considered an environmental disease, would not occur were it not that mankind lacks the gene for synthesis of ascorbic acid. Galactosemia, which is classed as a genetic disease, would not occur if our diet did not contain lactose (incidentally, the milk of the sea lion lacks this carbohydrate).

Does the genetic hypothesis of obesity lead to fatalism? We accept the fact that many conditions have a genetic basis – arthritis, diabetes, idiopathic scoliosis, congenital hypertrophic pyloric stenosis, to name but a few – yet this has not forestalled the search for effective treatment and/or amelioration of these conditions. Rather, in the knowledge that we can identify those individuals who are at greatest risk for obesity, we must redouble our efforts to better understand the basic nature of the transmitted influence, and build on this information to hopefully devise better methods of treatment and of prevention.

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These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

health issues of the 80's

competition

The word "competition" applied to the health care delivery system may be perceived as an anathema by some physicians who, in the past, have equated the concept of competition with high-pressure, wheeler-dealer business rivals. Or competition might have evoked thoughts of Olympic contestants, honorable orators, or chess champions. But the phrase, "competition in the medical care marketplace," until recently, was not often used.

Today, competition forms the cornerstone of some legislative and administrative proposals aimed at reducing health care utilization and, consequently, reducing costs. The premise, like many economic concepts, seems simple: if patients (the consumers) have greater participation in choosing from among several health care plans with different costs and different benefits, they will select appropriate plans and use services more prudently. Included in the premise is the idea that those connected with providing and financing care—physicians, hospitals, insurers and others — will compete to find the most cost-effective ways of providing that care. The extent to which actual behaviors will change to meet predictions is unknown.

The American Medical Association supports many of the principles of competition proposals — but we have grave concerns about some aspects of certain proposals.

About a year ago, the AMA House of Delegates adopted a report containing principles of evaluating competition legislation. The report named six basic desirable concepts: employers should offer multiple choice of plans; plans should provide at least certain minimum benefits; equal employer contributions, regardless of plan, should be required; nontaxable rebates to employees should be made when plans costing less than the amount of the employer contribution are selected; a maximum nontaxable contribution limit (adjustable for inflation) should be placed on the amount(s) of the premiums paid by an employer that are eligible for tax deductions as business expense; and unqualified plans should not be eligible for tax deduction.

The foregoing concepts are basic to the competition proposals now being considered by Congress and the Administration. However, some legislative initiatives before the Congress also go far beyond these and could create an adverse effect on our health delivery system. The AMA opposes any legislation that would: (1) increase federal involvement in regulation of health care delivery; (2) merely replace existing programs of regulation with yet another set of expensive and complicated dictates; or (3) require undesirable restructuring of our health system. The AMA believes, also, that any new program should be introduced on a limited basis until it has been tested and proved effective.

While many economic theories appear reasonable on paper, human behavior does not always mirror theory. Results may not match expectations. Radical changes in health care delivery should be avoided, as should any proposals that would serve to ration or lower the quality of health care available to the American people.

The American Medical Association, reflecting the concern of its members, will continue to maintain a careful watch on legislative proposals affecting health care and support only those that show the promise of practicality.

Such leadership requires your support. The larger our membership (now nearly 240,000) the greater our influence, and our strength, as the only representative for all of medicine.

For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196.

(*continued from page 1307*)

was weaned), I began to search the literature for what to do if it did not clear; there was no pacemaker small enough. I discovered the article by Greenwood et al[3] in which in 1958 he had treated a young man with Adams-Stokes syndrome by cutting his right vagus nerve in the neck with complete relief but with residual right vocal cord paralysis. On discussing this problem with my associate, K. Kenigsberg, M.D., he perceived that if just the cardiac branches were cut and the recurrent laryngeal spared then the vagal inhibition to the sino-atrial (S-A) node could be achieved without causing vocal cord paralysis, which would be very poorly tolerated as well as undesirable in a newborn or child. Then in 1969, a patient came under his care with reflex bradycardia and secondary syncope following swallowing any large amounts of food.[4] This child had also had esophageal atresia repair as a newborn. Dr. Kenigsberg employed his modification of a vagectomy with excellent results. Then in June, 1975 my first case with central vagal dysfunction and vagal bradycardia, as reported in my original paper published May 1976 in this Journal, came along, again as Nassau Hospital. Dr. Kenigsberg assisted me in performing the procedure on this child, again with excellent results. Since that time we have both been heavily involved in the investigation of vagal dysfuntion in childhood, especially as it affects the cardiopulmonary system and the gastrointestinal tract. Dr. Kenigsberg is currently engaged in basic research using the piglet.

I hope that this will clear up any misconceptions as to the etiology of the procedure of selective S-A node denervation.

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Starting Practice in 1935*

I've just graduated, I'm a doctor now,
I've opened up an office and it's sure a wow.
Shingle in the window, sheepskin on the wall,
Soon as someone needs me I can make a call.
L'envoi
Sit around, hoping for a patient
Millionaire, who can pay a big fee,
Got a room where I wait for no one
And a waiting room where no one waits for me.
First week over, and the phone won't ring;
Something out of order with the gosh-blamed thing.
Get a funny feeling in the region of the knees
When I pick up the receiver and hear, "Number please."

Feeling kind of lonesome when I think about things,
Nearly hit the ceiling when the doorbell rings,
Rush to the door just as fast as I can,
Fellow at the door says, "I'm the Fuller Brush man."

Three weeks over, not a patient yet;
But here comes some one, it's for me, I bet.
Looks kind of tired, and his face is green,
But he's a detail man, and he just sells "Maltine."

One month over, when a man walks in—
Sick looking fellow, with a droopy chin.
Get to feeling sorry for this poor old gent
When he says, "Just dropped around to get your next month's rent."

Lady on the phone says, "Doctor, please come quick;
Come and see my husband, 'cause he's mighty sick."

Rush to reach the patient, but my knees begin to sag
When I suddenly discover I forgot my bag.

Lady in the office. "Can I help you Ma'am?"
She says to me, "Yes, certainly, I think you can.
I'm bothered with an awful pain in both my knees,
And I wish you'd run along and call the doctor, please."

Sick baby round the corner, so I make a dash,
And I say, "He has the measles, 'cause he has a rash."
Mother says indignantly, "Of all the chumps!
He had the measles last year, so this must be the mumps."

EZRA WOLFF, M.D.
70 East Gate
Manhasset, New York

* Written when ready to finish medical school, 1930.

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Books Reviewed

Drugs in Litigation: Damage Awards Involving Prescription and Nonprescription Drugs. Compiled by Editorial Staff of Publishers of Lawyers' Medical Cyclopedia for Personal Injuries and Allied Specialties. Indianapolis, The Allen Smith Company, 1982. Softcover, 505 pages. $35.

The book was compiled by the editorial staff of the publishers of *Lawyers' Medical Cyclopedia for Personal Injuries and Allied Specialties*, a reputable source material used by attorneys requiring an understanding of medical issues involved in litigation. The compilation editors of *Drugs in Litigation* include Richard M. Patterson, J.D., former Staff Counsel, Blue Cross-Blue Shield of Indiana; and Robert E. Robinson, J.D., former Special Counsel, Indiana State Board of Health and former Legal Counsel for the Indiana Medical Association and the Indiana Roentgen Society.

The book provides a comprehensive annotation of trial and appellate court cases involving prescription and nonprescription drugs and medicines. Annotations are listed alphabetically by drug names, which are cross-indexed for generic and brand name identification. It can be exceptionally useful for an attorney researching malpractice or liability matters concerning drugs. Physicians desiring an understanding of drug litigation may find the book informative and interesting. The physician should not consider the book as a source of drug information, since it was not intended for this purpose. **Donald R. Moy, J.D.**

Clinical Ethics. By Albert R. Jonsen, Ph.D., Mark Siegler, M.D., and William J. Wonslade, Ph.D., J.D. New York, Macmillan Publishing Co., Inc., 1982. Hardcover, 187 pages. $15.95.

This small book *Clinical Ethics* is a gem and serves a great need. It presents a logical approach to medical ethics for physicians who practice internal and general medicine, and also will be useful to a wide spectrum of specialists, from neurologists to plastic surgeons. Nurses, medical students, residents, and others working with patients will come to use it, and indeed they should. It is addressed to those who, each day, are responsible for making clinical judgments about diagnosis and treatment of their patients, and who must make decisions and take action in the "imperfect world of the present."

Clinical Ethics deals with common troublesome problems such as: "confidentiality," "do not resuscitate orders," "noncompliance," "the quality of life," "mental incapacity," and "scarce resources." The three authors are "authorities." They have had extensive practical experience, have published widely, and, I believe, have a following. Albert R. Jonsen is professor of ethics in medicine at the University of California Medical School in San Francisco. William J. Winslade is a lawyer with psychiatric training, codirector of the program in medicine, law, and ethics at the University of California at Los Angeles. The clinician is Mark Siegler, associate professor of medicine at the University of Chicago. Each week medical students and residents formally present patients to Dr. Siegler and other staff members of the University Hospital for discussion and counsel on problems of medical ethics that arise on the medical wards and in the clinics. "The case-study-method" is used in the book to illustrate how to deal with medical ethical problems. No doubt some of the cases presented at Dr. Siegler's superb seminars are discussed in the book. The three authors' comments, advice, and counsel on each case are, as they say, "consonant with good common sense, generally accepted ethical teaching, and legal statutes.

Clinical Ethics is easy to read; it is a model of clarity, and is vital and vigorous. Unlike so many medical texts written by multiple authors there is a uniformity of style that enhances its utility. Moreover, the authors have developed and designed many novel and unique approaches specifically to educate us to deal with a problem when it arises in the present system of medical care. They tell us how to organize, present, and assess relevant facts from which we can come to practical ethical decisions. Their use of language and their definition of terms are exemplary. They give new weight to the exact use of words, which should do away with the habitual intellectual fuzziness and unconscious bias of those of us who are unfamiliar with the law and with the principles of ethics. To get the best out of this book will require hard work and a retentive memory.

There is a very comprehensive and useful bibliography at the end of each section of the book, as well as a list of general references. The book is not an encyclopedia of medical ethics, nor is it a comprehensive primer on medical ethics such as the one published by the British Medical Association. Many of the topics the latter takes up are not set forth in *Clinical Ethics:* for example, the ethical problems faced by clinicians in the armed services in peace and in war, in the Pentagon, or on the battlefield. British clinicians who share so many common heritages with us as citizens, and as patients and physicians, practice in a different socioeconomic and legal climate. This makes it difficult to use the British manual in the United States. Even if some one or some group writes a more comprehensive medical ethical primer for use in the United States, *Clinical Ethics* will still be of great value to us because it is unique and, as such, I believe it will become a classic in the field of medical ethics.

The authors, at the end of their introduction, state that they will have achieved their purpose if, through the book, proper attention will be given to the ethical problems that arise in clinical decision making. Of course this is not enough. What is even more important is the care of the patient. The authors are convinced that competent and confident physicians who are willing and able to deal with clinical ethical matters when they arise will provide the best care for patients. **Robert M. Kark, M.D., M.A.C.P.**

Significance of Medical Microbiology in the Care of Patients. Second edition. Edited by Victor Lorian, M.D.

(*continued on page 1397*)

MEDICAL SOCIETY OF THE STATE OF NEW YORK

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in honor of

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President

SUNDAY, November 7, 1982

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Dinner—7:00 P.M.

Milton Rosenberg, M.D., President, Medical Society of the State of New York and the Past Presidents of the Auxiliary to the MSSNY will share the honors at the reception.

The dinner *is included* in your American Plan Reservations. Since the Concord policy requires open seating in their dining rooms, there will be no special dinner tickets, reservations or table arrangements for this gala event. Only the dais and a few guests will be assigned to reserved tables.

Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, 474 pages. Hardcover, $60.

The second edition of this book is a considerably expanded and revised version of the first edition that suggests a need for this revision. On examination of this edition one is impressed with the diversity of subjects and the depth in which several of the subjects are covered in the 25 chapters. To the editor's credit, he has selected a group of well-qualified authors for each chapter; this is further reflected in the reading. About ten chapters are devoted to presentations on the microbial speciation polemic. Pros, cons, and intermediary positions are assumed by the authors as they present various views on the need to speciate clinically significant isolates in general philosophic terms, in terms of cost benefit, in terms of different microbial groups (enterics, aerobes, and anaerobes), and the impact of speciation and/or typing isolates on epidemiology and improved patient care. Six chapters cover different aspects of antimicrobial therapy, ranging from rapid in vitro testing and its relationship to therapeutic response, to antibiotic audit, serum levels, and resistance patterns over a ten-year span. The remaining chapters cover a variety of topics such as microbiology in life-threatening situations, clinical microbiology of pediatric patients, predictive value of diagnostic tests, the enzyme-linked immunosorbent blocking assay (ELISA) as an immunologic procedure, practical value of proficiency testing, and an overview on parasitic diseases in the United States.

Each chapter is a separate essay that reflects not only the authors' philosophy but the way in which he or she operates in the clinical microbiology laboratory or uses and interprets laboratory data for diagnosis and therapy. Each chapter is well written and contains more than useful information; each contains substantive material that can, if properly implemented, improve the role and contribution of the medical microbiology laboratory to improve patient care. The major concern of this reviewer in reading this book was the unfortunate possibility, as we continually strive for better patient care and simultaneously require cost-benefit analyses, that we may end up with unsound statistics rather than with sound policy.

I enjoyed this book because it provided broad, far-reaching, and provocative chapters by each essayist. It should provide interesting reading to microbiologists, infectious disease specialists, pediatricians, and pathologists. Physicians in general medical practice might also enjoy and benefit from the viewpoint expressed in many of the chapters. **Albert Balows**

Books Received*

SEX

Sexual Pleasure Sharing: An Alternative Approach to Sex Therapy and Sexual Fulfillment. By Walter J. Janson. Jaffrey, New Hampshire, Human Development Education-Corp., 1982. Illustrated, 197 pages. Softcover, $19.95.

NEUROANATOMY

Comparative Correlative Neuroanatomy of the Vertebrate Telencephalon. Edited by Elizabeth C. Crosby, Ph.D., M.D., and H. N. Schnitzlein, Ph.D. New York, Macmillan Publishing Co., Inc. 1982. Illustrated, 830 pages. Hardcover $75.

OPHTHALMOLOGY

Diagnosis and Management of Uveitis: An Atlas Approach. By Alan H. Friedman, M.D., Maurice H. Luntz, M.D., and Walter L. Henley, M.D. Baltimore, Williams & Wilkins, 1982. Illustrated, 116 pages. Hardcover, $95.00.

JURISPRUDENCE

Drugs in Litigation: Damage Awards Involving Prescription and Nonprescription Drugs. By the Editorial Staff of the Publishers of Lawyers' Medical Cyclopedia. Indianapolis, Indiana, The Allen Smith Company, 1982. Softcover, 504 pages. $35.00.

NEOPLASTIC DISEASE

Leukaemia. A Series of Workshops on the Biology of Human Cancer, Report No. 14, UICC Technical Report Series. Edited by N. L. Warner and D. Metcalf, Geneva, International Union Against Cancer, 1981. Volume 61. Softcover, 232 pages. $22.00.

CARDIOLOGY

Cardiology 1982. By William C. Roberts, M.D., Dean T. Mason, M.D., Mary Allen Engle, M.D., and Lawrence H. Cohn, M.D. New York, Yorke Medical Books, 1982. Illustrated, 464 pages. Hardcover, $45.00.

Excitation and Neural Control of the Heart. Edited by Matthew N. Levy and Mario Vassalle. Bethesda, Maryland, American Physiological Society, 1982. Softcover, 304 pages. $33.50.

OBSTETRICS

Protocols for High-Risk Pregnancies, 1982. Edited by John T. Queenan, M.D., and John C. Hobbins, M.D. Oradell, New Jersey, Medical Economics Books, 1982. Softcover, 340 pages. $16.95.

HISTORY OF MEDICINE

Willis's Oxford Casebook (1650–52). Introduced and Edited by Kenneth Dewhurst, T.D.,M.D.,D.Phil., F.R.C.Psych. Oxford, Sandford Publications, 1982. Hardcover. Illustrated, 199 pages, £12.

NUTRITION

Advances in Nutritional Research. Volume 4. Edited by Harold H. Draper. New York & London, Plenum Press, 1982. Hardcover, 343 pages. $39.50.

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* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

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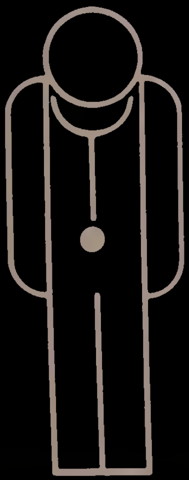

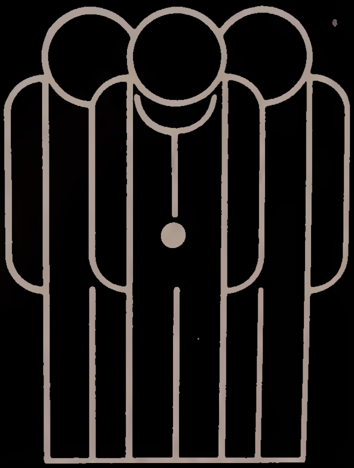

(*continued from page 1358*)

2. *Antilymphocyte and Antithymocyte Globulin in Renal Transplantation:* Biologically active heterologous antilymphocyte (ALG) and antithymocyte (ATG) globulin delay the onset of early severe rejection episodes and permit reduction of concomitant corticosteroid dosage. Administration of ATG is effective when used alone or in conjunction with intravenous corticosteroid therapy in reversing acute graft rejection and leads to improved graft survival. It is definitely indicated in corticosteroid-resistant renal allograft rejection crises.

   The preponderance of clinical data suggests that ALG and ATG therapy improve long-term graft survival in some patients. However, clinical data are inadequate to determine whether ALG and ATG should be utilized as routine prophylactic therapy in all renal allotransplant recipients or whether they should be primarily reserved for use in those patients at high risk of renal allograft rejection.

   High quality commercial preparations presently available have minimal allergic complications (thrombocytopenia, nephritis, thrombosis, and anaphylaxis). The nonspecific immunosuppressive effect of these agents increases the risk of infection and malignancy to the recipient.

   Limited commercial supply of biologically active antisera is the major problem hindering broad application of these agents in managing renal allotransplantations.

   Better methods of standardization and of determining the clinical effectiveness of these products in the pre-clinical situation are necessary. Biologically inactive preparations are nearly always ineffective. However, some active preparations may still not be effective.

   Monoclonal antibody preparations of ATG have been developed and have evidenced encouraging results. However, experience with this agent is extremely limited. It is premature to determine the clinical efficacy of this investigative agent.

   These agents should be administered by physicians experienced in the care and treatment of renal allograft transplant recipients. (1982)
3. *Hyperbaric Oxygen Therapy in Treatment of Actinomycosis:* There are no data regarding the efficacy of hyperbaric oxygen therapy for the treatment of actinomycosis. Until evidence of its efficacy is demonstrated, hyperbaric oxygen for the treatment of actinomycosis must be considered experimental. (1982)
4. *Hyperbaric Oxygen Therapy for Treatment of Chronic Osteomyelitis:* Chronic osteomyelitis is a disease for which diagnostic criteria are difficult to define. Its natural history is characterized by remissions and exacerbations. Because of the known beneficial effects of increased oxygen concentrations on the inhibition of bacterial growth and the presence of promising results from animal studies, interest has focused on the use of hyperbaric oxygen as an adjunct therapy in the treatment of chronic osteomyelitis.

   Although safe when delivered appropriately, data presently available are inadequate to determine its efficacy. As such, the use of hyperbaric oxygen therapy for the treatment of chronic osteomyelitis is investigative. A rigorously designed randomized controlled trial to assess the efficacy of hyperbaric oxygen therapy in the treatment of chronic refractory osteomyelitis is necessary to resolve this issue. (1982) (Summary of full statement).

The College has also reconsidered its position on phonocardiograms and now feels they may be useful under certain circumstances. Copies of the full ACP statement are available from the College.

The CEAP study evaluates the effectiveness of nonsurgical medical tests, procedures, and therapies and makes recommendations on their appropriate uses. CEAP is intended to help physicians practice with quality, more efficient and cost-effective medicine; the CEAP team expects improved health care and significant dollar savings to result from the use of their findings.

The three-year project, funded by a $650,412 grant from The John A. Hartford Foundation, is headed by J. Sanford Schwartz, MD, assistant professor of medicine at the University of Pennsylvania School of Medicine.

The private, New York City-located Foundation makes grants to stimulate health care payment system reforms and to promote efficient energy use, and also sponsors a fellowship program providing early career support for physicians in medical research. The Foundation, which has assets of $135 million, granted $7.7 million to projects in these three areas in 1980.

The American College of Physicians, founded in 1915, represents 53,000 physicians of internal medicine (internists), related nonsurgical specialists, and physicians-in-training. Through rigorous membership requirements, contact with health care officials in government and private sectors, continuing medical education programs, and programs such as CEAP, the American College of Physicians works to upgrade the quality of medical care, education, and research in the U.S.

MDs sought in nationwide study to assess benefits of two common substances in reducing risk of heart attack, stroke, and cancer

In an unprecedented effort in this country to see if an ounce of prevention can ward off the two leading causes of death — cardiovascular disease and cancer — approximately half of the male physicians in the United States will receive a letter during the next few days asking them, in effect, to take some of their own medicine.

The medicinal ingredients in the project, which is described in the March 12 issue of the *Journal of the American Medical Association*, are common, everyday aspirin and, in pill form, beta carotene, the principal pigment of carrots and a precursor of vitamin A.

Beyond the ironic twist that calls for physicians to take a medicine they themselves so frequently prescribe is a sense of urgency to find if the risk of heart attack and stroke can be reduced by aspirin and if the risk of lung cancer can be reduced by beta carotene, as some research already has indicated.

The letter, signed by Charles H. Hennekens, MD, an associate professor of medicine at Harvard Medical School and the project's principal investigator, is being sent to 200,000 physicians. The eventual participants — male physicians between the ages of 40 and 75 — will qualify on the basis of their own medical history and willingness to swallow each day for the next few years either one tablet or capsule without knowing what they contain.

The project, which will require at least five years, presently is funded with $3,732,831 from the National Heart, Lung, and Blood Institute and the National Cancer Institute, both part of the National Institutes of Health in Bethesda, MD.

Physicians were selected as the study population, says Hennekens, chiefly because of their ability to assess the evidence and provide reliable information on any illness that may subsequently develop.

A fourth of the approximately 20,000 expected participants will take a standard 325 milligram aspirin tablet (Bufferin) every other day and a 30 milligram beta carotene capsule (Solatene) on the alternate days. The rest of the participants will either take aspirin alternating with a placebo capsule, beta carotene alternating with a placebo tablet, or two placebos.

According to the investigators, administering 325 milligrams of aspirin every other day should allow the lining of the stomach, which can be irritated by aspirin, to recover between doses. However, would-be participants will be cautioned about indigestion and an increased tendency to gastrointestinal tract bleeding that can result in some aspirin users.

Physicians who already take aspirin regularly because of such conditions as arthritis, or avoid it because of such conditions as ulcers, among others, will be excluded from the study, according to the *JAMA* Medical News report.

A similar study, using 500 milligrams of aspirin, is under way with a group of 5,000 physicians in Britain.

Toxic shock syndrome found in postoperative patients

When toxic shock syndrome was first described in the medical literature in 1978, the account was based on seven children suffering abnormal redness of the skin and low blood pressure. Many physicians doubted that it was a new disease and they remained skeptical even after the syndrome subsequently was reported in menstruating women.

Now a report of toxic shock syndrome in patients recovering from surgery, which appears in the March 12 issue of the *Journal of the American Medical Association*, lends support to the argument that it is a new disease, according to an accompanying *JAMA* editorial.

In an evaluation of case reports of toxic shock syndrome from 45 states from Jan. 1, 1980, through July 31, 1981, researchers associated with the Centers for Disease Control in Atlanta, Ga, and their colleagues have documented for the first time 13 instances of the syndrome due to wound infections associated with a variety of common surgical procedures in both men and women. Twelve of the 13 patients recovered.

In all but one instance, *Staphylococcus aureus* — the same bacteria associated with toxic shock in menstruating women — was recovered from the surgical wounds. (In one case, no culture was done from the surgical site.)

"Clinical findings, including signs, symptoms, and laboratory results, were similar to those described for cases of toxic shock syndrome associated with menstruation," according to Paul Bartlett, DVM, MPH, who is now at Michigan State University in East Lansing. Fever, diarrhea, and vomiting were the earliest signs of the syndrome.

The source of the infection, however, remains a mystery. The authors of the report say that it is not known whether staphylococcus was present in the patients before they were admitted to the hospital or whether they acquired the organism in the hospital.

Alfalfa pills scorned in the treatment of allergy

A review of the medical literature since the late 1970s shows no reports on the effectiveness of alfalfa pills in the treatment of allergy, according to Irwin J. Polk, MD, writing in the March 12 *Journal of the American Medical Association.*

On the contrary, alfalfa pills may cause allergy symptoms to worsen, Polk wrote in his reply to a question from a physician whose ragweed-sensitive patients have been advised by nonmedical practitioners to treat their allergies with alfalfa pills.

Also, there is some indication that alfalfa seeds contain in high concentration a potentially toxic substance called canavanine, which may have been responsible for causing a blood cell disorder in at least one patient reported in the literature.

Alfalfa is a member of the grass family and, as Polk said, exposure to it may intensify symptoms caused by grass pollen sensitivity, as wheat and other grains have been reported to do.

Side effects of alfalfa ingestion include flatulence and diarrhea.

Because of potential toxicity and the possibility that symptoms will worsen, Polk said "it would seem prudent to avoid the use of alfalfa in the treatment of allergies."

Material for inclusion in the medical news section must be received eight weeks prior to publication date.

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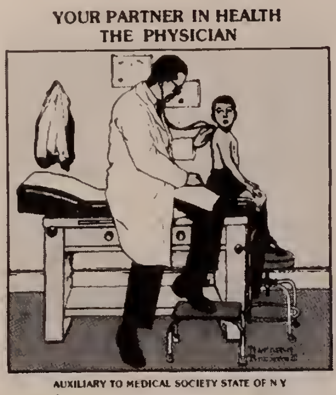
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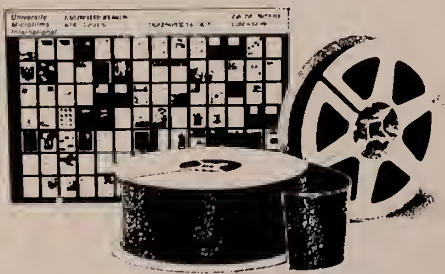

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MISCELLANEOUS

TAX ATTORNEY & PENSION PLAN SPECIALIST—Former IRS Pension Plan Specialist and Revenue Agent—Professional Incorporation, Pension and Profit Sharing Plan annual administration including initial IRS qualification, annual filings, actuarial certification and employee statements of participation—No Insurance Required—References upon request—Jack Wachstock, P.C., 300 Garden City Plaza, Garden City, N.Y. 11530. (516) 294-9470.

TAX ACCOUNTANT—ATTORNEY, formerly with I.R.S., announces his availability to prepare Professional Corporations, individually designed pension plan with I.R.S. approval, and other tax and accounting services. Reasonable professional fees. I have other doctor clients. Gerald Goldberg (212) 347-4256.

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For further information, call or write:

LT Jim Hoffower, Medical Programs Officer
United States Navy — Federal Building
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Research Project in

The Treatment of Trigeminal Neuralgia With Chinese Acupuncture Techniques

Any doctor who can refer trigeminal neuralgia patients for whom medications and surgery have brought no significant improvement, please contact:

Ling Sun Chu, M.D.
107 East 73rd St., New York, N.Y. 10021
(212) 472-3000

Acupuncture treatments will be free of charge to the patient if patient brings letter from referring physician that: 1) Contains patient's medical records. 2) Stating that: a) Referring physician agrees to participate in project, by evaluating the effects of the treatment on patient. b) Patient will remain under referring physician's care. Call or write for further details.

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ASSOCIATES IN MEDICINE, FAMILY PRACTICE, pediatrics, etc., to share new professional building in Litchfield, Conn. We have a catchment population of about 20,000 people, and presently only one medical man here with hospital privileges. Excellent opportunity for any practitioner who desires a fast start. Please contact Dr. George Carofino (203) 567-9488 or (203) 482-9481.

GROUP FACILITY—QUEENS BOULEVARD—Adjacent Alexander's Department Store in Rego Park, N.Y. Approximately 9000 square feet of street level space located in an 11-story 6 year old prestige office building; separate entrance; public transportation hub; area parking available. Contact Mr. Granville, Lefrak Organization, 97–77 Queens Boulevard, Rego Park, N.Y. 11374. Telephone (212) 459-9021.

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ON LONG ISLAND'S NORTH SHORE, Nassau County, New York—Large corner lot. Brick and shingle split. Prime residential area. Near golf, tennis, beaches. Four bedrooms, 2½ baths, cathedral LR, full DR, large EIK, family room, 3-season porch. Present zoning permits addition of up to 900 sq. ft. of professional office space. Convenient to Community Hospital at Glen Cove; St. Francis Hospital, Roslyn; North Shore University Hospital, Manhasset; Long Island Jewish-Hillside Medical Center, Lake Success. Occupancy March 1, 1983. $140,000. By appointment. (516) 676-0964.

what goes on IN CONTINUING MEDICAL EDUCATION

NEW YORK STATE **SEPTEMBER 1982**

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420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK

The Edward S. Harkness Eye Institute at Columbia-Presbyterian Medical Center

635 West 165th Street
New York 10032
September 7th through December 14, 1982—8:00 AM–10:00 AM—Daily
PART II—CLINICAL SCIENCE COURSE FOR RESIDENTS
Fee: $600. (No fee if $600 was paid for attending Part I)
For further information contact Alice B. McBride, 635 West 165th Street, New York. Tel: 212/694-2725.

Memorial Sloan-Kettering Cancer Center

1275 York Avenue
New York, NY 10021
September 13–15, 1982
SOFT TISSUE TUMOR SYMPOSIUM
Steven I. Hajdu, M.D.
FEE: $350. CREDIT: AMA Cat. 1 (35 Hrs.)
September 15–18, 1982
DIAGNOSTIC CYTOPATHOLOGY
Patricia E. Saigo, M.D.
FEE: $350. CREDIT: AMA Cat. 1 (36 Hrs.)
For further information contact Charlene H. Landis, CME Conference Planner, Memorial Sloan-Kettering Cancer Center, at 212/794-8406.

The New York State Society of Anesthesiologists, Inc.

Sponsored by District VII
30 East 42nd Street
Suite 1501
New York, NY 10017
* The Buffalo General Hospital & Sheraton Inn—East
September 20, 1982—5:00 PM–6:00 PM
"SNIFFERS, STICKERS, AND SHOOTERS"
Edward R. Johnson, M.D.
CREDIT: AMA Cat. 1
September 20, 1982—7:00 PM–9:00 PM
"STRESS-FREE ANESTHESIA AND THE TRAUMA PATIENT"
CREDIT: AMA Cat. 1
* Buffalo General Hospital
September 21, 1982—4:00 PM–5:00 PM
"FRONT-LOADING: FEELINGS, FLUIDS AND FENTANTL"
CREDIT: AMA Cat. 1
* Buffalo General Hospital
September 22, 1982—7:30 AM–8:30 AM
MANAGEMENT OF ANESTHESIA FOR THE TRAUMA PATIENT—COMBINED CONFERENCE
CREDIT: AMA Cat. 1
For further information contact Kurt G. Becker, Executive Secretary, The N.Y.S. Society of Anesthesiologists, Inc., at 212/867-7140.

The 8th Medical Brigade, The Surgeon General, U.S. Army, in cooperation with the New York Division of the American Cancer Society

Building 408, Fort Hamilton
Brooklyn, NY 11252
* The Sheraton Centre
53rd Street at Seventh Avenue, N.Y.C.
September 25–26, 1982
ADVANCES IN THE MANAGEMENT OF NEOPLASTIC DISEASES
For further information contact Captain Beverly L. Page, Headquarters, 8th Medical Brigade, Bldg. 408, Fort Hamilton, Brooklyn, New York 11252.

Westchester Square Hospital in collaboration with Albert Einstein College of Medicine/Montefiore Hospital & Medical Center

2475 St. Raymond Avenue
Bronx, NY 10461
* Conference Room
September 2, 1982—4:00 PM–5:30 PM
"DIAGNOSTIC APPROACHES TO THYROID DISEASE"
Martin Surks, M.D.
CREDIT: AMA Cat. 1 (2 Hrs.)
* Conference Room
September 16, 1982—4:00 PM–5:30 PM
"DIAGNOSTIC APPROACHES TO PARATHYROID DISEASE"
Uriel Barzel, M.D.
CREDIT: AMA Cat. 1 (2 Hrs.)
* Conference Room
September 30, 1982—4:00 PM–5:30 PM
"RE-ENTRY: THE ANATOMY OF ARRHYTHMIAS"
Dennis Miura, M.D.
CREDIT: AMA Cat. 1 (2 Hrs.)

NYU Post-Graduate Medical School and The Department of Psychiatry

550 First Avenue
New York, NY 10016
* Alumni Hall—Classroom B
Wednesdays—September 8, 1982 through March 30, 1983—7:00 PM–10:00 PM
COMPREHENSIVE PSYCHIATRY BOARD REVIEW
Harold I. Kaplan, M.D., Benjamin J. Sadock, M.D.
FEE: $1050. CREDIT: AMA Cat. 1 (90 Hrs.)
For further information, call or write: NYU Post-Graduate Medical School, 550 First Ave., New York 10016. Tel: 212/340-5295.

Metropolitan Jewish Geriatric Center Brenner Pavillion

4915 Tenth Avenue
Brooklyn, NY 11219
September 15, 1982—Wednesday
SEMINAR IN GERIATRIC MEDICINE
Harvey C. Shapiro, M.D.
CREDIT: AMA Cat. 1
For further information contact Harvey C. Shapiro, M.D., Medical Director, Metropolitan Jewish Geriatric Center. Tel: 212/853-2800.

Beth Israel Medical Center Co-sponsored by Department of Ophthalmology of the Mount Sinai School of Medicine and The Page and Willaim Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
* Grand Hyatt Hotel, New York
September 25, 1982—Saturday—8:00 AM–5:00 PM
September 26, 1982—Sunday—8:00 AM—1:15 PM
ANNUAL BIMC UPDATE IN OPHTHALMOLOGY
Maurice H. Luntz, M.D., Casimir A. Swinger
FEE 9/25/82—$125.00 (Residents $50.00)
9/26/82—$ 75.00 (Residents $35.00)
CREDIT: AMA Cat. 1 (11.5 Hrs.)
For further information contact Kathy R. Bonomo, Assistant, Medical Education, Beth Israel Medical Center. Tel: 212/420-2000

N.Y.C. Dept. of Health, Bureau for Handicapped Children In Conjunction with The Dept. of Speech & Language Pathology and Audiology of Teachers College, Columbia Univ.

280 Broadway, New york, NY 10007
* Teachers College, Columbia University
525 West 120th Street, New York, NY
September 22, 1982—Wednesday—9:00 AM—4:30 PM
ASSESSMENT AND INTERVENTION OF INFANTS-AT-RISK: HEARING AND PRESPEECH
CREDIT: 6 Hrs.
For further information contact Rose-Ellen Myers, Coordinator, Special Projects, N.Y.C. Dept. of Health. Tel. 212/566-8084.

NASSAU

Long Island Jewish-Hillside Medical Center Queens Hospital Center Affiliation and The Health Sciences Center, State University of New York at Stony Brook

* The School of Nursing on the Campus of the Queens Hospital Center

82-68 164th Street, Jamaica, NY 11432.
September 8, 1982—Wednesday—11:00 AM
GRAND ROUNDS
PHEOCHROMOCYTOMA
Lewis Landsberg, M.D.
CREDIT: AMA Cat. 1
September 15, 1982—Wednesday—11:00 AM
GRAND ROUNDS
DIAGNOSIS AND CURRENT TREATMENT OF HYPERLIPIDEMIAS
Robert Kohn, M.D.
CREDIT: AMA Cat. 1
September 22, 1982—Wednesday—11:00 AM
GRAND ROUNDS
CRYSTAL INDUCED ARTHRITIS
H. Ralph Schumacher, M.D.
CREDIT: AMA Cat. 1
September 29, 1982—Wednesday—11:00 AM
GRAND ROUNDS
NEW CONCEPTS IN TREATMENT OF MENINGITIS
Sheldon Landesman, M.D.
CREDIT: AMA Cat. 1
For further information contact Catherine Marino, M.D., Associate Director, Dept. of Medicine, Long Island Jewish-Hillside Medical Ctr.
Tel: 212/990-3681.

Nassau Academy of Medicine

1200 Stewart Avenue
Garden City, NY 11530
September 16, 1982—Thursday—8:45 AM—5:00 PM
ANXIETY—DEPRESSION TREATMENT, AN UPDATE
Leonard S. Brahen, M.D.
NO FEE
CREDIT: AMA Cat. 1 (6½ Hrs.)
For further information contact Mr. William R. Egan, Assistant Executive Director, Nassau Academy of Medicine. Tel: 516/832-2305.

Long Island Jewish-Hillside Medical Center The Division of Adolescent Medicine of the Department of Pediatrics

New Hyde Park, NY 11042
* Warwick Hotel
65 West 54 St. (Avenue of Americas) N.Y.C.
September 23 & 24, 1982—Thursday & Friday—8:30 AM–4:30 PM
THE FIFTH ANNUAL CURRENT CONCERNS IN ADOLESCENT MEDICINE
I. Ronald Shenker, M.D.
CREDIT: AMA Cat. 1 (14 Hrs.)
For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Ctr., New Hyde Park, New York 11042. Tel: 212/470-2114.

BINGHAMTON

Binghamton General Hospital

Mitchell Avenue
Binghamton, NY 13903
* United Health Services
General Hospital—Phelps Hall Auditorium
Mitchell Avenue, Binghamton, NY
September 15, 1982—11:45 AM–4:30 PM
THE 6th ANNUAL GERHARD A. KREMBS MEMORIAL CARDIAC TEACHING DAY
"AN AFTERNOON IN GENERAL CARDIOLOGY"
N. Brown, M.D., S. Goldstein, M.D., F. Khaja, M.D.
CREDIT: AMA/AAFP Cat. 1 (4 Hrs.)
For further information contact Christine L. Bowen, Medical Education Coordinator, Binghamton General Hospital, at 607/771-2200.

SYRACUSE

State University of New York—Upstate Medical Center Office of Graduate and Continuing Education

750 East Adams Street, Syracuse, New York
* Hotel Syracuse
Syracuse, New York
September 28 through October 2, 1982
17th ANNUAL REFRESHER COURSE IN ANESTHESIOLOGY
William Evers, M.D., Howard L. Zauder, M.D.
FEE: $375.
For further information contact Program Coordinator, Office of Continuing Education, Upstate Medical Center at 315/473-4304.

BUFFALO

State University of New York at Buffalo Faculty of Health Sciences School of Medicine

135 Cary Hall, 3435 Main Street
Buffalo, New York 14214
* Buffalo Hilton
Buffalo, New York
September 11, 1982
FRONTIERS OF DRUG THERAPY
CREDIT: AMA Cat. 1 (7 Hrs.)
September 17–18, 1982
PRIMARY CARE OF THE INJURED HAND
CREDIT: AMA Cat. 1

For further information contact Martin Wingate, M.D., Assistant Dean for CME at 716/831-5526.

State University of New York at Buffalo School of Medicine, Department of Pediatrics

219 Bryant Street, Buffalo, N.Y. 14222
* Buffalo Marriott Hotel
Amherst, New York

September 10–11, 1982

THE 4th NEONATAL/PERINATAL FALL SYMPOSIUM PRESENTS: PHARMACOLOGY AND THERAPEUTICS
Ralph J. Wynn, M.D.
FEE: $70. CREDIT: AMA Cat. 1 (8 Hrs.)
For further information contact Rayna Dutton, CME Coordinator, SUNY at Buffalo, 219 Bryant Street, Buffalo, New York. Tel: 716/878-7630.

DUTCHESS COUNTY

Harlem Valley Psychiatric Center—New York Medical College

Wingdale, New York 12594

September 10, 1982—Friday—10:00–11:30 AM

DSM III: UPDATE ON THE NEW NOMENCLATURE: SCHIZOPHRENIA AND PARANOID DISORDERS
Bruce Shapiro, M.D.

September 17, 1982—Friday—10:00–11:30 AM

AFFECTIVE AND ANXIETY DISORDERS
Bruce Shapiro, M.D.

September 24, 1982—Friday—10:00–11:30 AM

ORGANIC MENTAL DISORDERS AND SUBSTANCE USE DISORDERS
Joseph DiBianco, M.D.
For further information contact Seymour B. Jacobson, M.D., Director of Medical Education, Harlem Valley Psychiatric Center. Tel: 914/832-6611.

FUTURE EVENTS

State University of New York at Buffalo School of Medicine, Department of Pediatrics Children's Hospital

219 Bryant Street
Buffalo, New York 14222
* Hyatt Hilton Head Island
Hilton Head Island, South Carolina

October 28–30, 1982

RECENT ADVANCES IN PEDIATRIC LUNG DISEASES
Gerd J. A. Cropp, Ph.D., M.D.
FEE: $225. CREDIT: AMA Cat. 1 (18 Hrs.)
For further information contact Rayna Dutton, CME Coordinator, SUNY at Buffalo, 219 Bryant Street, Buffalo, New York. Tel: 716/878-7630.

College of Physicians & Surgeons of Columbia University

630 West 168th Street
New York, NY 10032

October 18–22, 1982

RENAL BIOPSY IN MEDICAL DISEASES OF THE KIDNEY
Conrad Pirani, M.D.
FEE: $525. CREDIT: AMA (Cat. 1 (35 Hrs.)
For further information contact Dr. Elizabeth C. Gerst, Continuing Education Center, 630 West 168 St., New York, 10032. Tel: 212/694-3682 or -5790.

Rosewell Park Memorial Institute Dept. of Health—State of New York

666 Elm Street
Buffalo, NY 14263

October 7–8, 1982—Thursday & Friday

"CANCER IN THE ELDERLY—AN INTERDISCIPLINARY PERSPECTIVE"
Dr. Evan Calkins
CREDIT: AMA Cat. 1

October 8–9, 1982—Friday & Saturday

"ANNUAL MEETING OF THE NEW YORK STATE CANCER PROGRAMS ASSOCIATION"

NOTICE

The Medical Society of the State of New York invites the Deans of Medical Schools and the Administrators of Hospitals to send notices of continuing medical education including teaching days, important lectureships, courses, and similar programs for publication in WHAT GOES ON to: The Editor, WHAT GOES ON, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100. This is a free service.

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420 Lakeville Road, Lake Success, New York 11042
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ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello, N.Y. 12701. Tel: 914/794-4900.

ANESTHESIOLOGIST

MONTICELLO, N.Y., contact Carl K. Heins, M.D., Hamilton Avenue Hospital, Monticello 12701. Tel: 914/794-4545.

NORWICH, N.Y., contact Martin H. Jacobi, M.D., Norwich, N.Y. 13815 at 607-334-2832.

SARATOGA SPRINGS, N.Y., contact Allen T. Jones, 384 Broadway, Saratoga Springs 12866. Tel: 518/584-1978.

WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

CARDIOLOGY

SIDNEY, N.Y., contact John W. Sands, Administrator, The Hospital, New York 13838. Tel: 607/563-3512.

EMERGENCY ROOM

BUFFALO, N.Y., contact Lafayette General Hospital, 113 Lafayette Avenue, Buffalo 14213. Tel: 716/885-8900.

ONEONTA, N.Y., contact Randolph E. Knob, M.D., Director or Mr. F. M. Isbell, Adm., A. O. Fox Memorial Hospital, 1 Norton Avenue, Oneonta 13820. Tel: 607/432-2000.

UTICA, N.Y., contact Irving Cramer, M.D., Medical Director, St. Luke's Memorial Hospital Center, P.O. Box 479, Utica 13503.

ENT

GLENS FALLS, N.Y., contact Orei Friedman, M.D., 591 Glen St., P.O. Box 444, Glens Falls 12801. Tel: 518/792-1404.

LONG BEACH, N.Y., contact Oscar Sreter, M.D., 270 Edward Blvd., Long Beach 11561. Tel: 516/431-7861.

OLEAN, N.Y., contact Dr. Edward R. Mountain, 1909 West State St., Olean, 14760. Tel: 716/372-2788.

ORCHARD PARK, N.Y., contact R. M. Patel, M.D., 55 Melroy Avenue, Lackawanna, N.Y. 14218

FAMILY PHYSICIAN

ADAMS, N.Y., contact South Jefferson Recruiting Comm., c/o Mrs. Fred Spinner, RFD#2, P.O. Box 1114, Adams 13605.

ALBION, N.Y., contact Jay Scott Parisella, Administrator, Arnold Gregory Memorial Hospital, 243 South Main Street, Albion, N.Y. 14411 Tel. #716-589-4422.

ATHENS, N.Y., contact Village Clerk, 2 First Street, Athens 12015. Tel: 518/945-1551.

AUBURN, N.Y., contact Charles D. Hicks; Director, Physician Procurement Committee, 157 Ross Street, Auburn 13021. Tel: 315/253-3388.

BATH, N.Y., contact W. A. Klepack, Box 831, Bath 14810. Tel: 607/776-6438 call collect.

BINGHAMTON, N.Y., contact Broome County Medical Society. Tel: 607/729-9261.

BROCKPORT, N.Y., contact James P. Goetz, M.D., 80 West Avenue, Suite 204, Brockport 14420. Tel: 716/637-3905.

BROOKHAVEN, N.Y., contact Dorothy S. Lane, M.D., Dept. of Community Medicine, Brookhaven Memorial Hospital, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.

GROTON, N.Y., contact Dorothy Ambis, M.D., 100 Sykes Street, Groton, New York. Tel: 607/898-3631

HICKSVILLE, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.

HUNTINGTON, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.

LATHAM, N.Y., contact Mrs. Joan Mosca, Latham Medical Group, Latham, New York. Tel: 518/785-5881

MANHATTAN and QUEENS, N.Y., contact Robert L. Mery c/o Dr. W. G. Grantham, 170 East 77th Street, New York 10021.

MARGARETVILLE, N.Y., contact Joseph Kehoe, Adm., Margaretville Hospital, Margaretville 12455. Tel: 914/586-2631.

NEW PALTZ, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel: 914-255-1200.

OLEAN, N.Y., contact Dr. John S. Reach, 2223 W. State St., Olean 14760. Tel: 716/372-7600.

ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.

OSWEGO, N.Y., contact J. Sherwood Dunham, Oswego Hospital, 110 West Sixth Street, Oswego 13126. Tel: call collect 315/349-5526.

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Epidemic Kaposi's Sarcoma & Opportunistic Infections in Homosexual Men:

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March 17-19, 1983

Organizing Committee:
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This symposium is designed to offer a broad overview of the recently recognized epidemic of Kaposi's sarcoma and acquired immunoregulatory disorders in homosexual men. The program affords an unusual opportunity to analyze the interrelationships between the environmental, genetic and immunologic factors in the pathogenesis of this unique neoplasm and its multifaceted clinical and basic science implications.

PROGRAM TOPICS

- Clinical expression and treatment modalities for the epidemic form of Kaposi's sarcoma: similarities and differences from the classical presentation of the disease.
- Details of the acquired immunoregulatory disorder including clinical and **in vitro** characterization of the defects in cell mediated immunity, possible role of circulating immune complexes and HLA alloantigens.
- Epidemiologic investigations aimed at defining the causes of this outbreak in homosexual men; the possible roles of changing lifestyles, use of "recreational" drugs and sexually transmitted diseases.
- The spectrum of opportunistic infections, such as **Pneumocystis carinii** pneumonia, cytomegalovirus, Epstein-Barr virus, cryptococcosis and atypical Mycobacterium: The potential role of viruses as the causative agent of the immunologic disorder.
- A workshop on Saturday morning will focus on the practical clinical management of common diagnostic and therapeutic problems encountered in patients with the acquired immunodeficiency syndrome, such as lymphadenopathy, diarrhea, unexplained fever and pulmonary infiltrates.

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1 Borison R Scientific Exhibit, 32nd Institute on Hospital and Community Psychiatry, Boston, MA, September 15-18 1980 2 Borison R Lecture, Duke University Department of Psychiatry Durham, NC, September 18, 1980. 3 Baldessarini RJ: Drugs and the treatment of psychiatric disorders in *Goodman and Gilman's The Pharmacological Basis of Therapeutics*, ed 6 New York Macmillan Publishing Co Inc, 1980. pp 391,402,407

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Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures In epileptic patients, anticonvulsant medication should also be maintained Pigmentary retinopathy, observed primarily in patients receiving larger than recommended doses, is characterized by diminution of visual acuity, brownish coloring of vision, and impairment of night vision, the possibility of its occurrence may be reduced by remaining within recommended dosage limits Administer cautiously to patients participating in activities requiring complete mental alertness (e g , driving), and increase dosage gradually Orthostatic hypotension is more common in females than in males Do not use epinephrine in treating drug-induced hypotension since phenothiazines may induce a reversed epinephrine effect on occasion.

Neuroleptic drugs elevate prolactin levels, the elevation persists during chronic administration Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. Daily doses in excess of 300 mg should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; rarely, nocturnal confusion, hyperactivity lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity *Cardiovascular System*—ECG changes (see *Cardiovascular Effects* below). *Other*—Rare cases described as parotid swelling

It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. It has been reported that old age lowers the tolerance for phenothiazines; the most common neurologic side effects are parkinsonism and akathisia, and the risk of agranulocytosis and leukopenia increases. The following reactions have occurred with phenothiazines and should be considered whenever one of these drugs is used. *Autonomic Reactions*—Miosis, obstipation, anorexia, paralytic ileus. *Cutaneous Reactions*—Erythema, exfoliative dermatitis, contact dermatitis *Blood Dyscrasias*—Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia. *Allergic Reactions*—Fever, laryngeal edema, angioneurotic edema, asthma *Hepatotoxicity*—Jaundice, biliary stasis. *Cardiovascular Effects*—Changes in terminal portion of electrocardiogram, including prolongation of Q-T interval, lowering and inversion of T-wave, and appearance of a wave tentatively identified as a bifid T or a U wave have been observed with phenothiazines, including Mellaril (thioridazine); these appear to be reversible and due to altered repolarization, not myocardial damage. While there is no evidence of a causal relationship between these changes and significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients showing characteristic electrocardiographic changes while taking the drug While proposed, periodic electrocardiograms are not regarded as predictive. Hypotension, rarely resulting in cardiac arrest. *Extrapyramidal Symptoms*—Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonus, oculogyric crises, tremor, muscular rigidity, and akinesia. *Persistent Tardive Dyskinesia*—Persistent and sometimes irreversible tardive dyskinesia, characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements) and sometimes of extremities may occur on long-term therapy or after discontinuation of therapy, the risk being greater in elderly patients on high-dose therapy, especially females; if symptoms appear, discontinue all antipsychotic agents Syndrome may be masked if treatment is reinstituted, dosage is increased, or antipsychotic agent is switched Fine vermicular movements of tongue may be an early sign, and syndrome may not develop if medication is stopped at that time *Endocrine Disturbances*—Menstrual irregularities, altered libido, gynecomastia lactation, weight gain, edema, false positive pregnancy tests. *Urinary Disturbances*—Retention, incontinence. *Others*—Hyperpyrexia, behavioral effects suggestive of a paradoxical reaction, including excitement, bizarre dreams, aggravation of psychoses, and toxic confusional states, following long-term treatment, a peculiar skin-eye syndrome marked by progressive pigmentation of skin or conjunctiva and/or accompanied by discoloration of exposed sclera and cornea; stellate or irregular opacities of anterior lens and cornea; systemic lupus erythematosus-like syndrome

Dosage: Dosage must be individualized according to the degree of mental and emotional disturbance, and the smallest effective dosage should be determined for each patient. *In geriatric patients with multiple symptoms such as agitation, anxiety, depressed mood, tension, sleep disturbances, and fears* the usual starting dosage is 25 mg t i d and the dosage ranges from 10 mg b.i d to q i.d in milder cases to 50 mg t i d or q.i.d. for more severely disturbed patients, the total daily dose ranges from 20 mg to a maximum of 200 mg

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SEPTEMBER 1982

Joel A. Wing, M.D., Albany County. President, Medical Society of the State of New York, 1844. See page 1477.

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*Hannemann, R. E., Erb, R. J., Stoltman, W. P., Bronson, E. C., Williams, E. J., Long, R. A., Hull, J. H. and Starbuck, R. R.: Digital Plethysmography For Assessing Erythrityl Tetranitrate Bioavailability. Clin Pharmacol and Ther 29:35-39, 1981.

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IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy. Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e.g., CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA: Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers: Thiazides appear in breast milk. If the use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (e.g., increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular:* bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

Hydrochlorothiazide: *Gastrointestinal:* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System: dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular: orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions.

Other: hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

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Month in Washington

Month in Washington

Major revisions in Medicare and Medicaid and important changes in pension plan provisions are building momentum toward final congressional passage.

Senate approval of a package bill carrying out sweeping program changes and raising some $100 billion in taxes over three years put immediate pressure on the House to follow suit. The Senate vote was along party lines, 50 to 47, on a measure adopted by the Senate Finance Committee.

The Senate bill incorporated both reduced spending and tax hikes as a follow-through to the budget resolution approved earlier by Congress mandating such actions.

The House, compelled to approve a bill similar to the Senate's to comply with the budget mandate, in an election-year gamble has agreed to go directly to conference on the Senate's bill to increase taxes by $98.5 billion over three years and impose major new cuts in Medicaid and Medicare.

The House Energy and Commerce Committee approved a bipartisan plan for cutting $2.1 billion over three years from Medicaid and from federal reimbursements to physicians under Medicare.

The savings fell about $160 million short of the budget instructions, but attempts to make deeper cuts were defeated easily.

"At least we controlled the damage," said Health Subcommittee Chairman Henry A. Waxman (D-CA).

Together with Medicare cuts approved earlier by the Ways and Means Committee, the proposed House cuts in the two programs over three years include $700 million from Medicaid and $12.9 billion from Medicare.

The Senate bill provides many reimbursement restrictions on Medicare and Medicaid, with hospitals hit the hardest. The tax side includes provisions making it tougher to claim medical expenses as deductions and limitations on pension plan contributions aimed at discouraging professionals such as physicians from incorporating.

At about the same time as the tax spending bill came before the Senate, the House Ways and Means Committee approved in a rare closed-door session a budget measure dealing only with Medicare. Many of the provisions were identical or similar to those of the Senate bill, but there were several important differences. The Ways and Means bill set spending targets or caps for hospitals in various groupings, a plan endorsed by the American Hospital Association and the Federation of American Hospitals.

The Senate bill and the Ways and Means measure endorse the concept of prospective reimbursement for hospitals, but offer no specific plans for carrying out the idea, which is under study by the Administration. The House bill calls for a voucher system to allow Medicare beneficiaries to pay for private coverage with a Medicare voucher.

Medicare beneficiaries would be allowed to enroll in qualified Health Maintenance Organizations (HMOs) with the government paying a premium equal to 95% of the average area per capita cost for Medicare patients. The HHS Department would have to devise a way to work the HMO plan.

The House bill also provides Medicare reimbursement for hospice services for the terminally ill, one of the few added benefits in the legislation.

Dropped from present law would be the provision requiring a three-day hospitalization before admittance to a skilled nursing facility.

*** *** ***

Prior to the House's unusual action of going directly to conference on the Senate bill, the American Medical Association (AMA) testified before a House Energy and Commerce Subcommittee on the Senate proposed Medicare and Medicaid cuts.

The Association favored most of the Senate's Medicaid cuts and opposed most of its proposals to change the Medicare program.

Before addressing the proposed cuts in detail, AMA Executive Vice President James H. Sammons, M.D., urged subcommittee members to " — bear in mind that program changes made with the goal of short-term budgetary savings are not going to solve the long-term needs of this nation. The AMA is planning a comprehensive examination of the long-term problems and has committed itself to work for their solutions. This study is in its initial stages."

Dr. Sammons noted that the AMA supported experimentation with the HMO proposal, but expressed concern about a provision requiring HMOs to provide extra benefits to Medicare patients if reimbursement exceeds overall costs. "This will effectively establish two classes of benefits," he said. Instead, savings should be returned to the program to benefit all Medicare recipients.

The AMA supported Part B changes that would reimburse inpatient radiology and pathology services at 80% of reasonable charges instead of 100% as now allowed; repeal optometric coverage for services to patients after cataract surgery; delay eligibility to the month following a beneficiary's 65th birthday; require employers to maintain private insurance for Medicare-eligible employees; index the Part B deductible to reflect inflation, using the medical component of the Consumer Price Index; and fix the Part B premium as a percentage of program costs.

Dr. Sammons noted, however, that if the current trend of cost increases continues, future beneficiaries could be faced with substantial premium expenses.

Repeal of the nursing differential, advocated by the Senate bill, could shift costs to non-Medicare patients, Dr. Sammons told the subcommittee. Commenting on other proposed Medicare cuts, Dr. Sammons said the Association supported imposing minimal copayments for home health services, as well as eliminating the three-day prior hospitalization requirement for skilled nursing coverage.

The AMA opposed establishing a single reimbursement rate for services provided by skilled nursing facilities and

(*continued on page 1423*)

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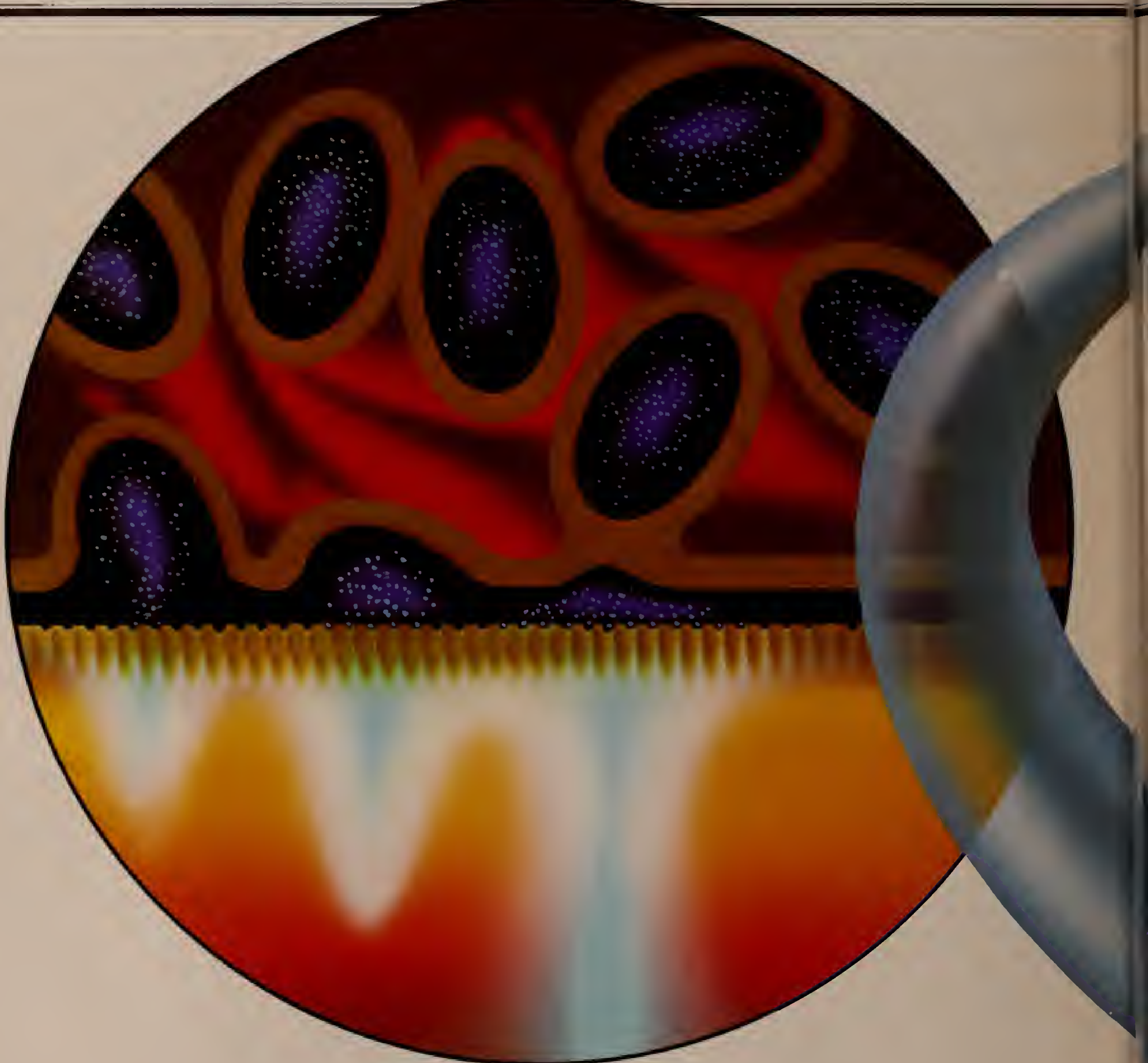

Artist's concept of neurotransmitter
being released into synaptic cleft and
impinging on receptor sites

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Opening new investigative pathways into where and how Valium (diazepam/Roche) exerts its distinctive antianxiety action

New discoveries in receptor research have stimulated the search for endogenous brain substances that may be involved in the mediation of anxiety.[1-5] It has been further theorized that these substances may act as ligands that bind to the same or similar sites as do benzodiazepine molecules[5,6]—binding sites early identified with the use of ^{3}H-diazepam.[5,7] These binding sites are now postulated to be benzodiazepine receptors, since the ability of benzodiazepines to bind with the sites appears to correlate with their clinical effects.[2,4,7,8]

Present investigations into clinical relevance of binding sites. Laboratories at Roche have conducted research to identify and isolate substances that may prove to be endogenous ligands, but no definitive identification has yet been made. Researchers are also studying substances which do not bind, but rather interact with the benzodiazepine binding sites—most notably gamma-aminobutyric acid (GABA)—and are postulated to mediate certain pharmacologic and clinical benzodiazepine effects.[2-4,9,10] Under especially intense investigations are the GABA receptors and the benzodiazepine binding sites themselves—apparently constellations of closely linked but not identical structures.[8]

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The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms similar to those with barbiturates and alcohol have been observed with abrupt discontinuation, usually limited to extended use and excessive doses. Infrequently, milder withdrawal symptoms have been reported following abrupt discontinuation of benzodiazepines after continuous use, generally at higher therapeutic levels, for at least several months. After extended therapy, gradually taper dosage. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.
Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
The clearance of Valium and certain other benzodiazepines can be delayed in association with Tagamet (cimetidine) administration. The clinical significance of this is unclear.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.
Dosage: Individualize for maximum beneficial effect. *Adults:* Anxiety disorders, symptoms of anxiety, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).
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Abstracts

Abel WG: Blood substitute oxygen carriers. ***New York State J Med 1982,*** 82: 1429–1433.

A general overview of blood utilization from the time of William Harvey to current blood fractions available is presented. Blood substitute oxygen-carriers are discussed in more detail under six headings: (1) hyperbaric oxygen, (2) direct introduction of oxygen into the blood stream, (3) synthetic hemoglobin, (4) stroma-free hemoglobin, (5) semipermeable aqueous microcapsules enclosing stroma-free hemoglobin, and (6) perfluorocarbons. Stroma-free hemoglobin, although an obvious candidate, requires further research to decrease hemoglobin-oxygen affinity in the clinical setting of hematocrits above 10% and to develop other hemoglobin compounds to improve storage characteristics. The perfluorocompounds have the ability to solubilize relatively large amounts of oxygen at an FIO_2 of 100% and to off-load adequately at the cellular level. These latter compounds are currently undergoing clinical trials at selected Centers around the United States.

Powell DR, Arnold CB: Antismoking Program for coronary-prone men. ***New York State J Med 1982,*** 82: 1435–1438.

A 5-day multiple-treatment smoking cessation program was evaluated. It involved 22 men, aged 42 to 61, with elevated risk for coronary heart disease. They were classified "hard core" smokers because of failure to quit despite five years continual smoking cessation efforts. In the new program men learned new skills to quit and reduce further smoking urges through psychologic, social, physiologic, and behavioral techniques. One year after treatment, 50% remained abstinent as determined by serum thiocyanate (SCN) levels. The mean SCN among quitters decreased from 166 μmol/L (pretreatment) to a 12-month level of 35 μmol/L. It is concluded that multiple treatment emphasizing behavior change can effectively induce and sustain smoking cessation in high CHD risk men, previously refractory to individual treatment methods.

Craig TJ, and Van Natta PA: Medication use and depressive symptoms, ***New York State J Med 1982,*** 82: 1439–1443.

A community survey revealed a significant association between medication use and depressive symptoms for minor tranquilizers and sedatives among women while nonsignificant increases in depressive symptoms were associated with the use of corticosteroids, contraceptives, antispasmodics, cardiovascular drugs and hypoglycemics drugs among women and respiratory drugs and other psychotropic drugs among both men and women. Reserpine-methyldopa antihypertensive drugs were not associated with an increase in depressive symptoms. The impact of drug-related depressive symptoms in the general population appears relatively minor although further study using specific diagnostic criteria and a prospective design are needed to verify this impression.

(continued from page 1419)

home health agencies and called for further study before eliminating the private room "subsidy."

In conclusion, Dr. Sammons again expressed the AMA's concern about making short-term or piecemeal solutions through the budget process. Referring to the Association's organization of a broad-based study of national health policy, he said, "we expect that the results of this study will suggest major reforms in the government's role in the health care of individual citizens .... We hope it will be possible to make the necessary short-term savings and changes now and later more basic long-term changes that will stem from the results of the health policy study."

*** *** ***

The AMA has protested a proposed regulation that would allow Health Maintenance Organizations (HMOs) to be forgiven repayment of federal grants despite changing from non-profit to for-profit HMOs.

"To amend these regulations now and allow profit-making entities to take advantage of the public funds received by the not-for-profit HMO is highly inappropriate," the AMA told the Health and Human Services Department (HHS).

The regulation would give the HHS Secretary authority to waive all or part of the grant repayment in such cases.

AMA Executive Vice President James Sammons, M.D, wrote that "in light of a projected budget deficit of over $100 billion in fiscal year 1983, we believe that it would be prudent for the Office of Health Maintenance Organization to insist on fulfillment of financial obligations undertaken by HMOs and recapture grant money given to HMOs by the federal government upon conversion to for-profit status."

The AMA told the HHS Department that "federal government intervention, particularly in the promotion of HMOs, has interfered with the operation of a pluralistic system for consumer choice."

To waive the repayment requirement would be "but another example of preferential treatment being given to HMOs by the federal government," said the AMA.

*** *** ***

Independent expenditures for political candidates represent "a basic element for our democracy and should be encouraged and supported," the American Medical Political Action Committee (AMPAC) has told Congress.

Michael Levis, M.D., a member of the AMPAC Board of Directors, told the Task Force on Elections of the House Administration Committee that an independent expenditure is an activity involving the exercise of the right to free speech concerning a political campaign.

Dr. Levis said that AMPAC carries out its program of independent expenditures by articulating support for a candidate "and we do not choose to campaign against someone we do not support. This is a decision that we made at the start of our independent expenditure activity and is a cornerstone of our policy."

AMPAC has budgeted about $350,000 for independent expenditures during the 1982 elections. The money will be spent on radio and TV spots and direct mail.

(continued on page 1510)

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

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Letters to the Editor

Diabetes and sexual function

To the Editor: Dr. Max Ellenberg's article on Diabetes and Sexual Function (*New York State J Med* 1982; 82: 927–930) should be read by all physicians and all professionals involved in the care of patients with male sexual dysfunction.

While he touches upon the subject of penile implantation we would like to emphasize the high success rate and important benefits, both to the patient and to his sexual partner, of the various types of penile prostheses currently used, particularly the inflatable penile prosthesis. During the last decade approximately 70,000 to 80,000 implantations of all types of prostheses have been performed and have returned potency to about 90% of patients implanted, resulting in a high satisfaction rate among patients and their partners.[1–4] *About one third of these operations are in patients with diabetic impotence.* These operations can be done under general or local anesthesia and generally require less than four days hospitalization. Candidates for penile implantations should have a strong libido, an enthusiastic partner and be in reasonable health.

It should be emphasized that prior to implantation it is sometimes advisable that the patient and his partner be seen in consultation by a sex therapist and/or specialist in marital-family therapy, and it is often desirable for the patient to talk to another diabetic patient who has had the implantation.

Today's multispecialty approach (family physician, endocrinologist, sex therapist, marital-family therapist, urologist) prior to implantation in properly screened and selected diabetic patients, who are often relatively young and had been sexually active prior to onset of impotence, has been highly rewarding both to the patient and his sexual partner, and to the "team" caring for the patient.

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(*continued on page 1427*)

Doctor! You can do something about it!

When the New York State Legislature recessed on July 3, 1982, it had failed to act on several pieces of legislation of critical importance to the physicians of New York State. Most discouraging was the fact that nothing was done to ease the medical liability insurance problem. The Medical Society of the State of New York (MSSNY) introduced an "omnibus malpractice bill." The Governor established a "Legislative-Executive Task Force on Malpractice." A bill came down from the Governor's office that contained some features of the MSSNY proposal, including the establishment of a "catastrophic fund" to be financed partially by a surcharge on health insurers. Extensive lobbying was engaged in on all sides of this issue and yet in the end nothing had been done.

Both the "Nurse Practitioner" bill and the "Access to Medical Records" bill died in committee following rigorous opposition by MSSNY. Although it may appear that we had some success in our lobbying activities we cannot forget that it must be done all over again next year. The liability insurance problem will become ever more critical; and encroachments on the quality of medical care and the physician/patient relationship will continue.

So, will we be any more successful next year in our efforts to reach the public and the legislature? It says here: "NO."

As long as we keep one arm tied behind our back we shall never be able to arouse the interests of Legislators in regard to our positions on critical health matters. Our lobbying activities are only 50% of the battle. The other 50% is **Political Action.** As long as only 2,000 of our 25,000 members join our State Medical Political Action Committee our one arm will remain paralyzed; and our legislative efforts will be no more successful than they have been in the past. It does no good to castigate MSSNY, nor to criticize its lobbying efforts.

Your medical society cannot do the job you want it to do, without your total support.

JOIN THE PAC

G.J.L.

(*continued from page 1426*)

Dr. Ellenberg's reply

To the Editor: I appreciate the remarks of Dr. Whitehead re my article "Diabetes and Sexual Function."

As indicated in my paper, the surgical approach to the treatment of diabetic impotence is available and often highly successful. We are biased towards the silicone implant because of its simplicity, absence of secondary complications, relatively low cost, and patient acceptance. The use of the inflatable penile prosthesis is successful primarily in the hands of those with special training and experience.

Regardless of the method used, results in our patients have been most rewarding. Two caveats: I insist that the partner be part of the picture and actively participate in the decision; and often a psychiatric screening is clearly indicated to evaluate psychological impotence and avoid unnecessary surgery.

MAX ELLENBERG, M.D.
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New York, N. Y. 10021

Missile injuries

To the Editor: Dr. Bakay (Missile injuries of brain. *New York State J Med* 1982; 82:313–319) may know neurosurgery, however the information he provided about firearms is in most cases misleading or incorrect. Two examples should suffice to prove this, although there are more.

First, Dr. Bakay states, "In modern guns the explosive charge is very explosive indeed . . . ." The materials he cites, smokeless powders, do not explode. They burn rapidly. Black powder, when confined, explodes.

Second, Dr. Bakay states that extreme muzzle velocity is responsible for the "devastating effect" of the M-16. What is responsible is the instability of the bullet under the conditions present when fired from an M-16. These conditions include not only the velocity but also several other factors, eg, the relatively light weight of the bullet; the spin caused by the rifling; and the shape of the bullet. A

(*continued on page 1507*)

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J-9043-4 July 1981

Blood Substitute Oxygen Carriers

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A general overview of blood utilization from the time of William Harvey to current blood fractions available is presented. Blood substitute oxygen carriers are discussed in more detail under six headings: (1) hyperbaric oxygen, (2) direct introduction of oxygen into the blood stream, (3) synthetic hemoglobin, (4) stroma-free hemoglobin, (5) semipermeable aqueous microcapsules enclosing stroma-free hemoglobin, and (6) perfluorocarbons. Stroma-free hemoglobin, although an obvious candidate, requires further research to decrease hemoglobin-oxygen affinity in the clinical setting of hematocrits above 10% and to develop other hemoglobin compounds to improve storage characteristics. The perfluorocompounds have the ability to solubilize relatively large amounts of oxygen at an FIO$_2$ of 100% and to off-load adequately at the cellular level. These latter compounds are currently undergoing clinical trials at selected centers around the United States.

It is the purpose of this article to briefly review the background on blood replacement and to consider the present state of the art regarding blood substitute oxygen carriers.

Historical

Following William Harvey's demonstration of the blood circulation in 1628, Christopher Wren (1657), a naturalist and architect, conducted experiments in which various substances were injected into animal veins via quills. Progress recorded over the next two hundred years consisted mainly of sporadic reports of infusions being given between animal and animal, animal to man, and man to man. James Blundell, an English obstetrician, devised a primitive syringe for transfusing blood between human beings and also determined that blood from one animal species is incompatible with that of another. Early attempts to prevent blood from clotting were reported by Hewson in 1771 and Hicks in 1869. Hustin in 1914 introduced citrate to prevent clotting and Rous and Turner in 1916 discovered that the addition of glucose prolonged the storage life of blood. The final element that permitted the beginning of modern transfusion practices was the demonstration by Landsteiner in 1901 that human blood contained naturally occurring antibodies that would react with the blood of certain other humans. From this he derived a system of blood grouping—the ABO classification—and to this he added the discovery of the Rh factor during World War II.

The first blood bank in this country was established by Fantus in 1937 at the Cook County Hospital, Chicago. Further improvement in blood storage was made possible by Loutit and Mollison's[1] introduction of an acid-citrate-dextrose (ACD) mixture in 1943. Subsequent to Audrey Smith's work in 1950 on erythrocytes frozen in glycerol, further refinements made it possible for blood to be stored for several years without losing its therapeutic effectiveness. By 1947 the ACD mixture had been widely adopted but its low pH contributed to acidosis. Continuing research led to the development of a preparation with a higher pH and, more important, that also contained phosphate essential for adenosine triphosphate, a key element in red cell membrane stability and erythrocyte metabolism. Dawson showed in 1970[2] that the increased pH also was responsible for maintaining higher levels of 2,3 diphosphoglycerate. As a result, this new mixture, citrate-phosphate-dextrose (CPD) was widely adopted by 1972 and the addition of adenine (CPD-adenine) was shown in 1978[3] to allow blood to be stored for 35 days. Ongoing research continues for ways to extend blood preservation.

Substitute oxygen carriers

The use of whole blood has for all practical purposes been phased out, with acute blood loss remaining as its only possible legitimate indication, although Gardner[4] reported that in healthy young adults with adequate volume replacement even an acute loss of 30% of blood volume may be well tolerated. Volume replacement can be managed adequately with electrolyte-colloid solutions supplemented when needed by appropriate component additives. If the only indication for blood transfusion is to provide an oxygen carrier, then packed red cells should satisfy this requirement. Although whole blood fractionization and component utilization has enabled donor blood to be more efficiently and completely used, there continues to exist the dual problems of increasing blood demand and unusable outdated blood. While considerable progress has been made in the development of plasma substitutes (dextran, polyvinylpyrrolidone, gelatin, hydroxyethyl starch) the substitute oxygen carrier remains for the most part a continuing research problem. Methods that have been investigated for potential gas transport include: (1) hyperbaric oxygen, (2) direct introduction of oxygen into the blood stream, (3) synthetic hemoglobin, (4) stroma-free hemoglobin, (5) semipermeable aqueous microcapsules enclosing stroma-free hemoglobin, and (6) perfluorocarbons.

Hyperbaric oxygen

High-pressure chambers have been utilized in attempts to provide adequate oxygenation but have been unsatisfactory, with pulmonary complications an added hazard. As an example, Boerema in 1960[5] placed pigs in a hyperbaric chamber and completely exchange-transfused them with dextran-saline. He replaced the blood after one hour and all animals developed severe pulmonary edema with a 50% survival rate. The solubility of oxygen expressed as volume percent is approximately 3 in water compared to 134 for human hemoglobin, which is a chemical combination. Expressed another way, for each mm Hg of PO_2 there is 0.003 mL oxygen per 100 mL of blood with normal blood at a PaO_2 of 100 mm Hg holding 0.3 mL oxygen per 100 mL. Using a hyperbaric chamber (2 to 5 atmospheres), the plasma oxygen content can only be raised to 5 mL per 100 mL. This modality has been found useful, however, in treating (1) acute infections not responding to surgery and antibiotics, (2) ischemic conditions, (3) chronic sepsis, and (4) inflammatory lung conditions.

Direct introduction of oxygen into bloodstream

Introducing oxygen directly into the bloodstream is a singlularly appealing approach and is based on the Thomas-Gibbs equation:

$$\Delta P = \frac{2\sigma}{R}$$

Where σ represents surface tension and R represents radius, then P (pressure under a spherical surface) reaches higher values as the radius is progressively decreased. The solubility of oxygen in plasma would increase as the pressure in the microbubble increased. It is known that gas pressure within a spherical surface rises with a reduction of the curvature radius, and therefore the smaller the bubble the higher the pressure. The combined surface area of the bubbles correspondingly increases as the radius of the bubbles decreases. Petrovski et al,[6] working at the Institute of Experimental and Clinical Surgery, Moscow, developed a machine for intravascular administration of oxygen. Oxygen emulsions were produced by the addition of a foaming agent to oxygen under high pressure and this was then delivered in a precalculated dose by a pulsing jet. The foaming agent allowed for the necessary fine dispersal, since the critical bubble size to prevent emboli is 8 microns, and it also acted to prevent bubbles from coalescing and forming larger ones. The results of his experiments indicated no significant unfavorable effects from the procedure in animals.

Synthetic hemoglobin

The synthesis of hemoglobin is the logical extension for a blood substitute, but although an enzyme has been synthesized,[7] and Sekiguchi et al[8] developed an oxygen carrier based on a polystyrene-imidazol model, problems with oxygen affinity were unsolvable in their prototype and further work was halted. In time, however, it is not unreasonable to expect that synthesis will be accomplished.

Stroma-free hemoglobin

Until such time as a synthetic hemoglobin becomes available, the use of natural hemoglobin from outdated bank blood would appear to offer an attractive alternative since there are relatively few excellent oxygen carriers supplied by nature.[9] Among the many advantages of hemoglobin is its ability to combine reversibly with oxygen and carbon dioxide. There would appear to be an adequate suppy of outdated bank blood since the National Heart and Lung Institute Resource Studies of 1972 indicated that 2.7 million pints of blood were "either not used or unaccounted for by the blood banks."[10]

Sellards and Minot in 1916[11] documented for the first time the injection of a hemoglobin solution into man. The period from 1859 to 1937 has been thoroughly reviewed by Amberson[12] regarding the use of hemoglobin solutions, and he updated his clinical experience with hemoglobin-saline solution in 1949.[13] Research starting in 1961 by Velikina and Klement[14] at the Institute of Hematology and Blood Transfusion, Leningrad, on methods of erythrocyte fractionization resulted in the preparation of a hemoglobin solution termed "Erigem." This is a stroma-free preparation obtained by lysis of red cells, centrifugation, and filtration. It received extensive trials in Russia and is reportedly now in use there, being produced by a number of blood transfusion stations.[14,15] The final product is a 3% hemoglobin solution, stored lyophilized. Velikina reported that the preparation contained thromboplastic substances that increased blood coagulation, but Professor

Milnikovan, Director of The Institute of Emergency Surgery (Russia), reported at a Symposium on Artificial Blood at the National Institutes of Health in 1974[16] that she had observed no adverse reactions with its clinical use, and D. Malahov from the First Pavlov Medical Institute, Leningrad, at the same meeting reported his results with its use over a two-year period. Although he noted hemoglobin in the urine and free circulating hemoglobin he was unable to document any nephrotoxic effect or hypercoaguable state. Hamilton et al[17] and others[18–21] have recorded the renal damage and hypercoaguable effects of infused hemolysate, but it is now well recognized that these effects produced by hemolysate infusions are due to the stromal elements and not to the hemoglobin itself.[21–23]

It follows, then, that an acceptable product must be free of any stromal elements and must be also commercially feasible. Due to the investigations of Rabiner,[24] Kaplan,[25] Peskin,[26] Greenburg,[27–29] and DeVenuto,[30–32] such a product now seems attainable. Further study is needed, however, in the development of hemoglobins with less oxygen affinity and longer intravascular retention. Some progress has been made; Greenburg,[27] using a pyridoxalated preparation, SFH-P, reported both a decreased oxygen affinity and more prolonged intravascular retention with his product. At issue remains the question of how much of a contribution to total oxygen released is provided by the extraerythrocyte hemoglobin at varying dilutions of blood volume. As has been observed,[33] if the hematocrit is 20% or above (representing the majority of emergency patients) and the P50 (partial pressure of oxygen when blood is 50% saturated) is above 20 mm Hg, then tissue oxygen requirements would be satisfied almost entirely by the intraerythrocyte hemoglobin. It would seem, then, that according to the work of Zuck et al,[34] before hemolysate infusions would begin to off-load oxygen, the hematocrit must be 10% or less.

Areas for further exploration include but are not limited to the use of sheep and cow hemoglobin, which has less affinity for oxygen than human hemoglobin,[35] and modifications of hemoglobin with various compounds to promote both improved storage characteristics and improved oxygen off-loading. Then, following on the work of Chang[36–39] with semipermeable aqueous microcapsules and the development of liquid encapsulated hemoglobin by Djordjevich,[40] we may anticipate a truly practical artificial red cell capable of supplying tissue respiration.

Semipermeable aqueous microcapsules

Chang et al,[36] pursuing earlier research, reported in 1966 a method by which aqueous protein could be encapsulated in a semipermeable membrane of microscopic dimensions. Biologic systems for the most part depend on rapid passage of solutes from one aqueous medium to another across semipermeable membranes. Chang reasoned that by making these "dialysis bags" of microscopic size they would more closely conform to the natural arrangement of things and be more efficient regarding diffusion capability. Simplified, preparation of such a solution begins with obtaining a hemolysate of outdated mammalian erythrocytes as described under "stroma-free hemoglobin" which is combined with a detergent (Span 85, Tween 20). A polymer membrane is then created around each microdroplet by the addition of a suitable material such as nylon or collodion. The diameter of the finished microdroplets can be determined by the speed of the mechanical emulsifier and the concentration of the emulsion used. A method, then, had been shown possible by which stroma-free hemoglobin could be incorporated in a small (5-micron or less) microcapsule. The particles formed are generally spherical, possess a degree of flexibility allowing slow passage through capillaries, are quickly permeable to water, and allow gas diffusion, although more slowly than a normal erythrocyte.

A major problem, as yet unsolved, in this attempt to produce artificial red cells is how to prevent the body from recognizing this injected material as foreign matter and rapidily sequestrating it in the reticuloendothelial (RE) system. Some preliminary research[8,36] has reported on this undesirable action from the therapist's viewpoint. By whatever means the body recognizes a foreign particle—size, electrical charge, composition, or coating—it is known that particles 1 micron or greater are deposited rapidly in the RE system,[41] and that particles of, for instance, fluorocarbon 0.4 microns and smaller, have a reported serum half-life of 4 to 6 hours.[42] Further in-vitro studies are necessary to improve the effective serum half-life and to develop a microcapsule membrane that can be completely eliminated from the body. Exciting possibilities for the future, in addition to providing functional artificial oxygen carriers, could well be: (1) the microencapsulation of a congenitally absent enzyme which might prevent the host from recognizing it as foreign protein and destroying it before it functions, and (2) mini-organ replacement by cellular encapsulation, based on the work of Algire et al,[43] in which ovarian tissue encapsulated in 2-cm-diameter compartments and implanted subcutaneously remained viable for extended periods.

Perfluorocarbons

Perfluorocarbons were developed during World War II to allow separation of uranium isotopes essential for producing the atomic bomb. It is ironic that the Japanese have used this same class of chemicals to produce a life-supporting fluid. Fluorocarbons are basically carbon-hydrogen chains in which all the hydrogen atoms have been replaced with fluorine atoms. Other related compounds have been developed which strictly speaking are not fluorocarbons, since they contain chemicals other than carbon and fluorine, and the term perfluorocarbon in this presentation applies to both groups. These chemicals are colorless, apparently nontoxic, have low surface tensions, are insoluble in water, biologically very stable, have low viscosity, and solubilize oxygen and carbon dioxide at a rate fifteen times greater than water; this last property makes it of great interest as a potential clinical oxygen carrier. The compound used by Clark and Gollon in 1966,[44] FC 80, in which they demonstrate the ability of mice to survive while completely submerged, caused the death of the mice after a few hours, probably due to the high vapor pressure of the fluorocarbon (FC 80) which expanded the lungs and produced respiratory insufficiency.

A search for more attractive compounds centered on commercially available products such as transformer coolants (FC 43). The medical grade, FC 47, or perfluorotributylamine, is extremely stable but remains in the body for long periods,[45] but a related compound, perfluorodecalin, is more rapidly removed.[42] Neither of these compounds could be infused in pure form due to immediate undesirable reactions. Also, to increase their effective serum half-life, the particles must be adequately dispersed since foreign particles greater than 1 micron are rapidly removed from the circulation by the RE system. The perfluorodecalins were impossible to prepare in a stable emulsion, but when mixed with perfluorotripropylamine and surfactants, a useful stable form resulted. Additionally, the solution should have effective oncotic properties to prevent undesirable fluid translocation.

Many solutions have been prepared seeking one that is nontoxic, stable, has an effective serum half-life, is eliminated in an appropriate manner, and is commercially expedient. The Green Cross Corporation of Osaka, Japan has prepared such a product, an emulsion of perfluorotripropylamine, perfluorodecalin, surfactant, glycerol, and hydroxyethyl starch, which has received extensive laboratory and clinical trials in Japan.* One report[46] of its use in this country to sustain a patient during surgery with a hemoglobin of 3.5 g/dL revealed that 27% of the oxygen delivery during surgery was provided by Fluosol-DA during a forced inspiratory oxygen (FIO_2) of 99.95%. There is no chemical combination of oxygen with the perfluorocarbons; they represent only solubility. At room air this is approximately 7.2 vol%, and although this represents some available oxygen it is acting essentially as a volume expander, but at an FIO_2 of 100% it assumes an integral part of the oxygen delivery system.

Although most investigators agree the perfluorochemicals are eliminated from the body, the exact sequence of disposal is unclear, although according to Beisbarth and Suyama[47] the PFCs are eliminated almost totally via the lungs, with some delayed release due to entrapment in the RE system. The intravascular half-life of these compounds seems to be dose-related, varying from 4 hours in subjects receiving 200 mL total[41] to 22 hours when Fluosol-DA (20%) was given at 30 mL per kilogram body weight.[48] Further development of this class of compounds could provide an excellent resuscitative fluid for emergency cases. The prototype fluid, Fluosol-DA, as alluded to, requires an FIO_2 of 100% to be effective, and this is disadvantageous. This drawback has apparently been corrected by the development of a 35% solution which requires only room air.† Other advantages are low unit cost, ability to be stockpiled for three years, no typing needed, and during major disasters does not require the facilities of a sophisticated blood bank, an obvious great merit in underdeveloped areas.

Summary

A brief background on whole blood replacement from the historical aspect has been presented. Some of the methods utilized to provide substitute oxygen carriers have been discussed. Stroma-free hemoglobin, although still promising, requires further research to decrease hemoglobin-oxygen affinity in the setting of hematocrits above 10% and to develop other hemoglobin compounds to improve storage characteristics. Microcapsules of nylon, silastic, or collodion encapsulating hemoglobin have been developed and have many exciting possibilities, but due to problems of oxygen affinity, rapid removal from the circulation, and hemoglobin instability, require more investigation. Perfluorocarbons, due to their unique chemical qualities, not the least important of which is their ability to dissolve relatively large amounts of oxygen and to off-load it acceptably at the cellular level, are currently undergoing extensive research and clinical trials. Another form of fluorocarbon, fluosol-43, has been developed to aid in perfusing organs such as cadaver kidneys. This alone could justify its development when it is estimated that about one half of harvested kidneys are lost before they can be cross-matched.† An intriguing concept by Chang,[49] substantiated by experimental studies, utilized microencapsulated urease in an extracorporeal system as a compact ar-

---

* Composition of Fluosol-DA (20%). The Green Cross Corporation

Ingredient	Amount (w/vol%)
Perfluorodecalin	14.0
Perfluorotripropylamine	6.0
Pluronic F-68	2.7
Yolk phospholipids	0.4
Potassium oleate	0.04
Glycerol	0.8
NaCl	0.600
KCl	0.034
$MgCl_2$	0.020
$CaCl_2$	0.028
$NaHCO_3$	0.210
Glucose	0.180
Hydroxyethyl starch	3.0

† From "Questions & Answers About Fluosol-DA," by Thomas C. Drees, President, Alpha Therapeutic Corp., Los Angeles.

tificial kidney. The surface area (720,000 cm^2) of only 10 mL of 20-micron-diameter microcapsules compared favorably to that of conventional artificial kidneys in lowering systemic urea levels.

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Addendum

Since completion of this article, several centers in this country have been involved in active clinical investigation of Fluosol-DA, and results of some of these investigational protocols are now being published.

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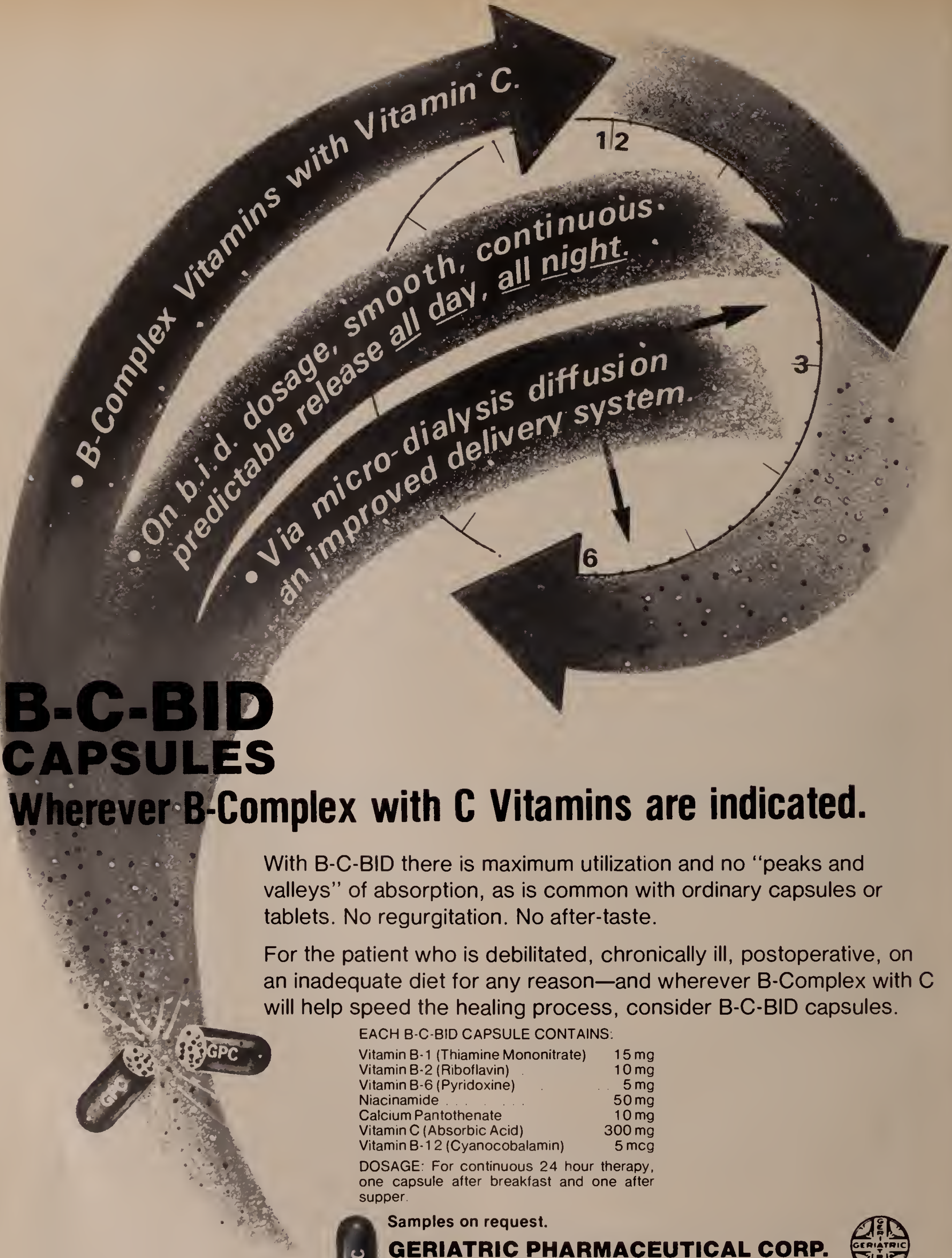
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Antismoking Program for Coronary-Prone Men

An evaluation study

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New York City

From the American Health Foundation

A 5-day multiple-treatment smoking cessation program was evaluated. It involved 22 men, aged 42 to 61, with elevated risk for coronary heart disease. They were classified "hard core" smokers because of failure to quit despite five years continual smoking cessation efforts. In the new program they learned new skills to quit and reduce further smoking urges through psychologic, social, physiologic, and behavioral techniques. One year after treatment, 50% remained abstinent as determined by serum thiocyanate (SCN) levels. The mean SCN among quitters decreased from 166 μmol/L (pretreatment) to a 12-month level of 35 μmol/L. It is concluded that multiple treatment emphasizing behavior change can effectively induce and sustain smoking cessation in high-CHD-risk men, previously refractory to individual treatment methods.

Finding an effective treatment for cigarette smoking has been a major concern to physicians for the past 15 years. The medical need for effective methods includes: (1) the substantial pulmonary and cardiovascular consequences of extended cigarette smoking, (2) the estimated large number of smokers (54 million) in the United States, and (3) the stated desire of many of these smokers to quit. A variety of individual smoking cessation techniques has been used such as behavioral modification, aversive methods,[1–3] covert sensitization,[4] and self-control techniques such as stimulus control[5] and contingency contracting.[6]

All these individual smoking cessation strategies have shown varying degrees of short-term success when used singly, but have only had 20% to 25% quit rates at one year.[7,8] It has been suspected that greater cessation results would occur if these techniques were used in combination. As a result, so-called multiple-treatment programs have been reported recently.[9,10]

Over 600,000 people in the United States die each year from coronary heart disease (CHD), more than from any other single cause. Many studies have shown that cigarette smokers have a higher sudden death rate, higher total mortality, and earlier onset of CHD than nonsmokers.[12,13] There is also evidence that the risk of death from CHD increases progressively as daily cigarette consumption increases.[14] Epidemiologic case-control and cohort studies have shown elevated CHD risk to decline sharply two to five years after quitting smoking.[15,16]

Primary prevention of CHD through smoking cessation remains a principal challenge to therapists concerned about preventive cardiology. Reviews of smoking cessation experience in longitudinal studies of CHD mortality have shown beneficial effects to ex-smokers in populations in the United States and in several European countries.[17]

The National Heart, Blood, and Lung Institute's Multiple Risk Factor Intervention Trial (MRFIT) is a six-year project involving 20 clinical centers to prevent CHD mortality in men aged 35 to 57 who at the project's onset were estimated to be in the upper 10% of risk for CHD by a three-factor multiple logistic analysis using Framingham-derived weights. From the trial's onset, all participants in special intervention status have received intensive therapies through the clinical centers designed to decrease serum cholesterol levels, lower diastolic blood pressure, and achieve cigarette smoking abstinence. In the trial, after four years, the smoking cessation quit rate is 44% among the 3,742 smokers at baseline.[18] Despite these intensive efforts, however, more than one half (56%) of these initial smokers persist. It is this hard-core group that the present study addressed.

Methodology

Evaluation design. Twenty-two male participants from the American Health Foundation's (New York Center) MRFIT population attended the five-day Stop Smoking Program. The men ranged in age from 42 to 61 years, had smoked for an average of 33 years, and consumed an average of 33 cigarettes per day.

The study design used the five-year observation period for the 22-man cohort as the control or comparison group. Because this was a feasibility study to determine whether or not a multiple-modality method could have an effect when individually applied methods had failed, the use of this control group method seemed reasonable. If the test were positive, that is, if feasibility was affirmed, then more elaborate controls could be developed.

Chemical vertification of smoking status was determined with the use of serum thiocyanate (SCN) measurements. The tests were conducted at pretreatment and at 3, 6, and 12 months post treatment. The thiocyanide radical is present in tobacco, oxidized to a cyanate form and readily detectable in blood using chemical methods. In nonsmoking, healthy subjects, SCN is in the range 0 to 50 μmol/L, and the half-life is about 14 days.[19] In this study SCN levels were used to corroborate participants' reported smoking status. In every participant, the agreement was complete between their self-report and the SCN measure.

Procedure. A flyer was sent to all current smokers in the New York City MRFIT Center. Its purpose was to create an air of much-needed optimism in these men about quitting smoking. It invited them to attend one of two explanatory sessions held at the American Health Foundation. There was aggressive recruitment among the MRFIT staff to contact all smokers to assure their awareness of this program. A total of 26 men attended the explanatory meetings, but due to schedule difficulties only 22 enrolled in the program. They were divided into two groups: the first contained 14 men who went through the program the week following the explanatory meetings; and a second group which contained eight men began two weeks later. All 22 attended the entire program.

The Stop Smoking Program consisted of four consecutive 1½-hour sessions on Monday through Thursday. It was a highly structured multiple-treatment program that intended to teach skills to achieve permanent abstinence from smoking. The program was based on the assumption that quitting smoking is easier when specific behavioral skills are available to the ex-smoker to handle the anticipated urges and desires to smoke. Every effort was made to convey in imaginative ways the health risks to the men involved with continued cigarette smoking under conditions of their high-risk status. For example, mock cigarette packages with amusing brand names such as "Halitosis 100's" or "Fools" were mounted on an easel outside the discussion room within easy view of all participants entering the room.

The program taught well-known behavior modifications and self-control techniques including:

1. Stimulus control: the altering of smoking antecedents.
2. Relaxation training: the use of deep breathing exercises and pleasant mental imagery to reduce stress associated with cravings.
3. Thought stopping: a procedure to extinguish repetitive thoughts about smoking.
4. Eating management: avoidance of foods and eating situations that triggered desires to smoke.
5. Incompatible behavior: the use of oral and manual substitutes like sugar-free candies and binder clips when smoking urges occurred.
6. Behavior rehearsal: imagination of desired nonsmoking behavior.
7. Cognitive coping: procedures for thinking positively about the quitting experience.

These techniques were all presented in a didactic format with the participants seated around a long table facing the instructor who stood at the front of the room. Over the course of the program, participants received a 65-page smoking cessation manual that presented that program's techniques and concepts.

The program also employed a mild aversive smoking procedure. The traditional stringent aversive (ie, negative) methods such as electric shock, rapid smoking, and the blowing of warm, smoky air have yielded the highest published quit rates. Unfortunately, these procedures may cause tachycardia or premature ventricular contractions so that they are contraindicated for those at high risk for CHD, such as the MRFIT population.

The negative method used included a procedure called "pinky puffing," consisting of having subjects smoke cigarettes in a manner that highlighted the negativity of cigarette smoking. Each individual held their cigarette in the opposite hand from which they usually smoked. Further, the cigarette was placed between the fourth and fifth fingers of that hand, an unfamiliar experience for most because cigarettes are usually held between the second and the third fingers. In addition, the participants were asked not to inhale the cigarette smoke but only to hold it in their mouth while blowing it out at the same rate that they would ordinarily smoke a cigarette. This procedure would last until two cigarettes were smoked down to the filter.

During "pinky puffing" the men did the following: they viewed a slide show which contained both positive and negative aspects of smoking. They flicked their ashes into ash trays that were filled with stale, smelly cigarette butts and ashes. They smoked cigarettes treated with antinailbiting solution which gave them a bitter taste. While smoking and watching the slide show, mildly irritating, low-decible "white" noise was played as background sound accompaniment. In summary, the mild negative-smoking procedure simultaneously affected all five senses: visual, auditory, olfactory, taste, and kinesthetic. Since cigarette smoking in this procedure is done casually, is not inhaled, but simply puffed, the procedure seems a safe one for virtually all treatment populations. All subjects tolerated it well.

Maintenance. Graduates of this program attended three once-weekly meetings after the program. At this time they verbalized feelings about quitting. In addition, they were urged to maintain contact with one another through a "buddy system." Further, they were frequently telephoned by a health counselor who would inquire as to their progress (Fig 1). Participants received a maintenance message manual that provided them with pep talks and sug-

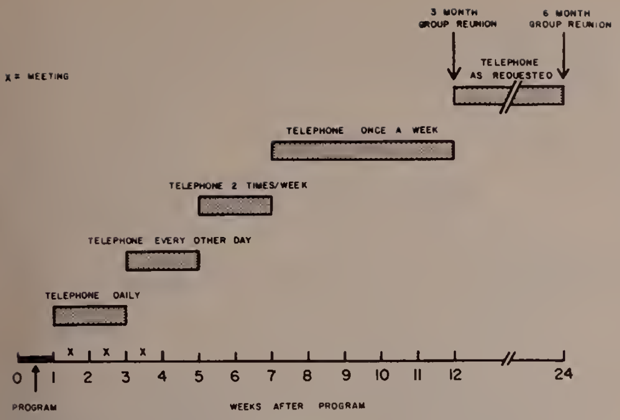

FIGURE 1. Smoking cessation program schedule and frequency of maintenance contact after treatment.

gested further skills for dealing with difficult situations. The self-control procedures taught during the treatment program were reinforced by telephone contacts during this maintenance phase.

A contigency contract was incorporated into the program as well. Participants paid a $25.00 fee to the program at the outset. They could earn this money back by remaining off cigarettes for three months. Smokers who had quit for six months were told that they would receive a bonus of an additional $25.00.

Results

At the end of treatment, 19 of the 22 men (86%) reported total smoking abstinence. Three months post treatment, 15 reported abstinence (68%); each had SCN levels less than 100 μmol/L.

At six months post treatment, 13 (59%) reported total abstinence from cigarette use. Again, these self-reports were confirmed by SCN levels; no reported ex-smoker had a SCN over 50 μmol/L. According to current concepts, these values are consistent with nonsmoking status. At one year post treatment, 11 (50%) were abstinent as confirmed by SCN levels (Fig 2).

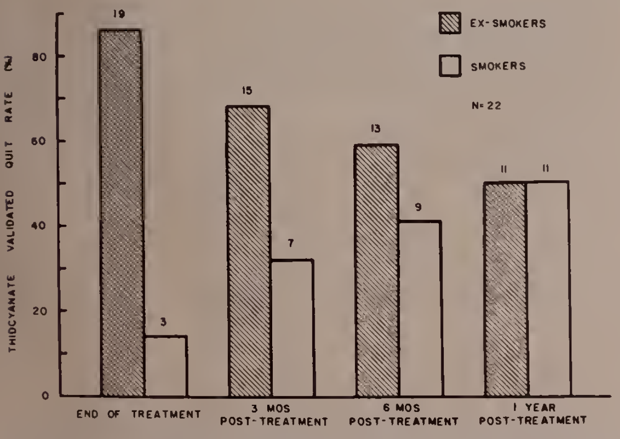

FIGURE 2. Thiocyanate-validated smoking cessation rates at end of treatment, 3 months, 6 months, and 1 year post treatment.

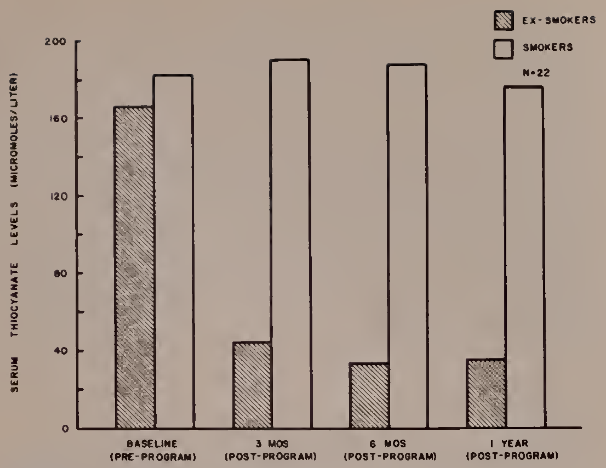

FIGURE 3. Serum thiocyanate levels (μmol/L) in ex-smokers and continued smokers.

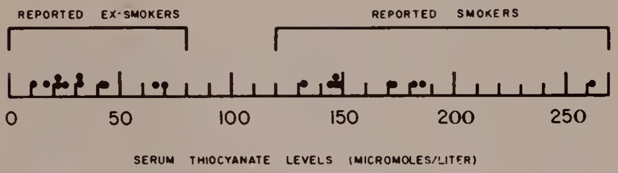

FIGURE 4. Serum thiocyanate levels 1 year post treatment.

The baseline SCN measures were altered significantly after treatment in those who quit smoking, from a pretreatment mean of 166 μmol/L to a 3-month post-treatment mean of 44 μmol/L, a 6-month level of 33 μmol/L, and a 12-month level of 35 μmol/L. In contrast, the mean SCN levels of the smokers remained virtually unchanged from a baseline level of 182 μmol/L, to 190, 187, and 175 μmol/L at 3, 6, and 12 months post treatment (Fig 3).

A scatter diagram of the individual SCN levels 12 months after treatment are shown in Figure 4, where the biomodality of the two populations is clearly

Baseline Demographic, CHD Risks, and Smoking Habit Characteristics of Participants

	Smoking Status One Year Post Treatment	
Characteristic	Ex-smokers	Smokers
Mean age (1979)	50.2	53.1
Mean education (years)	14.2	13.7
Mean baseline 6-year CHD risk	8.9	7.6
Mean no. years smoked	29.8	34.4
Mean no. estimated previous quit attempts	15.6	7.8
Mean reported cigarettes/ day at start of program	36	27.5
No.	11	11

shown as a result of the program. All the reported ex-smokers had thiocyanate levels below 100 μmol/L which are assumed to indicate nonsmoking behavior.

An analysis of the baseline demographic, CHD risk, and smoking habit characteristics of participants showed that participants who quit after the program were remarkably similar to those who continued smoking except for one measure: number of estimated previous quit attempts. The quitters had made nearly six times greater previous quit attempts (17.6 *v* 3.1) (see Table).

Comment

The feasibility of a multiple-treatment smoking-cessation technique seemed clearly indicated in this study. It tended to be considered a "cafeteria" approach whereby men could select the items they wished, and ignore the others.

The half-hour negative-smoking procedure including a mildly aversive set of procedures designed to reduce cigarettes' appeal was well tolerated by these men. Further, for most participants, it represented the only smoking done in the five days; as such, however, it reduced the tensions of quitting "cold turkey."

The chemical verification of results, including venipunctures at three and six months, was also well accepted. For many it meant an opportunity to prove they had quit, thus enabling themselves to get the $25 down payment returned, or the $25 bonus (at six months).

Interestingly, the men who quit had made five to six times more previous attempts to quit. As learning theories indicate, previous practice probably helped, especially in making useful selections among the multiple-treatment items offered in the program.

The overall program effectiveness results at one year (50%) were good, compared with most single-treatment methods. We are unaware of other treatments directed at a group previously so resistant to antismoking therapy; however, we suspect that these results would compare favorably with them.

Finally, we conclude that multiple-treatment methods are preferable for smoking cessation, even when the clinical group has resisted five years of previous efforts, and are at high risk for CHD. In considering treatment options for smokers found in clinical practices, we believe patients who smoke will fare better in cessation therapy when referred to programs using multiple-treatment approaches.

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Medication Use and Depressive Symptoms*

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A community survey revealed a significant association between medication use and depressive symptoms for minor tranquilizers and sedatives among women while nonsignificant increases in depressive symptoms were associated with the use of corticosteroids, contraceptives, antispasmodics, cardiovascular drugs and hypoglycemic drugs among women and respiratory drugs and other psychotropic drugs among both men and women. Reserpine-methyldopa antihypertensive drugs were not associated with an increase in depressive symptoms. The impact of drug-related depressive symptoms in the general population appears relatively minor although further study using specific diagnostic criteria and a prospective design are needed to verify this impression.

Many commonly used drugs have been implicated in causing or worsening symptoms of depression.[1] These symptoms may occur while the drug is being used or on withdrawal. In addition, it is sometimes difficult to determine whether the drug or the disease for which it is prescribed is the more important etiologic agent in the production of depression (eg, the use of corticosteroids in the treatment of lupus erythematosis).

Prominent among those drug categories reputed to have an association with depression are the minor tranquilizers and sedatives, oral contraceptives, corticosteroids, antibiotics, and certain antihypertensives. However, most studies of these facts have relied on anecdotal clinical reports which give little insight into the magnitude of this problem in the general population. In addition, these reports generally fail to compare the prevalence of depression among users of these drugs with that among nonusers in the general population. This report addresses these deficiencies by permitting the comparison of the prevalence of depressive symptoms among drug users and nonusers randomly selected from a general population.

Materials and methods

The present study is part of a larger interview survey carried out in Washington County, Maryland and Kansas City, Missouri in conjunction with the Center for Epidemiologic Studies (CES) of the National Institute of Mental Health (NIMH). Details of the sampling techniques have been reported elsewhere.[2] In both areas, one individual over the age of 18 was randomly selected for an interview by nonmedical personnel. The questionnaires used requested information on demographic characteristics, health status, and psychosocial factors with particular emphasis on depressed mood.

In this study, the index of symptoms of depression was derived from the Center for Epidemiologic Studies' depression (CES-D) scale.[2,3] This scale has a potential range of 0 to 60 obtained by summing the weighted number of days of the week preceding the interview during which the respondent experienced the feeling described by each item. This scale has demonstrated high internal consistency reliability, acceptable test-retest stability, and good construct and criterion validity in both clinic and community samples.[4–7] A cutoff score of 16 or above was used in the present study to identify individuals with high levels of symptoms of depression.[8] Also, recent studies have shown good specificity using similar cutoff scores, an important issue in the present study.[4]

As an index of recent medication use, the respondent was asked: "In the past 48 hours, what medicine or drugs have you taken?" The specific medications reported were then listed along with the reasons for taking them. Although, because of the nature of the study, it was not possible to stimulate the respondents' recall as has been done in other studies (eg, with charts, lists, etc.),[9–12] the interviewers were asked to verify drugs whenever possible from bottles.

All interviewers were middle-aged women, which may have biased the information obtained. The extent of this bias could not be accurately estimated, but an earlier report[13] demonstrated no significant differences in respondent reports of total medications used among the interviewers. A comparison of

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proportions or an association was judged to be significant if the computed chi-square value was larger than the tabled value for $P = .01$.

Results

A total of 771 men and 1,059 women respondents were included in the sample. Table I indicates the number and proportion of respondents using the major medication categories studied. Women were significantly more frequent users of analgesics, diuretics, and antihypertensives (both with and without reserpine-methyldopa), minor tranquilizers, contraceptives, and estrogens and vitamins than were men. In the other drug categories, men and women were similar in their use of medications. Table II lists the percentage of men and women with CES-D scores of 16 or more among users and nonusers of each drug category. Only two medication groups, minor tranquilizer and sedatives, showed significantly greater proportions of high CES-D scorers among users in comparison with nonusers; in both groups this was only true among women. In several other drug categories, including antidepressants, respiratory drugs, major tranquilizers (among both men and women), as well as antispasmodics, tranquilizer-antidepressant combinations and corticosteroids (among women only), the proportion of high scorers exceeded 30% of the total users but the numbers were too small to be statistically reliable.

TABLE I. Number and Percent of Men and Women Using Medications in Each Category

Medication	Men (N = 771) N (%)	Women (N = 1,059) N (%)
Analgesic	109 (14.1)	224 (21.2)[†]
Diuretics and antihypertensives	53 (6.9)	156 (14.7)[†]
Minor tranquilizer	33 (4.3)	98 (9.3)[†]
Contraceptives and hormones	··· (···)	90 (8.5)[†]
Vitamins	19 (2.5)	57 (5.4)[†]
Miscellaneous	42 (5.5)	55 (5.2)
Antihypertensives (R-A)[*]	21 (2.7)	53 (5.0)[†]
Cardiovascular	41 (5.3)	41 (3.9)
Hypoglycemics	15 (1.9)	37 (3.5)
Sedative	19 (2.5)	35 (3.3)
Cold remedies	33 (4.3)	27 (2.5)
Antibiotics	8 (1.0)	24 (2.3)
Antispasmodics	5 (0.6)	23 (2.2)
Thyroid medication	4 (0.5)	21 (2.0)
Topical	13 (1.7)	17 (1.6)
Antihistamine	15 (1.9)	17 (1.6)
Antidepressant	2 (0.3)	12 (1.1)
Antacid	8 (1.0)	14 (1.3)
Respiratory	10 (1.3)	6 (0.6)
Major tranquilizer	4 (0.5)	6 (0.6)
Combination tranquilizer-antidepressant	··· (···)	7 (0.7)
Stimulants	··· (···)	3 (0.3)
Corticosteroids	··· (···)	5 (0.5)

[*] Antihypertensives containing reserpine and/or methyldopa.

[†] Significant difference ($P < .01$) between proportion of men and women using medication.

TABLE II. Percent of Men and Women with CES-D Scores of 16+ Among Users and Nonusers of Each Reported Drug Category

Medication	Men (N = 771) Users (%)	Men (N = 771) Nonusers (%)	Women (N = 1,059) Users (%)	Women (N = 1,059) Nonusers (%)
Analgesic	11.9	11.2	23.2	17.8
Diuretics and antihypertensives	18.9	10.7	17.9	19.1
Minor tranquilizer	18.2	11.0	36.7[†]	17.2
Contraceptives and hormones	···	···	25.6	18.4
Vitamins	10.5	11.3	15.6	19.1
Miscellaneous	16.7	11.0	16.4	19.1
Antihypertensives (R-A)[*]	9.5	11.3	15.1	19.2
Cardiovascular	9.8	11.4	26.8	18.6
Hypoglycemics	6.7	11.4	29.7	18.6
Sedative	21.1	11.0	51.4[†]	17.9
Cold remedies	18.2	11.0	18.5	19.0
Antibiotics	25.0	11.1	20.8	18.9
Antispasmodics	0.0	11.4	30.4	18.7
Thyroid medication	0.0	11.3	9.5	19.2
Topical	8.3	11.3	11.8	19.1
Antihistamine	20.0	11.1	17.6	18.9
Antidepressant	50.0	11.2	33.3	18.8
Antacid	12.5	11.3	14.3	19.0
Respiratory	30.0	11.0	33.3	18.9
Major tranquilizer	50.0	11.1	33.3	18.9
Combination tranquilizer-antidepressant	···	···	42.9	18.8
Stimulant	···	···	0.0	19.0
Corticosteroids	···	···	60.0	18.8

[*] Antihypertensives containing reserpine and/or methyldopa compounds.

[†] Significant difference ($P < .01$) between proportion of users with CES-D scores of 16+ compared to proportion of nonusers with CES-D scores of 16+.

Comment

Several characteristics of the present survey tend to differentiate it from prior studies of medication use. The relatively short time interval (48 hours) about which the respondent was queried was selected both to maximize recall and to determine, as closely as possible, current drug use. In its brevity, the interval differs from other studies which covered time periods of from one month to one year.[9–11,14] Since the primary focus of the present survey was on aspects of depression, relatively little time could be devoted to detailed inquiry concerning drug use, as has been the practice in other studies.[9–12,14,15] Several authors have commented on the relative underestimates which may occur in such a survey.[12,16] Our belief was that the short duration of time and the ascertainment of exact information from bottles, etc., minimized this bias but we have no direct way of measuring its effect on the present data. However, comparison of the rates obtained in this survey with similar data from surveys covering longer time intervals tends to support this assumption.[17] Also, the fact that the present data were collected in approximately equal weekly samples over a two-year period tends to minimize any seasonal bias.

Another limitation of the present findings relates to the diagnosis of depression. Scores on the CES-D of 16 or above have been shown to be associated with clinically recognizable depression.[3,4] While such a score is not synonymous with clinical depression, earlier studies have found this to be a reasonably good cutoff for separating respondents into depressed and nondepressed.[4] An earlier study has shown a low false positive rate (7%) using this cut off although the false negative rates were higher, suggesting that some depressed respondents may fail to be detected using this screening instrument.[4] For this reason, the present findings must be interpreted cautiously since the dependent variable essentially represents the prevalence of substantial depressive symptoms rather than clinically diagnosed depression. Moreover, if depressive symptoms were to vary systematically as a result of the use or nonuse of medication independent of the presence of clinical depression, this would affect the results in unpredictable ways. However, with the exception of reserpine (to be discussed), we are not aware of such an effect. This issue requires further study since it is crucial to our understanding of the interaction of drugs and affective disorder. Finally, the relatively small sample size of users in any drug category precludes adjustment of the present findings for age. Despite these limitations, the present findings provide a unique perspective on the magnitude of drug-associated depressive symptoms the community.

Only two categories of medication were associated with a significantly higher proportion of high CES-D scorers for users than nonusers (minor tranquilizers and sedatives) and this was only true among women although a similar trend was found for men. This finding is of particular importance in view of reports that depression, when recognized, is frequently treated with these categories of drugs which have been shown to be of little benefit in the treatment of depression, *per se* (although they may assist with certain specific symptoms such as insommnia).[18–20] In addition, a report has suggested that diazepam (Valium), the most frequently prescribed minor tranquilizer in this study, may, in high doses, cause depression in nondepressed individuals.[21] Thus, while the cross-sectional nature of the present study does not permit us to establish the direction of causality for this finding, either interpretation (ie, that the drug has caused the depression or that it is being used to treat the depression) must be considered potentially hazardous. The implications of this finding have been discussed in an earlier report.[17]

Oral contraceptives have been suspected of causing depression in susceptible individuals, perhaps through pyridoxine deficiency.[22] The data substantiating this assertion are conflicting.[23–28] Although the total proportion of high CES-D scorers among contraceptive users (25.6%) is not significantly greater than among nonusers, the present findings must be examined in the light of Leeton's[29] finding of a 15% incidence of depression in contraceptive users. While the present rate of depressive symptoms among contraceptive users exceeds that figure, the availability of a comparison group of nonusers whose rate also exceeds that rate suggests that, to identify any effect of contraceptive use, the base rate of nonusers must first be taken into account. Thus, the present findings suggest that any depressogenic effect of oral contraceptives may be relatively minor against the backdrop of spontaneously occurring depressive symptoms.

As might be anticipated, those respondents using antidepressants and major tranquilizers had greater proportions of high scorers on the CES-D than nonusers, perhaps reflecting the receipt of treatment for a diagnosed disorder. However, since the duration and dosage of current medication use was not assessed, it was not possible to determine whether the continued presence of high levels of depressive symptoms represented merely the fact that antidepressant therapy had been recently initiated and remission had not yet occurred or whether these respondents were receiving inadequate dosages of these drugs for some time which had failed to induce a symptomatic remission.

A less expected finding was the relatively high proportion of users of respiratory medications and, among women, antispasmodic agents, who had high CES-D scores, although both groups may be expected to contain a relatively high proportion of medically ill persons with associated psychologic problems. A final group which was quite small (N = 5) but which contained the highest proportion (60%) of high CES-D scorers was the group using corticosteroids. In view of these agents' known potential for induction of affective disorders of sometimes psychotic proportions,[30] the present finding suggests that patients taking these drugs require careful continuous monitoring of their mood to detect potentially serious depressive features either resulting from the use of steroids or, possibly, from the disease for which these drugs were prescribed. This finding also suggests that the previously reported incidence of 36% of "mental changes" (chiefly depression and euphoria) among patients receiving exogenous corticosteroid therapy may be an underestimate.[31]

In the area of negative findings, the lack of association of high CES-D scores with the reserpine-methyldopa group of antihypertensives suggests the need for further study of the putative depression-producing potential of these agents, especially since reserpine has been recently suggested as an effective alternative to neuroleptic agents for the treatment of psychotic patients with tardive dyskinesia. Goodwin and Bunney[32] summarized nine studies which showed a 20% average incidence of depression among hypertensive patients treated with reserpine and a range of 0% to 26%, not dissimilar to the present finding of 15.1% prevalence of depressive symptoms among women. They also estimated a prevalence of 6% of "major" or "true" depression among these patients receiving a dose of from 0.5 to 10.0 mg of reserpine for one-half to 24 months in these studies. However, they also cite a prospective study of 50 patients treated with 1 to 5 mg per day of reserpine for 12 to 18 months in which not a single case of depression was found although 12 (24%) were reported to be "slowed down or overtranquilized." [33]

They stressed the need to distinguish between "depressive-like" symptoms[34] (eg, lethargy, decreased psychomotor activity, insomnia, and anhedonia) which Ayd[35] has called "pseudodepression." Ayd found that 23 of 70 patients referred to him for "reserpine-induced depression" actually suffered from this side effect and concluded that it is impossible to definitely identify the role of reserpine in causing depression. Patients with "pseudodepression" tend to have an absence of the more psychologic symptoms of depression (feelings of guilt, worthlessness, crying spells, suicidal thoughts, etc.). Since the CES-D consists primarily of the latter symptomatology, it is less likely to have included "pseudodepressed" respondents as high scorers, perhaps, in part, accounting for the findings in Table II.

Finally, the one clear relationship between reserpine use and depression appears to be mediated by a history of prior depression. The fact that 50% or more of persons with such a prior history will develop depression when taking resrpine as compared with less than 10% of persons without such a history suggests that reserpine is primarily responsible for precipitating a depression in susceptible individuals rather than causing it *de novo.* These present findings would suggest that current prescribing practices do not expose hypertensive patients to an increased risk of depression from these agents.

A few other drugs (notably cardiovascular and hypoglycemic agents among women and antibiotics among men) showed a nonsignificant increase in depressive symptoms which may represent the presence of depression secondary to the underlying medical condition.

The present findings suggest that the overall impact of medication-associated depressive symptoms in the general population is relatively small and confined primarily to the use of psychotropic drugs. Some medications traditionally linked to the occurrence of depression showed little (eg, contraceptives) or no (eg, reserpine/methyldopa antihypertensives) excess of high scorers over the nonuser population. An exception to this statement is the substantial excess of high scorers among users of steroids although the number of such respondents was too small for meaningful analysis (N = 5). Finally, a number of medications not generally thought to be causally linked to depression showed a nonsignificant excess of high scorers, probably as the result of depression secondary to the condition for which they were prescribed.

The present study affirms the need for comparison groups of nonusers if prevalence rates of psychologic symptoms among medication users are to be meaningful. Future research in this area should focus on the application of operationally defined diagnostic criteria to matched groups of medication users and nonusers of adequate size followed over time to explore possible etiologic associations between drug use and depression.

Such a strategy is especially indicated since, because it was not feasible to obtain detailed past medication histories in the present study, it is possible that some respondents had experienced depressive symptoms in the past while receiving a given medication and have subsequently discontinued that medication, thus falling into the current nonuser group.

Finally, the present findings support the need for medical practitioners to systematically assess medically ill patients for the presence of significant depressive symptoms whether primary or secondary to either medication use or the underlying medical illness and to institute appropriate therapy where indicated. In particular, the use of minor tranquilizers or sedative agents in the presence of significant depressive symptoms must be questioned as potentially hazardous.[17]

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Violence in elderly patients

The stereotype of the little old lady wielding a cane to ward off a supposed attacker is in need of revision. The weapon of choice today, according to a Vanderbilt University psychiatrist, is more likely to be a gun or a knife.

Writing in the July 23/30 *Journal of the American Medical Association*, William M. Petrie, M.D., reports that an appreciable number of elderly patients commit acts of violence. This is in contrast to the popular image in which the elderly are almost always regarded as the victims of violence.

Petrie, and his coauthors found that 139 of 222 patients surveyed in a geriatric unit of a state psychiatric hospital had committed or threatened violence, with or without weapons.

Eighteen of the patients had committed violent acts, 12 with guns. These patients, who had a mean age of nearly 74 years, were classified for the purposes of this study as violent. An additional 121 patients had committed or threatened violence without using weapons and were categorized as aggressive rather than violent. The remaining 83 patients were considered nonaggressive.

The aggressive patients, in contrast to those categorized as violent, were more likely to have behavior problems caused by brain tissue damage, according to Petrie. Many of the aggressive patients had degenerative brain disease accompanied by memory loss, time and place disorientation, and general confusion. Their outbursts were reflexive rather than premeditated and were less likely to be dangerous.

Most of the violent patients had paranoid delusions unaccompanied by demonstrated brain tissue damage but, unlike the aggressive patients, were not confused or disoriented and were capable of premeditated acts. In only one of the violent patients was a history of violence documented before age 60.

Paranoid thinking, access to firearms, and previous experience with assaults or having their homes broken into appeared to predispose the 18 patients to violence, Petrie writes.

Treatment of violent behavior, primarily with antipsychotic drugs, was often successful, Petrie reports. Aggressive patients, on the other hand, were more often successfully treated in a structured, supportive environment designed to reduce fear and confusion.

The hospitalized patients in this study represent only a small segment of the elderly population, Petrie acknowledges, and the findings should not be generalized for all elderly psychiatric patients.

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[1] *Promoting Health/Preventing Disease Objectives for the Nation* U S Department of Health and Human Services, November 1980
•An *in vitro* simulation of gastric ulcer acid level conditions based on standard laboratory methodology Data on file Ayerst Laboratories Acid-neutralizing capacity of RIOPAN and RIOPAN PLUS = 13 5 mEq/5 ml or tablet

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Electrocardiograms of the Month

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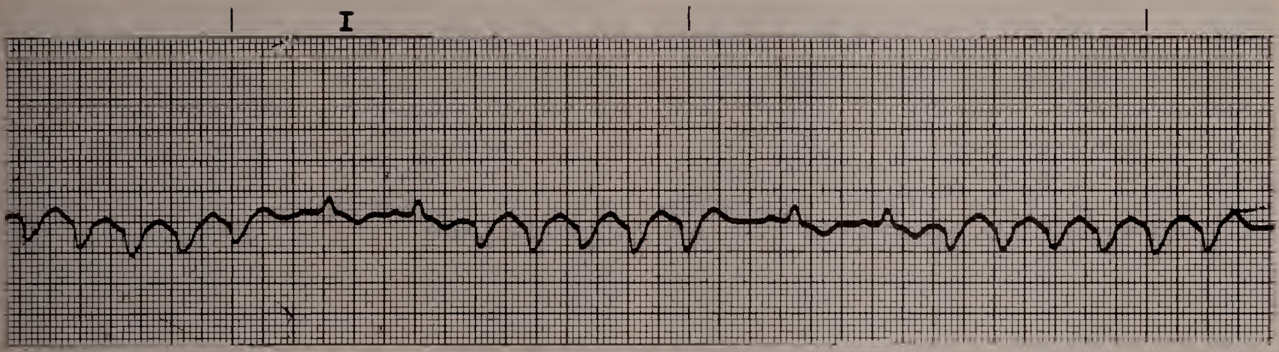
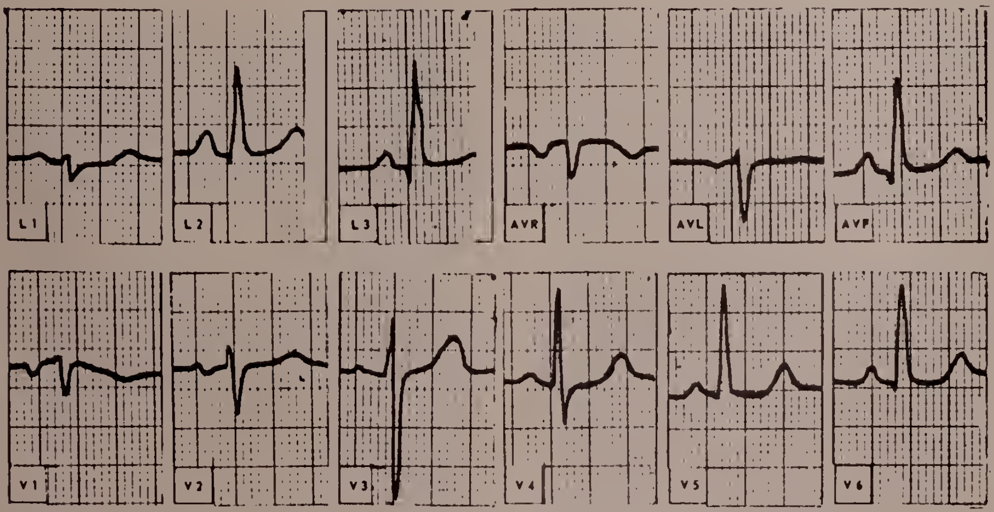
Head, Department of Electrocardiography
JULIAN FRIEDEN, M.D.
Associate Head, Department of Electrocardiography



QUESTION 345. Lead I obtained on admission from a 76-year-old woman admitted for severe congestive heart failure. What is the rhythm?



QUESTION 346. This electrocardiogram was obtained from a 58-year-old heavy smoker complaining of dyspnea on exertion. What is the interpretation?

Electro-
cardiograms
of the Month

ELUCIDATION

Answer 345. Two forms of QRS complexes are present. The downwardly directed QRS complexes are wide and regular at a rate of 180/min. The wide QRSs are interrupted by upright QRS complexes with a normal duration; these are preceded by P waves. P waves are not seen during the tachycardia. Plotting the PP interval reveals that the atrial rate remains constant throughout the tachycardia.

The upright QRS complexes represent regular sinus rhythm at a rate of 100/min.

During the rapid tachycardia the atrial and ventricular rates are independent. The tachycardia with wide aberrant QRS complexes is therefore a ventricular tachycardia.

Answer 346. The rhythm is regular sinus. The P waves are peaked in II, III, and aV_F. The height of the P wave in lead II is 2.5 mm.

An inverted P wave is present in V_1, 1.0 mm deep and 0.06 sec in duration. There is right axis deviation with the mean electrical axis of the QRS in the frontal plane of +100°. The QRS and ST segments and T waves are normal. The QT is 0.42 to 0.44 sec in duration. The ventricular rate cannot be determined.

The right axis deviation in conjunction with the peaked P waves in II, III, and aV_F suggest, but are not diagnostic of, cor pulmonale. The negative P wave in V_1 and the biphasic P wave in V_2 may indicate left atrial abnormality.

Hugging can help stopped heart, researcher says

Romantics say that hugging warms the heart. Now a researcher says that hugging can replace the heart temporarily when its pumping action fails — as in cardiac arrest.

"When the heart is not beating," said Howard S. Goldberg, MD, at the Annual Meeting of the American Lung Association and its medical section, the American Thoracic Society, "blood can still pass through it. If the heart cannot independently maintain circulation, simple physical principles can be used as a temporary substitute, to maximize current cardiopulmonary techniques."

Dr. Goldberg has been working on developing an abdominal restraint which "hugs" the abdomen. This allows pressure in the thorax to increase more than it ordinarily would, and enhances movement of blood from the thorax into the circulation.

"The lungs are used as an accessory pump, with appropriate use of ventilation," he said.

A pneumatic jacket, or jerkin, Dr. Goldberg said, also is being developed for use in hospitals and other emergency settings. This new technique would have less potential for trauma to the chest since the entire chest would be "hugged" rather than undergoing force delivered at a single point on the thorax.

Dr. Goldberg's paper, "Hugging and Kissing for Survival," was presented today at the Symposium on Cardiopulmonary Resuscitation which he chaired. The symposium was sponsored by the American Thoracic Society Scientific Assembly on Clinical Problems at the Annual Meeting of the American Lung Association/American Thoracic Society. More than 4,000 persons are attending the Annual Meeting.

The American Lung Association is the nation's oldest voluntary health agency. Founded in 1904 to combat tuberculosis, it is concerned today with all aspects of the lung and lung health.

Radiologic Problem of the Month

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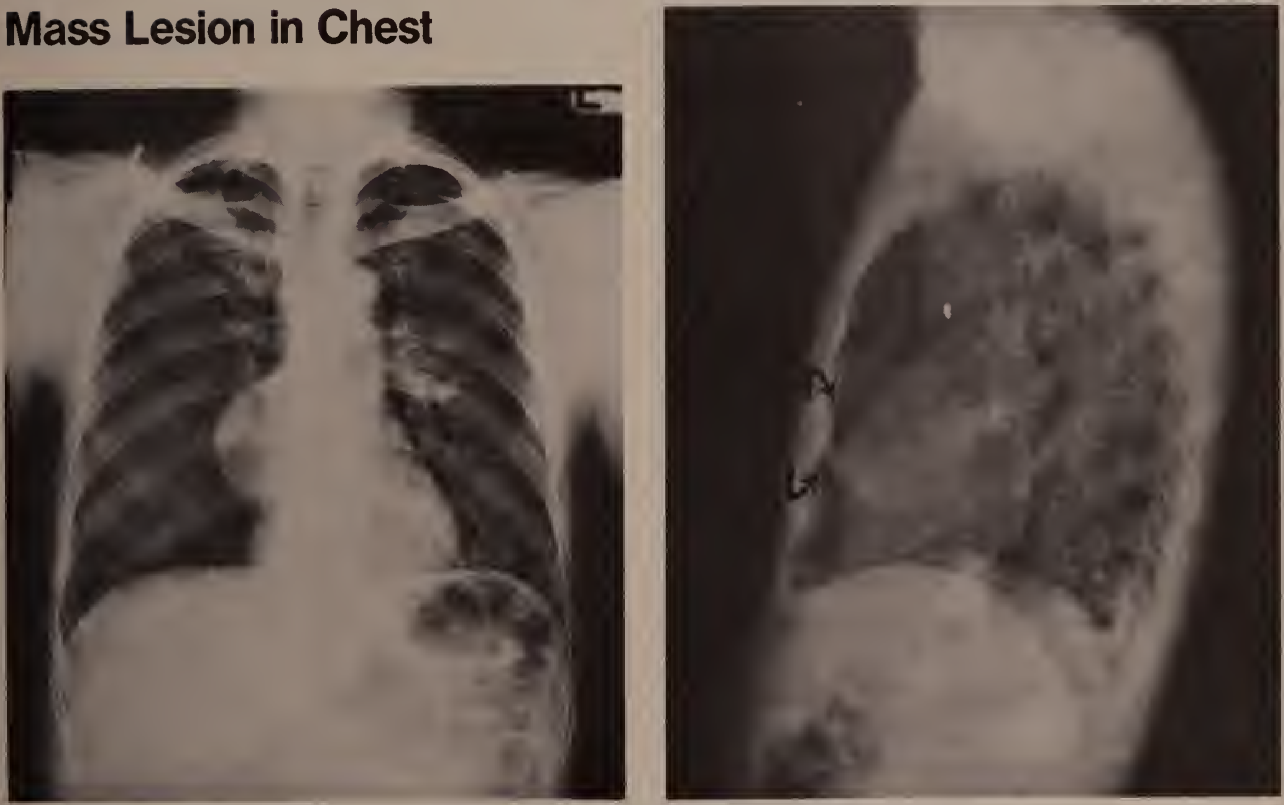
Mass Lesion in Chest



A 56-year-old asymptomatic man appeared with an abnormal radiograph of chest.

Elucidation

The posteroanterior view of the chest reveals a smooth and dense opacity overlying the right hilum (Figure, left). The medial border of this otherwise well-circumscribed mass merges with the cardiovascular silhouette, indicating this to be located in the anterior mediastinum. Lateral view of the chest confirms this finding (Figure, right).

The mass is homogeneous and calcification is not present either in the center or at the periphery. A "sulcus sign"—a biconcave border along its anterosuperior and inferior margins—is present (Figure, right, curved arrows). This indicates that the mass is firm, as opposed to a soft mass which gets flattened against the sternum.

In the analysis of an anterior mediastinal mass, a number of radiologic features should be taken into consideration to narrow the differential-diagnostic possibilities. This low-lying mass does not affect the trachea by compression or deviation and it does not extend into the neck. Thus, a thyroid mass can be ruled out. A pericardial cyst may be considered, but the most common site for a pericardial cyst is at the cardiophrenic angles, and it is generally oval in shape and sags down when in the erect posture. Bronchogenic cyst is more common in the middle mediastinum and hence these two possibilities are unlikely.[1,2] At the age of this patient, a bronchogenic carcinoma may appear as a mass, but lack of clinical signs and noninvolvement of the adjacent lung structure and a smooth border negate this diagnosis. The most logical entities to be considered are lymphadenopathy, and teratoid and thymic tumors. Lymphadenopathy, whether of the benign or malignant etiology, appears as a lobulated mass and generally involves other sites such as paratracheal or carinal area. This mass is unicentric and well-defined and hence lymphadenopathy is ruled out. Teratoid lesions, eg, dermoids, germ cell tumors, are said to account for 16% to 28% of mediastinal masses, and the mediastinum is the third most common site.[3] The presence of calcium, tooth, bone, and fat identifies this lesion which mostly appears at a younger age than in the sixth decade of life. Hence, by the process of elimination, this mediastinal mass has to represent a thymoma. In the absence of infiltration into the adjacent structures and distant metastases, it is difficult to differentiate benign from malignant thymoma.

Thymoma is the most common anterior mediastinal mass in the older age group.[3,4] It is commonly located just above the heart and is usually a solid mass and when cystic has a dense fibrous capsule. The incidence of malignancy is about 20% to 30%. Although myasthenia gravis is associated in 10% to 15% of the time, other less associated manifestations include aregenerative anemia, Cushing's disease, Grave's disease, and acquired hypogammaglobulinemia.[4] Radiologically, a smoothly outlined mass is seen in the anterior mediastinum. Rarely, the periphery of the mass shows a rim-like calcification. Ultrasonography and computerized tomography do not generally contribute to differentiating thymoma from other masses.

This patient, in view of the malignant potential of this mass, underwent surgery and this proved to be a benign thymoma.

Diagnosis

Benign thymoma

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MD plays nurse for a week, gets exhausted

As director of adult critical care medicine at Newark, New Jersey's United Hospitals, Aloysius Cuyjet, MD, wondered about the high turnover among intensive care nurses.

So the 34-year-old cardiologist decided to shed his usual responsibility supervising the 12-bed intensive care unit and don a scrub suit to work as an RN.

"After my first day," Dr. Cuyjet told senior editor Sari Staver in an interview that appeared in the Jan. 1 issue of *American Medical News*, "I realized that until that time I really had no concept of what a nurse's job was like. Physically the work is exhausting. I can't remember ever being as tired, even during my days as an intern or resident."

On that first day, Dr. Cuyjet was assigned to help care for a patient with chronic leukemia whose temperature was peaking at 106 degrees F.

After spending more than an hour giving the patient an alcohol bath and changing linens, he found the bed clothing and linens drenched again and had to start from scratch.

Dr. Cuyjet remembers it as being a rude introduction to intensive care nursing. But in contrast to his own laborious efforts at the task, he recalls being impressed at how nurses were able to change a patient's clothing and bed linens without ever getting the patient out of bed.

"It's something we take for granted," he said, "but it's really quite amazing that the patients don't have to be disturbed."

More than that, though, he came away with the realization that nurses are far more knowledgeable than he had presumed.

Not everyone shares that opinion, however, as he found out by watching the reactions of other physicians to unsolicited suggestions. Some physicians, he noticed, became irritable when nurses commented on a patient's therapy and others seemed to feel threatened.

As a possible remedy for this, he suggests similar first-hand experience.

Although Dr. Cuyjet had hopes that his stint as a nurse might lead to changes that would improve the nurses' lot in the United Hospitals' ICU, he now is resigned to the fact little will change.

Unfortunately, the problems he encountered — a grueling workload and friction among the staff — are, he believes largely endemic to the whole profession.

What's more, nurses receive few rewards, salary and otherwise, for their contributions to patient care — contributions that he found could make the difference between life and death.

The response to Dr. Cuyjet's week as a nurse was overwhelmingly favorable, at least on the part of the hospital's nurses. He has even received messages of congratulations from nurses at other hospitals.

"Really," he says, "anyone who understands the tremendous job nurses do has got to have a tremendous amount of respect for them."

Interscholastic Athletics

Method for selection and classification of athletes

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Student eligibility for interscholastic athletics has traditionally followed the arbitrary guidelines of age and grade level. The guidelines have existed despite the realization that there are broad ranges in physiologic maturation of children of the same age. Additionally, these guidelines have created difficulties in athletic scheduling in school districts between those that do and those that do not have intermediary schools.

In an attempt to evaluate more objectively the child's readiness for participation in a specific sport at a specific level of competition, New York State's Public High School Athletic Association (NYSPHSAA) constructed an experimental program to collect and review criteria for eligibility. The program, designated Selection/Classification, was designed to determine if eligibility could successfully be established on new norms based on physical maturity, fitness, skill, prior sports experience, and the demands of the given sport. The success of the program was to be measured by the provision of an increased opportunity for personally satisfying competition for the athlete, while at the same time assuring an acceptable level of success and safety. Following is a review of that experience.

Method

The program. The State of New York Department of Education provided a grant in 1973 for a project entitled "Selection/Classification Program." The focus of the program was to determine students' readiness for interscholastic competition by employing criteria other than traditional age and grade. Participation in the program was available to school districts in New York State on a voluntary basis from 1974 to 1979. All students registered in participating schools in grades seven through 12 were eligible to request participation in an available sport at a level that would otherwise be disallowed by age and grade criteria.

Data collection. Approval from the chief school officer was required to employ the Selection/Classification procedure. Once this approval was granted, students who requested to qualify for participation and placement were required to undergo the following evaluation:

I. Approval by chief school officer
II. School sports physician
    A. Medical examination
    B. Stage of sexual maturation
III. Physical education personnel
    A. Height, weight, age
    B. Physical fitness achievement level
    C. Skill
    D. Prior sports experience
IV. Director of safety—research—NYSPHSAA
    A. Evaluation and approval
V. Coach
    A. Assessment in standard tryout
    B. End of season evaluation—injury, participation, success, skill
VI. Director of safety—research—NYSPHSAA
    A. Evaluation of data

Medical examination and stage of sexual maturation. A complete medical evaluation was performed by the school physician to provide medical clearance for participation. A component of this evaluation was to establish and score the stage of sexual maturation. This technique employed the scaled picture model of pubic, facial, and axillary hair for boys (Fig 1A). For girls, the developmental age was established based on the years past menarche (Fig 1B).

[†] Deceased.
[*] Presently Associate Producer, CBS Sports.

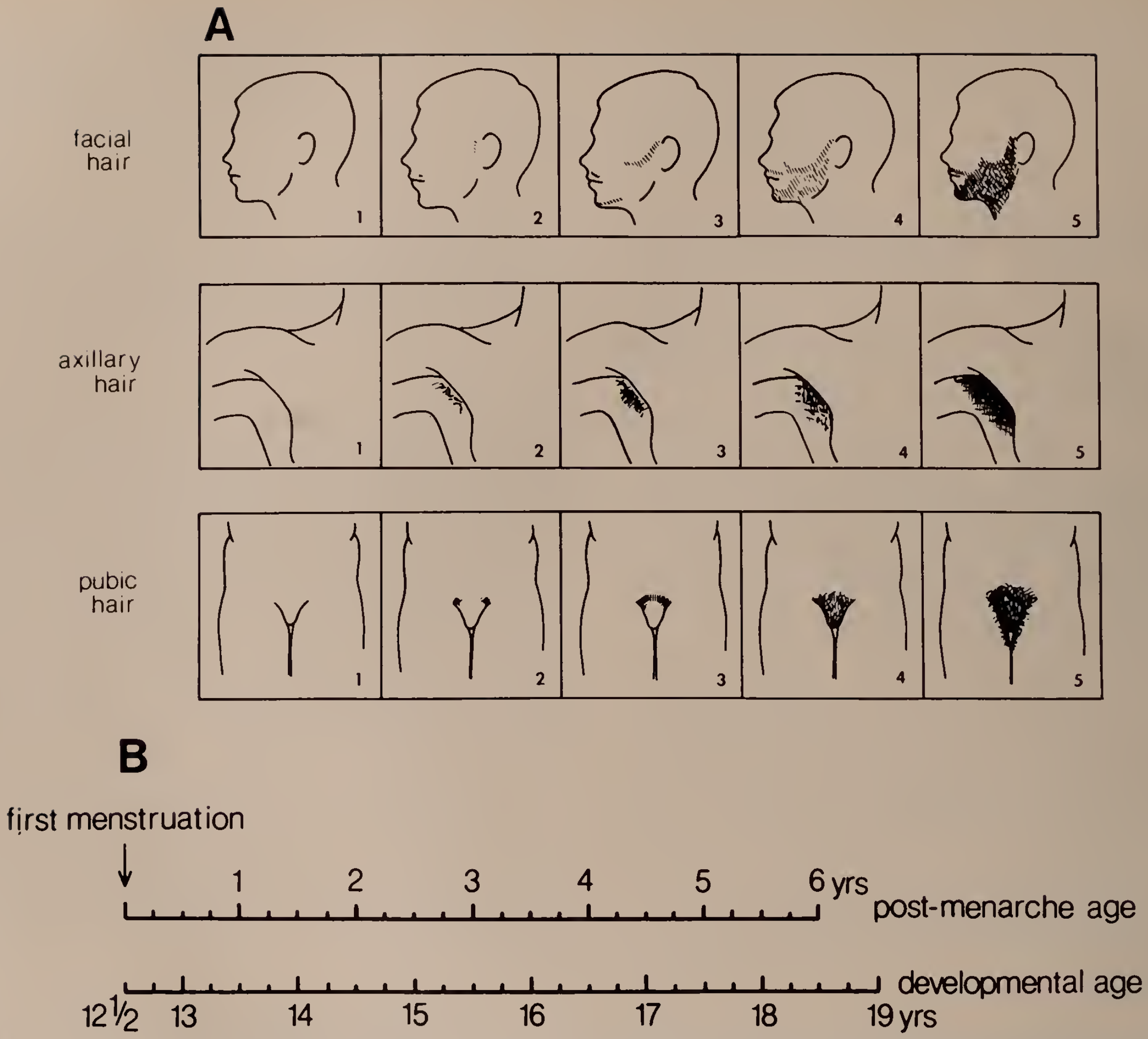

FIGURE 1. (A) Medical screening test to determine stage of sexual maturation. (B) Scale to determine physical maturity of girl: mark point on first line below to indicate months and years elapsed since first menstruation. Point directly below on second line shows developmental age rating to use.

Table I. Results of Prescreening of 3,190 Female Athletes for Years 1976 to 1979

Team	Number	Age Yr-Mo	Wt (lb)	Ht (in)	Postmenarche	Developmental Age
Varsity	**1,976**	13-6	109.4	62.6	1.0	13.5
Strenuous	1,728	13-6	108.1	62.5	0.9	13.4
Moderate strenuous	244	13-9	118.7	63.1	1.4	13.9
Nonstrenuous	4	13-5	144.8	62.5	0.8	13.3
Junior Varsity	**1,155**	13-6	110.1	62.9	1.0	13.6
Strenuous	839	13-6	110.4	62.8	1.0	13.6
Moderate strenuous	313	13-8	112.8	63.1	1.0	13.6
Nonstrenuous	3	13-9	115.7	64.0	0.9	13.4
Modified	**59**	13-1	102.9	61.7	0.7	13.1
Strenuous	44	13-1	102.6	61.4	0.8	13.7
Moderate strenuous	13	13-4	107.6	62.5	0.4	12.9
Nonstrenuous	2	11-9	95.5	61.0	0.1	12.5

* Achievement level.
Totals in bold print.

Physical education assessment. On receipt of medical approval, the physical education staff of the participating schools, through coordination by the athletic director, accumulated the following information:

1. Height, weight, and age.
2. Physical fitness achievement level: This assessment, based on previously established norms on New York State physical fitness tests, consisted of the test of agility, strength, speed, and endurance. Agility was measured by the side-step test, with a raw score representing the number of lines crossed in 10 seconds. Strength was evaluated by the number of sit-ups performed in one minute for girls and in two minutes for boys. Speed was assessed by the time required to run 60 yards for girls and 120 yards for boys, depending on the level of competition requested. Endurance was measured by the number of squat thrusts achieved in 30 seconds by girls and in one minute by boys. From the raw score values of each test, an individual achievement level was determined based on prior standards. Additionally, a total achievement level was established by the summation of the individual tests.
3. Skill: a physical education instructor or coach assessed the performance skill of the student and graded it to be superior, above average, average, or below average. This decision was based on the demands of the specific sport selected by the student and the level of play (varsity, junior varsity, etc) for which the student was endeavoring to qualify.
4. Prior sports experience: a physical education instructor acquired a history of the success of the pupil during previous participation in organized sports programs, including participation in programs outside of school.

Evaluation and placement. All the preceding information was recorded on an athletic data profile form which was sent to the director of safety and research of the NYPHSAA. A determination of the readiness of the student to try out in a specific sport at a requested level of play was made. The potential levels of requested placement included high school varsity, junior varsity, and freshman teams, as well as junior high modified A, B, and C programs. These modified programs represented existing competitive teams with age and grade criteria, but with rule modifications to accommodate the developmental capabilities of the participants. A single individual decided on the readiness for participation of each athlete. At the inception of the study, the criteria for approval were developed by an advisory committee comprised of physical educators and physicians. The criteria were based on the stage of sexual maturation, physical fitness achievement level, and skill of the athlete and his or her prior sports experience. As the study progressed to its conclusion, the criteria were revised by determining the characteristics of the most successful performers (regulars on their requested teams) and developing the standards from these individuals' screened results. Approval for participation permitted the athlete to try out for a team, but it was left to the coach to select the students for his or her team. The coach employed the same criteria used for all students trying out for that team.

Students not meeting the required standards were notified of areas needing improvement and were permitted to request retesting at a later date. Students were also allowed to request participation in multiple sports at the initial evaluation and did not have to apply for the same level of competition (varsity, junior varsity, etc) in a subsequent year.

End-of-season evaluation. At the conclusion of the sports season, participating schools were required to complete a form on each athlete approved for competition under Selection/Classification. This form included information on the following:

1. Injuries: each injury sustained by an athlete was recorded with an indication of the duration of time lost before returning to competition. This included categories of one to seven days, eight to 15 days, 16 to 30 days, and 31-plus days.
2. Participation: the degree of participation of the athlete was assessed by determining if the child dropped out, practiced only, played only as a substitute, or played as a regular.
3. Degree of success: the degree of success of the

Table I. ***(Continued)***

Agility		Strength		Speed		Endurance		Total	
Raw	AL*	Raw	AL*	Raw	AL*	Raw	AL*	Raw	AL*
18.5	7.2	35.6	9.3	14.2	7.6	18.0	8.5	32.7	9.5
18.5	7.3	35.8	9.4	14.2	7.6	18.0	8.6	32.7	9.5
18.5	7.2	34.2	8.8	14.1	7.6	17.9	8.3	32.5	9.4
17.0	6.0	34.0	9.0	14.8	6.5	17.8	8.0	29.5	8.5
18.2	7.4	35.5	9.3	14.3	7.4	17.9	8.3	32.1	9.4
18.2	7.4	35.3	9.3	14.3	7.4	17.8	8.3	32.1	9.4
18.3	7.4	35.9	9.5	14.4	7.4	18.2	8.3	32.2	9.4
18.3	7.7	34.3	9.3	13.8	8.3	15.7	7.7	32.7	9.7
17.2	7.4	32.7	8.6	14.5	6.9	18.7	8.1	30.9	9.0
17.2	7.0	33.2	8.8	14.2	6.4	18.8	8.2	31.2	9.1
17.3	7.6	30.6	8.1	14.6	6.7	16.6	7.5	30.0	8.8
17.0	7.5	30.5	8.0	14.0	8.0	34.0	10.0	33.5	9.5

Table II. Results of Prescreening of 3,469 Male Athletes for Years 1976 to 1979

					Developmental Age		
Team	Number	Age Yr-Mo	Wt (lb)	Ht (in)	Hair (facial)	Hair (axillary)	Hair (pubic)
Varsity	**1,096**	14-0	120.4	64.7	2.1	2.5	3.3
Strength Contact	196	14-0	116.0	63.5	2.1	2.5	3.5
Strength Limited Contact	104	14-2	134.1	66.7	2.3	2.7	3.5
Strength noncontact	671	14-0	119.8	64.7	2.1	2.5	3.2
Modified strength, noncontact	115	13-10	110.6	64.6	1.3	2.3	3.1
Non strength, noncontact	10	14-1	116.8	64.4	1.8	2.9	3.1
Junior Varsity	**1,158**	14-0	126.8	65.5	2.1	2.6	3.4
Strength contact	454	14-1	131.2	65.7	2.2	2.7	3.6
Strength limited contact	528	14-0	127.7	65.9	2.1	2.6	3.4
Strength noncontact	176	13-10	113.0	63.8	1.9	2.2	3.0
Freshman	**393**	13-10	123.0	65.2	2.1	2.4	3.4
Strength contact	163	13-9	126.7	65.3	2.2	2.7	3.5
Strength limited contact	230	13-10	120.4	65.1	2.0	2.3	3.3
Strength noncontact	0	...	...	...	...	...	...
Modified program A	**60**	13-6	128.6	66.2	2.0	2.4	3.4
B	**475**	12-5	114.2	61.8	1.7	1.8	2.5
C	**287**	12-11	114.1	62.5	1.6	1.9	2.6

* Achievement level.
Totals in bold print.

athlete was rated as exceptional, above average, average, or below average, based on the coach's assessment of his or her performance in competition.

4. Skills: the skills of the athlete were rated as superior, above average, average, or below average, based on a comparison with competitors at a similar level of play.

Statistical evaluation. For the purposes of statistical evaluation, sports were grouped into broad categories based on their physical demands. These were:

1. Strenuous contact sports—football, ice hockey, lacrosse, and wrestling.
2. Strenuous limited contact sports—basketball, soccer, baseball, field hockey, and softball.
3. Strenuous noncontact sports—cross country skiing, fencing, gymnastics, swimming, alpine skiing,* track and field, indoor track, tennis, and volleyball.
4. Moderately strenuous noncontact sports—golf and badminton.
5. Nonstrenuous, noncontact sports—bowling and archery.

All preseason and postseason evaluation forms were collected and the information tabulated for final analysis, applying these broad categories.

Results

Subjects. The program was begun on a limited trial basis from September 1974 to June 1975; it was formally started in September 1975 and ran to June 1979. There were 690 schools participating in the program and, at its completion, 4,220 boys and 3,754 girls were evaluated. Tables I and II describe the results of the evaluation of 3,469 males and 3,190 females assessed between 1976 and 1979 and for whom complete data were available. As can be seen, the males in the program were at a more advanced stage of sexual development than were the females.

Figures 2 through 4 depict the age and grade distribution of the male and female athletes participating at the varsity and junior varsity levels between 1976 and 1978. As can be seen, the median age for female athletes was 14 years for varsity sports and between 13.6 and 14 years for junior varsity sports. For males, the median age was between 14 and 14.6 years for varsity and junior varsity sports. For both sexes, the median grade was the eighth.

Participation. Tables III and IV describe the participation success of males and females between the years 1976 and 1979. It can be seen that 80% of the girls and 83% of the boys participated as substitutes or regulars. Fourteen percent of the girls and 11% of the boys dropped off their respective teams.

Injury rates. Tables V and VI reflect the injuries sustained by 4,220 males and 3,755 female participants between the years 1975 and 1979. The overall injury rate was 11.0% for females and 5.9% for males. There was no statistically significant difference in overall injury rates between varsity, junior varsity, freshman, and modified programs.

Tables VII and VIII depict the injuries sustained in individual sports. For females, soccer had the highest percentage of injury and for males, the highest percentage occurred in alpine skiing. For all equivalent sports except alpine skiing, females had higher injury rates than males.

Final criteria. Tables IX and X depict the final

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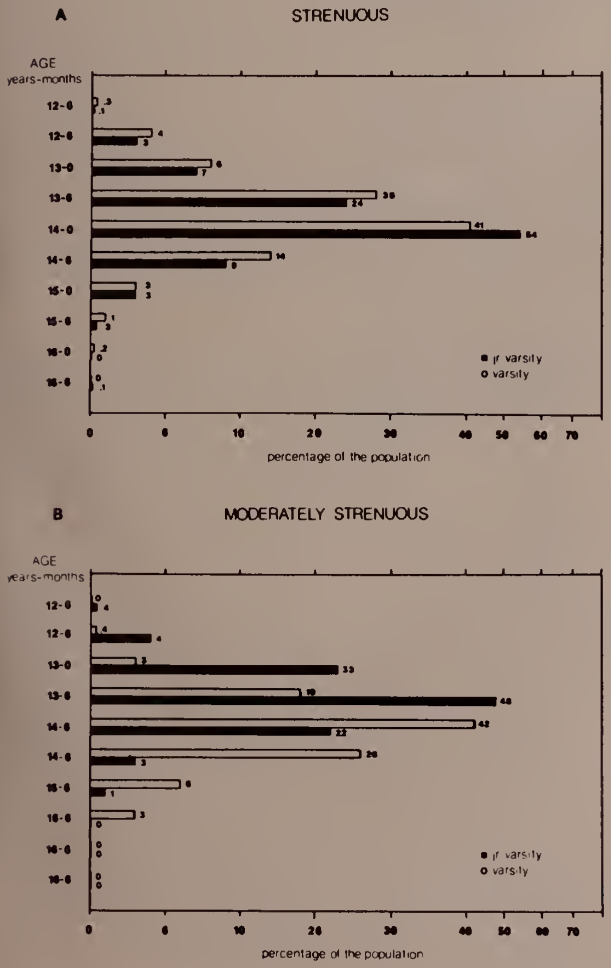
* It is the consensus of the authors that, based on recent information, alpine skiing should be classified as a moderately strenuous noncontact sport.

Table II: (*Continued*)

Agility		Strength		Speed		Endurance		Total	
Raw	AL*	Raw	AL*	Raw	AL*	Raw	AL*	Raw	AL*
20.6	6.5	69.8	7.9	27.5	6.8	36.2	7.8	28.9	8.3
20.7	6.5	75.7	8.6	27.4	6.8	38.3	8.3	30.2	8.7
20.9	6.7	66.5	7.4	27.6	6.9	37.1	8.0	29.1	8.4
20.6	6.5	69.5	7.9	27.5	6.8	35.8	7.8	28.9	8.4
20.0	6.1	65.5	7.3	28.1	6.2	33.8	7.1	26.7	7.4
19.0	5.4	58.7	6.0	28.0	6.3	33.9	7.2	24.9	6.7
20.5	6.9	69.3	7.9	27.6	7.1	35.3	7.7	29.6	8.5
20.5	6.9	70.8	8.1	27.8	6.9	35.6	7.7	29.7	8.6
20.5	6.9	68.5	7.8	27.5	7.4	35.1	7.6	29.6	8.5
20.2	6.7	68.2	7.8	27.7	6.8	35.3	7.7	29.2	8.4
20.0	7.3	65.7	7.6	20.7	7.2	34.4	7.4	29.4	8.5
19.6	7.1	65.8	7.6	20.7	7.0	34.2	7.3	29.0	8.3
20.1	7.4	65.7	7.6	20.7	7.2	34.5	7.4	29.6	8.5
...	...	...	...	...	...	...	...	...	...
19.4	6.8	66.7	7.6	21.3	6.5	32.9	7.0	28.0	7.9
18.2	6.7	65.0	7.8	22.3	6.3	33.6	7.5	28.2	7.9
18.4	7.2	61.2	7.9	21.6	7.1	31.9	7.1	29.4	8.4

criteria established for participation by athletes at levels not dictated by their grade or age. These criteria were established from the mean performance of students who participated as regulars on their respective teams. For final criteria, maturation of males was determined only by the observation of pubic hair, since this was deemed to be less varied by ethnic and racial factors and most representative of sexual maturation.



Exclusion of data. Although included in the methods, data on the initial evaluation of skill and prior sports experience and the end-of-season evaluation of degree of success and skill were not longer collected after the first year of the study. This was done because the results were felt to be too arbitrary for accurate assessment.

Comment

Throughout the nation, age and grade level continue as criteria for placement in interscholastic athletics. Because of the great variation among

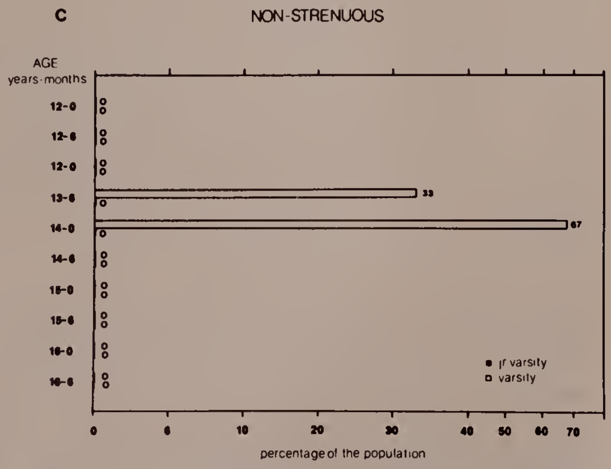


FIGURE 2. Age distribution for females participating at varsity and junior varsity levels for years 1976 to 1978: (A) strenuous, (B) moderately strenuous, (C) nonstrenuous.

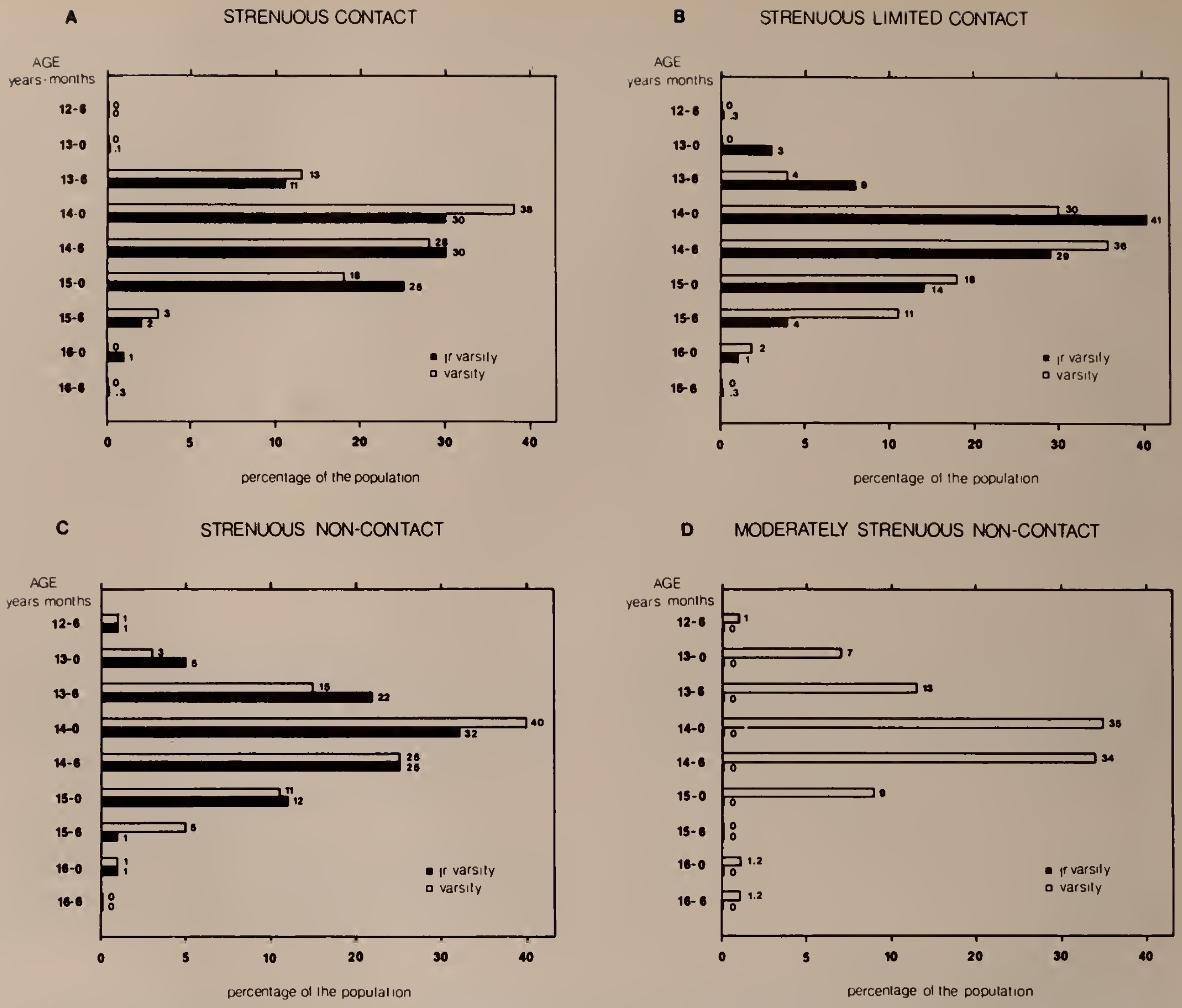


FIGURE 3. Age distribution of males participating at varsity and junior varsity levels for years 1976 to 1978: (A) strenuous contact, (B) strenuous limited contact, (C) strenuous noncontact, (D) moderately strenuous noncontact.

children in both physical and skill development, these criteria often create unbalanced competition. Such competition can be unsatisfying and nonproductive, and it potentially increases the risk of injury for the participating athlete. The current program was undertaken to determine if, by employing standards for sexual maturation, physical fitness, and skill, an additional set of criteria could be established to permit satisfying and safe competition. The preceding criteria were chosen because of their relevance to sports performance.

The onset of sexual maturation coincides with significant alterations in growth, body composition, cardiovascular endurance, and muscular strength. The timing of the initiation of puberty shows great variation and, since these factors are of great significance in regard to sports performance, it is not surprising that children of advanced skeletal maturity have been demonstrated to show a higher level of sports performance.[1,2]

With the onset of pubertal development, both males and females demonstrate a change in growth velocity that results in significant increases in height and weight.[3] The maximum rate of change tends to occur before menses in females and at midpuberty in males.[4–6] Since body size has been correlated to components of sports performance,[7] sexually mature children would be expected to participate at an advantage.

Body composition also changes during adolescence, with males demonstrating the most dramatic alterations. In the preadolescent period, males and females have approximately 15% to 20% body fat. With the advent of and progression through sexual maturation, males decrease their body fat to an average of 10% to 12% and females increase to 20% to 25%.[8,9] Since weight increases significantly during this period, the weight gains of males reflect a disproportionate increase of muscle mass.[10] Females also gain muscle, although at a significantly decreased rate. The increased muscle mass has been demonstrated to correlate with strength[11] and, con-

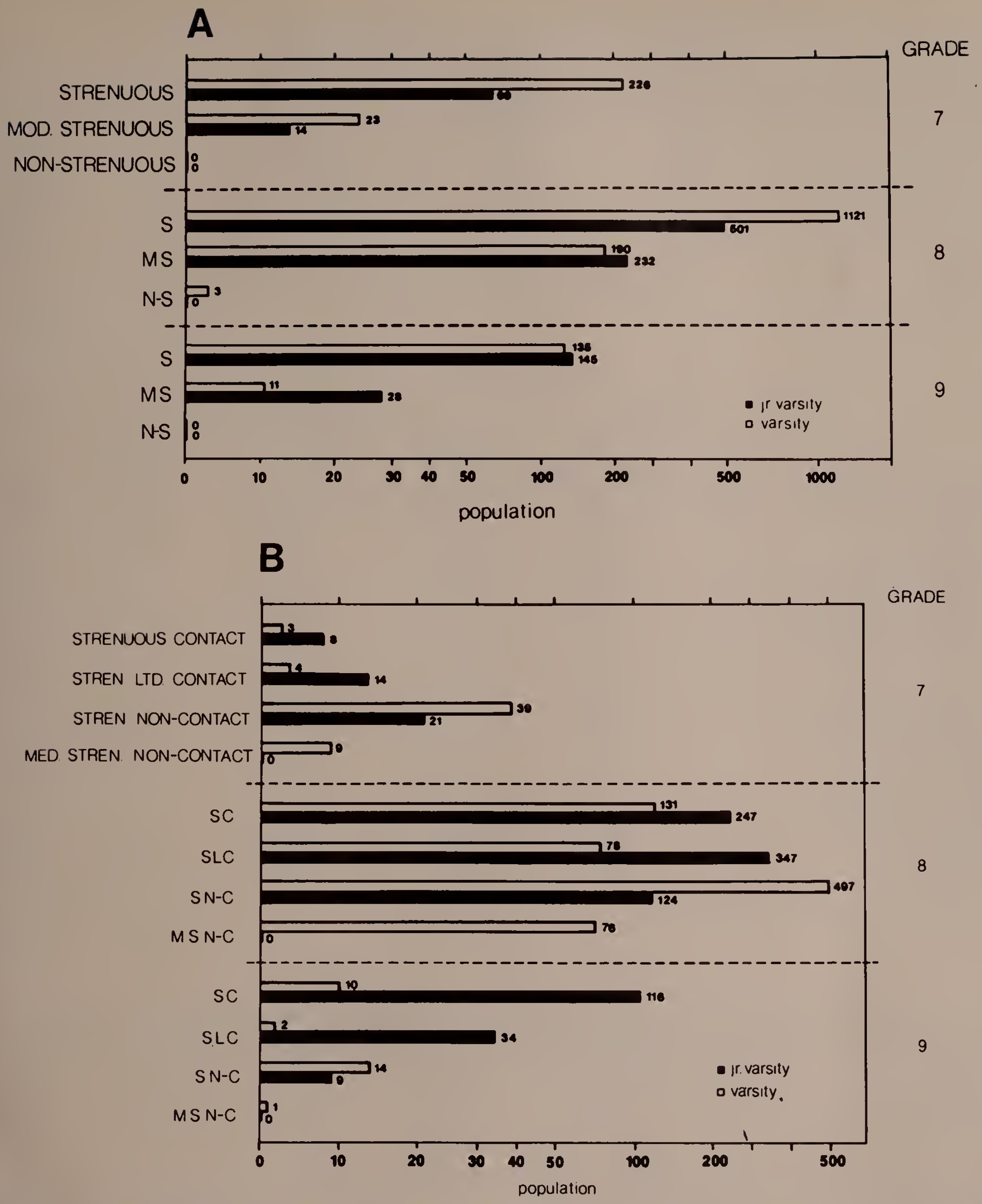


FIGURE 4. (A) Grade distribution for female participants of varsity and junior varsity levels for years 1976 to 1978. (B) Grade distribution for male participants at varsity and junior varsity levels for years 1976 to 1978.

comitantly, with improved sports performance.[5,12,13] Because of the great range in the onset of puberty, ages 11 to 13 in girls and 13 to 15 in boys are associated with the greatest per-age variation in muscle strength.[14,15]

Cardiovascular endurance, as measured by maximum oxygen consumption, has also been demonstrated to improve during the period of sexual maturation,[15–17] and the response to training for endurance has been suggested to be different for prepubertal and postpubertal children.[18–21] Therefore, as can be seen, children of the same age but divergent sexual development are decidedly different physiologic individuals when it comes to sports performance. Because of these diverse differences, team placement on the basis of age during the adolescent period can potentially create significant mismatching.

Table III. Participation Success of Girls Between the Years 1976 and 1979

Level, Category	Total Population	Regulars No. (%)	Substitutes No. (%)	Practice No. (%)	Dropouts No. (%)
All levels, all categories	3,183	1,688 (53)	856 (27)	177 (6)	462 (14)
Varsity, all sports	1,975	1,021 (52)	519 (26)	122 (6)	313 (16)
Strenuous	1,728	915 (53)	421 (24)	113 (7)	279 (16)
Moderately strenuous	244	104 (43	98 (40)	9 (4)	33 (13)
Junior varsity, all sports	1,152	637 (55)	326 (28)	42 (4)	147 (13)
Strenuous	839	455 (54)	251 (30)	32 (4)	101 (12)
Moderately strenuous	313	182 (58)	75 (24)	10 (3)	46 (15)
Modified					
All sports	56	30 (54)	11 (20)	13 (23)	2 (4)

Totals in bold print.

Table IV. Participation Success of Boys Between the Years 1976 to 1979

Level, Category	Total Population	Regulars No. (%)	Substitutes No. (%)	Practice No. (%)	Dropouts No. (%)
All levels, all categories	3,719	1,743 (47)	1,348 (36)	207 (6)	421 (11)
Varsity, all sports	1,155	658 (57)	290 (25)	73 (6)	134 (12)
Strenuous contact	241	163 (68)	56 (23)	5 (2)	17 (7)
Strenuous limited contact	111	41 (37)	50 (35)	6 (5)	14 (13)
Strenuous noncontact	678	386 (57)	152 (22)	51 (7)	89 (13)
Moderately strenuous noncontact	115	65 (57)	26 (23)	11 (10)	13 (11)
Nonstrenuous noncontact	10	3 (30)	6 (60)	0	1 (10)
Junior varsity, all sports	1,343	609 (45)	503 (37)	65 (5)	166 (12)
Strenuous contact	579	252 (44)	206 (36)	35 (6)	86 (15)
Strenuous limited contact	601	264 (42)	266 (44)	19 (3)	52 (9)
Strenuous noncontact	163	93 (57)	31 (19)	11 (7)	28 (17)
Freshman, all sports	399	132 (33)	205 (51)	36 (9)	26 (7)
Strenuous contact	153	53 (35)	80 (52)	9 (6)	11 (7)
Strenous limited contact	225	76 (34)	109 (48)	27 (12)	13 (6)
Strenuous noncontact	21	3 (14)	16 (76)	0	2 (10)
Modified A, all sports	60	16 (27)	31 (52)	1 (2)	12 (20)
B, all sports	475	180 (38)	211 (44)	25 (5)	59 (12)
C, all sports	287	148 (52)	108 (38)	7 (2)	24 (8)

Totals in bold print.

Table V. Frequency/Seriousness of Injury for Girls, 1975–1979 Selection/Classification Program

Category	Population	Total Injury (%)	1–7 Days (%)	8–15 Days (%)	16–30 Days (%)	31+ Days (%)
All sports	3,755	412 (11.0)	369 (9.8)	31 (0.8)	7 (0.2)	5 (0.1)
Strenuous	3,069	347 (11.3)	309 (10.1)	28 (0.9)	6 (0.2)	4 (0.1)
Moderately strenuous	677	65 (9.6)	60 (8.9)	3 (0.4)	1 (0.2)	1 (0.2)
Nonstrenuous	9	0	0	0	0	0

Totals in bold print.

Table VI. Frequency/Seriousness of Injury for Boys, 1975–1979 Selection/Classification Program

Category	Population	Total Injury (%)	1–7 Days (%)	8–15 Days (%)	16–30 Days (%)	31+ Days (%)
All sports	4,220	249 (5.0)	195 (4.6)	34 (0.8)	5 (0.1)	15 (0.4)
Strenuous contact	1,899	168 (8.9)	126 (6.4)	26 (1.4)	3 (0.2)	13 (0.7)
Strenuous limited contact	1,156	43 (3.7)	36 (3.1)	5 (0.4)	1 (0.1)	1 (0.1)
Strenuous noncontact	1,011	38 (3.8)	33 (3.3)	3 (0.3)	1 (0.1)	1 (0.1)
Moderately strenuous noncontact	144	0	0	0	0	0
Nonstrenuous noncontact	10	0	0	0	0	0

Totals in bold print.

Table VII. Frequency/Seriousness of Injury for Girls in Specific Sports 1975–1979

Total Sport	Population	Total Injury (%)	1–7 Days	8–15 Days	16–30 Days	31+ Days
Strenuous						
Track and field	667	43 (6.4)	32	9	0	2
Basketball	477	55 (11.5)	46	7	2	0
Gymnastics	420	68 (16.2)	62	4	1	1
Swimming	394	38 (9.6)	34	3	0	1
Field hockey	386	40 (10.4)	37	1	2	0
Soccer	362	64 (17.7)	62	2	0	0
Tennis	176	16 (9.1)	15	0	1	0
Cross country skiing	115	15 (13.0)	13	2	0	0
Indoor track	51	5 (9.8)	5	0	0	0
Alpine skiing	21	3 (14.3)	3	0	0	0
Moderately strenuous						
Softball	371	34 (9.2)	31	1	1	1
Volleyball	291	30 (10.3)	29	1	0	0
Badminton	15	1 (6.7)	0	1	0	0

Table VIII. Frequency/Seriousness of Injury for Boys in Specific Sports 1975–1979

Total Sport	Population	Total Injury (%)	1–7 Days	8–15 Days	16–30 Days	31+ Days
Strenuous contact						
Football	1,205	114 (9.5)	82	20	4	8
Wrestling	579	48 (8.3)	39	6	1	2
Lacrosse	107	5 (4.7)	4	0	0	1
Ice hockey	8	1 (12.5)	1	0	0	0
Strenuous limited contact						
Baseball	472	14 (3.0)	13	0	0	1
Soccer	375	19 (5.1)	16	2	1	0
Basketball	309	11 (3.6)	8	3	0	0
Strenuous noncontact						
Track and field	359	13 (3.6)	9	3	1	0
Swimming	264	7 (2.7)	7	0	0	0
Tennis	213	5 (2.3)	5	0	0	0
Gymnastics	65	2 (3.1)	2	0	0	0
Cross country skiing	44	2 (4.5)	1	0	0	1
Alpine skiing	35	6 (17.1)	6	0	0	0
Indoor track	31	3 (9.7)	3	0	0	0
Moderately strenuous noncontact						
Golf	144	0	0	0	0	0
Nonstrenuous noncontact						
Bowling	10	0	0	0	0	0

Successful sports performance also requires an inherent level of conditioning and skill. For this reason, the minimal standards of fitness in the areas of endurance, speed, and agility were employed to select those athletes with a higher potential for success. Additionally, a high level of skill, as measured both by the prescreening process and by the coaches' evaluations for team selection, was required for participation. It was hoped that these screening procedures would successfully select those students who could compete at a higher level than that dictated by their age or grade. The results of the program demonstrate that with this strictly supervised selection process criteria other than grade and age can be successfully employed to place children in interscholastic athletics.

The preceding statement is supported by the fact that 80% of the students processed by the Selection/Classification program who qualified for team placement participated as either regulars or substitutes, and only 10% to 15% elected to drop off their respective teams. Although no study could be found, this level of discontinued participation coincided with the experience of coaches dealing with regular, nonscreened interscholastic programs. An additional advantage, although not studied, was the position made available for another athlete as a result of the forward movement of the superior screened athlete. Additionally, the injury rates for these screened athletes were certainly acceptable compared with other studies,[22–24] since they were in general decidedly lower. The reason for this lower injury rate, as well as the higher incidence of injuries in females, cannot be specifically explained at this time. Males, in general, had injuries requiring longer restriction from activity. Although not examined, one must also question if there were decreased injury rates experienced at the lower levels of competition after the larger and more precocious athletes were moved up.

No attempt was made to correlate which of the multiple preselection variables correlated best with

Table IX. Final Criteria for Participation of Girls in Selection/Classification Program

			Fitness									
			Agility		Strength		Speed		Endurance		Total Achievement Level	
Sports Categories	Level of Competition	ML*	RS†	AL**	RS	AL	RS	AL	RS	AL	RS	AL
Strenuous												
Limited contact	Varsity	3	19–27	7	45–51	9	20.5–16	7	32–41	8	30–34	9
	Jr. varsity	2	19–25	7	48–53	9	20.5–15	7	33–41	8	30–34	9
	Modified	1	18–24	7	41–52	8	22.0–15	6	30–43	7	28–34	8
Noncontact	Varsity	2	19–27	7	45–51	9	20.5–16	7	32–41	8	30–34	9
	Jr. varsity	2	19–25	7	48–53	9	20.5–15	7	33–41	8	30–34	9
	Modified	1	18–24	7	46–52	8	22.0–15	6	27–43	6	25–34	7
Moderately strenuous	Varsity	2	19–27	7	41–51	8	20.5–16	7	28–41	7	25–34	7
	Jr. varsity	2	19–25	7	42–53	8	20.5–15	7	29–41	7	25–34	7
	Modified	1	18–24	7	41–52	8	20.5–15	7	30–43	7	25–34	7
Nonstrenuous	Varsity	2	17–27	6	36–51	7	22.0–16	6	28–41	7	25–34	7
	Jr. varsity	2	17–25	6	38–53	7	22.5–15	6	29–41	7	25–34	7
	Modified	1	16–24	6	37–52	7	22.0–15	6	30–43	7	25–34	7

* Developmental Age: No menarche, physician's approval; 12.6 to 13.5; 13.6 to adult.
† Raw score
** Achievement level

Table X. Final Criteria for Participation of Boys in Selection/Classification Program

			Fitness									
			Agility		Strength		Speed		Endurance		Total Achievement Level	
Sports Categories	Level of Competition	ML*	RS†	AL**	RS	AL	RS	AL	RS	AL	RS	AL
Strenuous												
Contact	Varsity	4	23–29	7	66–79	9	19.5–15.5	7	41–48	8	30–33	9
	Jr. varsity	4	22–29	7	56–79	8	19.5–16.0	7	41–48	8	30–33	9
	Freshman	4	21–28	7	54–77	8	19.5–16.0	7	40–47	8	30–33	9
	Modified A	4	21–28	7	54–77	8	19.5–16.0	7	40–47	8	28–33	8
	Modified B	3	20–27	7	53–76	8	20.0–16.0	7	35–47	7	28–33	8
	Modified C	3	19–25	7	51–72	8	20.0–17.0	7	33–45	7	28–33	8
Limited contact	Varsity	4	23–29	7	57–79	8	19.5–15.5	7	41–48	8	28–33	8
	Jr. varsity	4	22–29	7	56–79	8	19.5–16.0	7	41–48	8	28–33	8
	Freshman	4	21–28	7	54–77	8	19.5–16.0	7	40–47	8	28–33	8
	Modified A	4	21–28	7	54–77	8	19.5–16.0	7	36–47	7	28–33	8
	Modified B	3	20–27	7	47–76	7	20.0–16.0	7	35–47	7	28–33	8
	Modified C	3	19–25	7	45–72	7	21.0–17.0	7	33–45	7	28–33	8
Noncontact	Varsity	3	23–29	7	57–79	8	19.5–15.0	7	41–48	8	28–33	8
	Jr. varsity	3	22–29	7	56–79	8	19.5–16.0	7	41–48	8	28–33	8
	Freshman	3	21–28	7	54–77	8	19.5–16.0	7	40–47	8	28–33	8
	Modified A	3	21–28	7	49–77	7	19.5–16.0	7	35–47	7	28–33	8.
	Modified B	3	20–27	7	47–76	7	20.0–16.0	7	35–47	7	28–33	8
	Modified C	3	19–25	7	45–72	7	21.0–17.0	7	33–45	7	28–33	8
Moderately strenuous												
Noncontact	Varsity	3	21–29	6	51–79	7	20.0–15.5	6	38–48	7	25–33	7
	Jr. varsity	3	20–29	6	50–79	7	20.5–16.0	6	37–48	7	25–33	7
	Freshman	3	19–28	6	49–77	7	20.5–16.0	6	36–47	7	25–33	7
	Modified A	2	19–28	6	49–77	7	20.5–16.0	6	36–47	7	25–33	7
	Modified B	1	18–27	6	47–76	7	21.0–16.0	6	35–47	7	25–33	7
	Modified C	1	17–25	6	45–72	7	21.5–17.0	6	33–45	7	25–33	7
Nonstrenuous												
Noncontact	Varsity	3	21–29	6	51–79	7	20.0–15.6	6	38–48	7	25–33	7
	Jr. varsity	3	20–29	6	50–79	7	20.5–16.0	6	37–48	7	25–33	7
	Freshman	3	19–28	6	49–77	7	20.5–16.0	6	36–47	7	25–33	7
	Modified A	2	19–28	6	49–77	7	20.5–16.0	6	36–47	7	25–33	7
	Modified B	2	19–28	6	47–76	7	21.0–16.0	6	35–47	7	25–33	7
	Modified C	2	17–25	6	45–72	7	21.5–17.0	6	33–45	7	25–33	7

* ML: Maturation level as determined by physician's appraisal (range: 1/low to 5/high).
† Raw Score
** Achievement Level

athletic success and injury rates. This was because data were collected in the field by multiple participants and the degree of accuracy of the various measurements could not be validated. Only the outcomes of success and injury rates were closely reviewed. It is, therefore, for future studies to determine which parameters correlate best with the desired outcome.

A mechanism by which the precocious athlete can engage in more satisfying and balanced competition is certainly of great value and the Selection/Classification program provides such an opportunity. The program initially contained a provision for the sexually delayed older athlete to "move down" to a more appropriate level of competition. This alternative was rarely requested, but this option has great potential and deserves further study. Additionally, one must be aware that problems can occur in such a selection process and that many questions remain to be answered. These problems include abuses in the selection procedure, inadequate psychologic adjustment by the athlete to a new peer group, overemphasis on athletics to the exclusion of other activities, and the logistic problems of transporting students between schools. Such potential problems require close surveillance. Still unanswered is the effect of the upward movement of superior athletes on the lower or age-appropriate levels of competition.

The described screening procedure employed in this study is not implied to be the system that can best match adolescent competitors, but it is presented as a successful alternative to the arbitrary matching by grade and age level. It is certainly apparent that variations in sexual development must be considered in interscholastic programs. We strongly recommend, though, that any program considered must have necessary controls and motivated supervisors before it is instituted.

Since it is a large field evaluation, the present study has limitations. Physical fitness parameters could have been more selectively measured, such as by Cybex testing, rather than by achievement tests. Maturational assessment of females could have been performed more accurately by observation of secondary sex characteristics than by age past menarche. Control groups would have more specifically defined injury risk and success of participation. Unfortunately, logistic problems precluded this type of assessment, and, hopefully, future studies on smaller populations will specifically address these issues. The variations in development during childhood, though, require that the factors of sexual maturation and physical fitness be considered in properly matching adolescent competitors. The current study is an initial attempt to address this issue.

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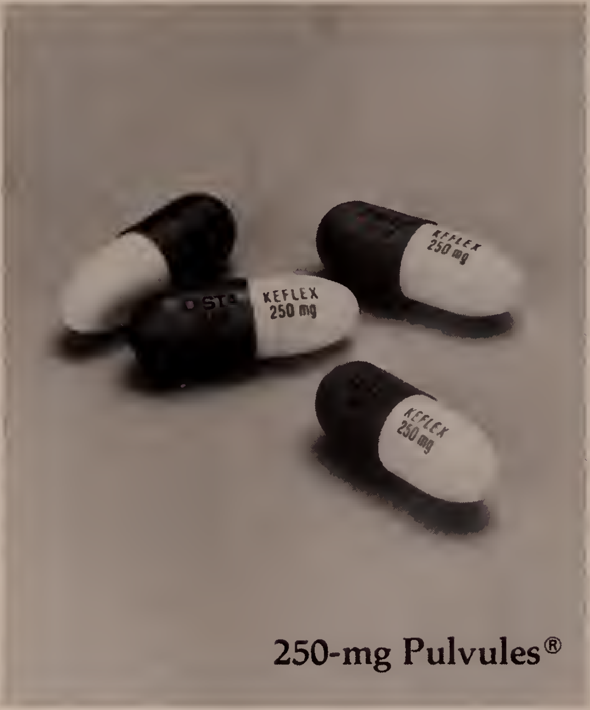

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Aeromonas hydrophila Infection

Ecthyma gangrenosum with aplastic anemia

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Aeromonas hydrophila is a gram-negative, flagellated bacillus of the genus *Vibrionaceae.* It is usually associated with aquatic environments. It grows on blood agar in a beta hemolytic colony pattern described as coliform. It can, however, be easily distinguished from *Escherichia coli*, *Enterococcus*, *Proteus*, and *Pseudomonas* because of its positive indophenol-oxidase reaction and because of its fermentation patterns with a variety of sugars. Its growth on media containing vibriostatic compounds separates it from other vibrios.[1,2]

At the Coney Island Hospital (CIH), Brooklyn, NY this organism was isolated in pure culture from the blister fluid of an area of ecthyma gangrenosum on the leg of a 76-year-old woman being treated for aplastic anemia with cyclophosphamide. She subsequently died in septic shock. Since this is the first report of a clinical infection with this organism recorded at CIH, and as we have heard of only one other case in the Brooklyn area, we would like to describe the features of this case, and to review the bacteriologic aspects of this organism.

Case report

First admission. This 76-year-old woman appeared in the emergency room of the CIH with a severe nose bleed. She had been well all her life until six months previously when she had been admitted to another hospital in Brooklyn because of jaundice. The clinical picture and the laboratory data (see Table I) had suggested viral hepatitis, and she had been discharged after 21 days much improved. On physical examination at the CIH, the patient was not acutely distressed or jaundiced. The vital signs were normal, as were results of chest x-ray, and electrocardiogram. There were no rashes, petechiae, adenopathy, or organomegaly. She was admitted because of severe weakness and pallor, and profound pancytopenia (Table I). Aspiration and biopsy of the bone marrow showed marked hypocellularity, abundant fat, almost no white cell precursors, rare megakaryocytes, and only a few islands of erythroid activity. All other tests were within normal limits. A diagnosis of aplastic anemia following viral hepatitis was made. The profundity of the cytopenia indicated that the prognosis was grave.[3] Transplantation of bone marrow was not feasible because of her age and because no donors were available. Since some forms of aplastic anemia are thought to be caused by cytotoxic antibodies and lymphocytes,[4] and in view of reported successes in the treatment of aplastic anemia with immunosuppressive agents,[5] we elected to treat the patient with cyclophosphamide. Supportive therapy included transfusions of packed red cells and platelets, as well as ticarcillin disodium, oxacillin, ampicillin, and gentamicin sulfate. She was discharged home on her 17th hospital day.

Second admission. Four days later, the patient kept her appointment at the hematology outpatient clinic. She complained of pain in the left leg where a tender, somewhat raised hematoma, 1 × 2 cm, was seen on the left calf. Her temperature was 101 F. She was readmitted and cyclophosphamide was discontinued. Laboratory data were unchanged from those at discharge (Table I). Her condition deteriorated over the next three days. She ran spiking fevers up to 104 °F. The hematoma of the left leg progressed quickly to a very painful cellulitis involving the entire left calf, with a large central hemorrhagic blister which yielded clear, nonpurulent fluid when punctured. By the sixth day, the entire left leg to the thigh was swollen and the epidermis and the subepidermal tissues and underlying musculature were necrotic and exuding serosanguinous

TABLE I. Patient's Laboratory Data

Data	6 mo Before Admission	First Admission	Second Admission
Blood counts			
Hemoglobin, g/dL	12.8	4.4	9.7
RBC, $\times 10^6/\mu L$	4.5	1.4	...
Hematocrit, %	36	10	27
Mean corpuscular volume, μ^3	79	108	...
WBC, $\times 10^3/\mu L$	4.4	0.6	0.6
Neutrophils, %	76	6	6
Lymphocytes, %	20	38	44
Monocytes, %	2	54	50
Eosinophils, %	2	2	0
Basophils, %	0	0	0
Platelets, $\times 10^6/\mu^3$	adequate	14.0	26.0
Reticulocytes, %	...	0.7	0.1
Chemistries			
Total protein, g/dL	5.5	5.4	...
Albumen, g/dL	3.3	3.3	...
Lactic dehydrogenase, units/mL	370	215	...
Creatinine phosphokinase, units/mL	0	33	...
Alkaline phosphatase	425	65	...
SGOT, units/mL	1,550	13	...
SGPT, units/mL	400	5	...
Total bilirubin, mg/dL	30.5	1.4	...
Direct bilirubin, mg/dL	11.5	0.3	...

fluid. Despite supportive therapy and retreatment with oxacillin, ticarcillin, and gentamicin, the patient developed hypotension on the seventh day and went into cardiac arrest. Permission for autopsy was not obtained.

Following her death, *Aeromonas hydrophila* was recovered from the blister fluid. On agar plates the colonies had a slightly hemolytic, coliform appearance and odor. Identification was made by microscopic examination, culture characteristics, and fermentation patterns (Table II). Samples were sent to the bacteriology laboratory of the City of New York Department of Health where the identification of *A hydrophila* was confirmed. Water samples were taken from the patient's hospital rooms and from the kitchen and bathroom of her home which was nearby. Only normal environmental flora were recovered. Stool cultures obtained from the family members grew normal organisms. It is of interest that the toilet in the patient's apartment frequently backed up, requiring bailing and plunging to empty it. This had occurred during the four days the patient was at home between hospital admissions. At the time of our sampling, the toilet had been repaired.

Comment

Characteristics of the organism. Aeromonads are gram-negative rods with polar flagellae. They are classified as *Vibrionaceae* because of their morphology, facultative anaerobiasis, respiratory and fermentative metabolism, positive oxidase reaction, and guanine-cytosine ratio of 57-63 moles%. Their normal habitat is in water sources. Cold-blooded animals can be infected naturally. Natural infection in warm-blooded animals is very rare but does occur. The eventual source for the infecting organisms seems to be water, soil, foodstuffs, or intestinal flora. There are animal carriers as well as human carriers.[2]

A hydrophila is cultured both on blood agar and enteric differential agar. Growth is optimal at 30 °C. A large zone of beta hemolysis forms on blood agar, although there are nonhemolytic strains. The organism does not ordinarily ferment lactose. In oxidation-fermentation basal medium with glucose, acidification occurs in the "open" and "closed" tubes in contrast to nonglucose fermenters. Commercial kits will yield a correct diagnosis as long as the organism is screened for cytochrome- or indophenol-oxidase activity. Some strains produce enterotoxins.[6] The culture characteristics of *A hydrophila* in general and of the organism isolated from our patient are given in Table II. The usual patterns of antibiotic sensitivity of *A hydrophila* are indicated in Table III. The sensitivity of the organism isolated from our patient conformed to the usual pattern of antibiotic sensitivities. The organism was resistant to two of the three antibiotics she received.

Incidence. *A hydrophila* has been found in aquatic environments from all over the world and has been cultured from coastal waters, fresh water, stagnant water, and sewage. Infections with this organism have been reported from Australia, India, Ethiopia, England, continental Europe, the West Indies, and several parts of Canada. In the United States cases have been documented throughout most of the country, including the states of Wisconsin, Illinois, Tennessee, Texas, Florida, South Carolina, Washington, D.C., Connecticut, and New York.[7–20] Although nine cases were reported in 1973 from the

TABLE II. Characteristics of Aeromonads[10,16]

	A	B
Morphology		
Gram neg. rod	+	+
Asporogenous	+	...
Polar monotrichous flagella	+	+
Motility	+	+
Culture		
Optimal temp.	30–35 C	...
Optimal pH	5–9	...
Facultative anaerobiasis	+	...
Beta hemolysis	+	+
Indophenol	+	+
Oxidase	+	+
0% NaCl	+	...
6% NaCl	–	...
Gelatin liquefaction	+	+
TSI (Triple sugar iron agar)	acid/acid	acid/acid,
H_2S	–	–
Methyl red broth	+	...
Voges-Proskauer	+	...
Enzymes		
Arginine dihydrolase	v	+
Beta galactosidase	+	...
Cytochrome oxidase	+	+
DNase	+	+
ONPG (Ortho-nitrophenyl-beta-D galactosidase)	+	+
Phenylalanine deaminase	+	...
Ornithine decarboxylase	–	–
Lysine decarboxylase	–	–
Tryptophan deaminase	–	–
Urease	–	–
Fermentations		
Arabinose	–	–
Glucose	+	+
	(with gas production)	
Inositol	–	–
Lactose	v	...
Mannitol	+	+
Melibiose	–	–
Rhamnose	–	–
Sorbitol	–	–
Sucrose	+	+

Key:
A = Aeromonads generally
B = organism isolated from this patient
+ = positive
– = negative
v = variable

TABLE III. The Sensitivities of *Aeromonas hydrophila*[10]

Almost always sensitive to:
- Chloramphenicol (+)
- Kanamycin
- Aminoglycosides (+)
- Tetracycline (+)

Sometimes sensitive to:
- Cephalosporin (+,–)
- Erythromycin
- Trimethoprim-sulfamethoxazole (+)
- Polymyxin

Hardly ever sensitive to:
- Penicillin (–)
- Ampicillin (–)
- Carbenicillin (–)
- Oxacillin
- Ticarcillin

Key:
(+) Patient's organism was sensitive.
(+,–) Patient's organism was somewhat sensitive.
(–) Patient's organism was resistant.

Memorial-Sloan Kettering Medical Center in New York City,[21] the current case is to our knowledge the first case of human *A hydrophila* infection reported from Brooklyn. The organism has been isolated from the waters of the New York Bight near sewage outlets. Indeed, according to the Environmental Control Agency, sewage from the area surrounding CIH is discharged into the New York Bight through the waters off the Brighton Beach Section of New York Harbor.

Clinical syndromes. *A hydrophila* infections have occurred in both sexes and at all ages, from a 4-month-old infant with diarrhea to an 86-year-old woman with conjunctivitis.[14,15] Infections may appear as cellulitis,[12] septicemia,[16] aspiration pneumonia,[11] endocarditis,[10] cholecystitis,[17] gastroenteritis,[22] peritonitis,[15] arthritis,[23] and meningitis.[24] The four clinical syndromes most commonly encountered are (1) water-contaminated wound infections, (2) self-limited cholera-like diarrheas, (3) biliary tract infections, peritonitis, and sepsis in patients with cirrhosis of the liver, and (4) septicemia in immunocompromised hosts. In all these conditions there is rapid progression of the infection and high fatality in leukopenic patients.

Contaminated wound infections. The great majority of case reports have involved wounds associated with aquatic environments where the water has been assumed or shown to be contaminated with *A hydrophila.* The wounds may be trivial or even inapparent, such as fish-hook scratches or abrasions against rocks and piers.[14,25,26] On the other hand, some have involved extensive trauma with deep lacerations or fractures such as may occur in shallow-water diving or from being thrown into a ditch following a motorcycle accident.[12–20] Backed-up sewage from an overflowing washing machine was implicated in one case. As in our patient, the initial cellulitis usually progresses within 24 to 48 hours to the typical lesion of ecthyma gangrenosum, indistinguishable from the ecthyma gangrenosum caused by *Pseudomonas.*[21,27,28] The history of her broken toilet makes it possible that our patient, like most of the previously reported cases of ecthyma gangrenosum, may have had contact with contaminated water.

Septicemia in immunocompromised hosts. *A hydrophila* septicemia occurs most commonly in patients with cirrhosis of the liver, and in patients receiving chemotherapy for leukemia or solid tumors.[16,21,25] One child had sickle cell anemia.[29] Thus, abnormal histiocyte-macrophage function and immunodepression may predispose to dissemination of *Aeromonas* infection. No correlation appeared between any particular regimen of chemotherapy and the occurrence of septicemia. Not all patients have been leukopenic; in fact, many have had normal or elevated white cell counts.[25] Cultures of our patient's blood were repeatedly sterile; she was not bacteremic. Aplastic anemia has been implicated in only two other cases.[25,30] Etiologically, the aplastic anemia in this case appeared to be post infectious hepatitis.[31]

Conclusion

Greater awareness of the possibility of *Aeromonas* infection in this agranulocytic patient on the part of the clinicians and the bacteriology laboratory might have permitted earlier diagnosis. Furthermore, the differential diagnosis of ecthyma gangrenosum must include infection by *Aeromonas* as well as *Pseudomonas*, and the two must be distinguished bacteriologically. Review of the literature shows that *Aeromonas hydrophila* infections are no longer uncommon. In fact, the organism is ubiquitous in its distribution and may be found in any geographic area. Since the clinical syndromes of (1) water-contaminated wound infections, (2) gastroenteritis, (3) cholangitis and sepsis in cirrhotic patients, and (4) bacteremia in immunosuppressed hosts are now well defined, physicians must be on the alert for *Aeromonas* infections, since the prompt use of appropriate antibiotics may be expected to reduce morbidity and mortality.

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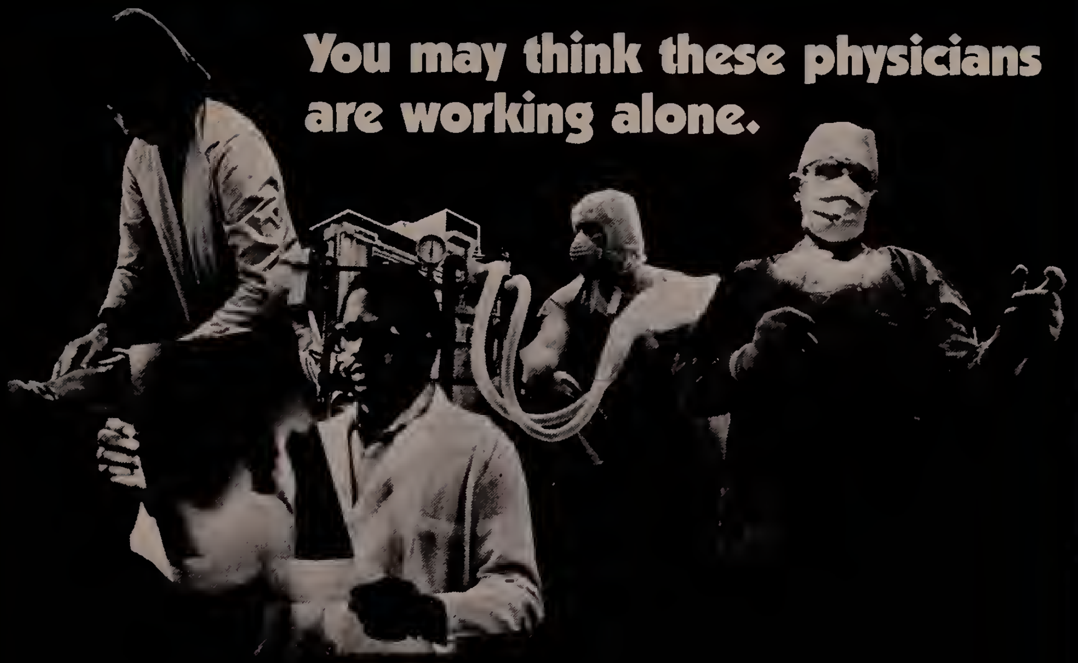

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1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e *g* , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes A precipitous elevation of blood pressure may accompany hypoglycemic attacks.

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure; intensification of AV block, hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura *Central Nervous System* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress *Respiratory* bronchospasm *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

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Myoglobinuria Associated With Parainfluenza Type 2 Infection

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Myoglobinuria has been associated with many viral illnesses, including influenza A,[1–6] adenovirus,[7] herpes,[8] parainfluenza type 3,[9] Coxsackievirus,[10,11] and echovirus 9.[12,13] The major complication of myoglobinuria is renal failure.[14–17] We report a case of acute myoglobinuria accompanied by a significant increase in parainfluenza type 2 titers in the acute and convalescent phases.

Case report

A 38-year-old black male was admitted to the medical service with a two-day history of dark urine. The patient had been in his usual good health until seven days prior to admission when he developed a sore throat and a temperature of 101 °F. There was no history of cough, chest pain, chills, night sweats, or dysuria. The fever resolved after two days. Four days prior to admission, the patient developed malaise and generalized myalgia with no weakness or loss of function. The following day the patient noted dark urine. There was no history of trauma or recent exercise, no intravenous drug use, allergies, alcohol ingestion, or medication. There was no family history of myoglobinuria. The patient reported one previous episode, two years prior to admission, of dark urine following a viral-like syndrome of low-grade fever, rhinitis, myalgia, and malaise. He did not seek medical attention at that time, and the symptoms resolved in 10 days.

Physical examination on admission revealed a muscular man in no distress. Blood pressure was 140/80 mm Hg; pulse, 100 per minute and regular, and temperature was 99 °F. The chest was clear to auscultation. Neuromuscular examination disclosed generalized tenderness to palpation with no decrease in range of motion or loss of strength. Neurologic examination was normal. The chest x-ray was normal and electrocardiogram revealed a sinus rhythm with a rate of 100.

Laboratory data on admission included: hemoglobin, 16 g/dL; hematocrit, 48.9%; WBC, 7,900/μL, with a normal differential; serum electrolytes were normal; BUN, 12 mg/dL; glucose, 104 mg/dL; serum glutamic oxaloacetic transaminase (SGOT), 1,200 mU/dL; lactic dehydrogenase (LDH), 4,500 mU/dL; creatine phosphokinase (CPK), 66,000 mU/dL; creatinine 1.0 mg/dL; alkaline phosphatse, calcium, phosphorus, total bilirubin, albumin, total protein, and uric acid were all normal (see Table).

The urine was dark, strongly orthotoluidine-positive and 3+ for protein. Microscopic examination disclosed many pigmented granular casts per low-power field. Ammonium sulfate solubility was positive for myoglobin. The Watson-Schwartz reaction was negative. VDRL, ASLO titers, febrile and cold agglutinins, and a Mono Spot were all negative, as were blood, throat, and urine cultures. Serum complement (C3) was slightly elevated at 202 mg/dL (normal 100–190 mg/dL) and C-reactive protein was positive at 1:6.

Viral titers were obtained on the second hospital day, and subsequently at two- and four-week intervals, that showed 1:4, 1:32, and 1:128, respectively, for parainfluenza type 2.

The patient was adequately hydrated, remained afebrile, and renal function remained normal.

An electromyogram obtained on the third hospital day was consistent with an acute myopathic process. The patient refused muscle biopsy.

The patient's symptoms subsided as did the myoglobinuria, and he was discharged on the sixth hospital day. After follow-up one week later, he was symptom free, and all laboratory values were normal.

At follow-up one year later, the patient reported no further episodes of dark urine or of any viral-like illness.

Conclusions

Myoglobinuria has been associated with many causes including trauma, exercise, alcohol, toxins, drugs, arterial occlusion, McArdle's disease, and several types of viral infection, including adenovirus,[7] herpes,[8] influenza A,[1–6] parainfluenza type 3,[9] Coxsackievirus,[10,11] and echovirus 9.[12,13] It has also been associated with more than one type of virus in the same patient.[10] The major complication is renal failure,[14–17] associated with hypocalcemia, hypophosphatemia, and hyperuricemia.[17]

To our knowledge, this is the first reported case of myoglobinuria associated with a parainfluenza type 2 virus. The parainfluenza type 2 titers showed a 32-fold increase, while other viral titers (influenza A, adenovirus, parainfluenza type 3, and echovirus) showed no such elevation. It is unfortunate that the patient did not consent to a muscle biopsy in order to obtain a morphologic diagnosis and possible iso-

Laboratory Values in a 38-Year-Old Male With Myoglobinuria

Hospital Day	Bun (mg/dL)	Creatinine (mg/dL)	CPK (mU/dL)	SGOT (mU/dL)	LDH (mU/dL)	Creatinine Clearance
1	12	1.0	66,000	1,200	4,500	...
2	15	1.3	79,000	495	1,700	122 mL/min
3	15	1.2	32,400	327	500	...
4	11	0.9	19,000	180	300	128 mL/min

lation of the virus from the biopsy specimen.

The actual mechanism of rhabdomyolysis has not been defined, but two mechanisms have been suggested.[2] The first contends that there is direct muscle invasion by the virus, and the other postulates the release of a toxin from the virus. There are no definitive data to support either of these possibilities.

It would also be interesting to know if, when this patient had his prior episode of myoglobinuria associated with a viral-like syndrome, a virus could have been isolated at that time and whether it would have been different from the one isolated during this hospital admission.

Those patients with myoglobinuria associated with a viral-like syndrome should have viral titers in the acute and convalescent phases. In addition, renal function should be closely monitored.

Summary

A 38-year-old man developed acute myoglobinuria following fever, myalgia, and malaise. Laboratory studies disclosed a marked elevation in creatine phosphokinase and a 32-fold increase in parainfluenza type 2 titers. The patient was adequately hydrated, and renal function remained normal. This represents the first case, to our knowledge, of myoglobinuria associated with a parainfluenza type 2 infection.

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Renal Oncocytoma

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Renal oncocytomas are, for the most part, nonaggressive tumors that are believed to be of tubular origin.[1,2] Although there were only a handful of cases reported in the world literature prior to a study of the subject made by Klein and Valensi in 1976,[1] they have since been reported with increasing frequency, although almost exclusively in the urology, radiology, and pathology literature. A case on the medical service will be discussed, along with the various aspects of this entity, to increase the awareness of the internist.

Case report

A 40-year old hypertensive woman had several weeks of bilateral flank pains, urinary frequency, fever, and chills. She was thin, with a temperature of 100.6° rectally, blood pressure of 160/110, and pulse of 112. Her fundi showed no significant hypertensive changes. A grade II/VI systolic ejection murmur was heard without radiation. Her abdomen revealed no organomegaly or masses. She had bilateral costovertebral angle tenderness somewhat greater on the left than on the right. A urinalysis showed many white blood cells and bacteria. No casts were present. Her blood urea nitrogen and creatinine levels were normal. The patient's urine grew out greater than 10^6 colonies per milliliter of *Escherichia coli*, which responded to intravenous tobramycin sulfate.

An intravenous pyelogram demonstrated a 5.5-cm left renal peripelvic mass with resulting calyectasis. The lower tracts were normal, as was the right kidney. A dynamic scan with ^{99m}Tc-glucoheptonate (GHA) demonstrated a vascular mass in the peripelvic area of the left kidney. The mass was "cold" on static renal scan, first with ^{99m}Tc-GHA and then with ^{99m}Tc-dimercaptosuccinate (DMSA). The mass was solid by sonography. Pre- and postcontrast computed tomography (CT) scans demonstrated a left hilar mass of homogeneous soft tissue density, which enhanced after intravenous contrast material. A metastatic work-up, including liver chemistries, a liver/spleen scan, and whole-body bone scan disclosed nothing remarkable. Angiography showed the mass to be well demarcated and hypervascular, with no "puddling" or shunting. Arterial supply was predominantly from vessels surrounding the periphery of the mass, with a suggestion of a "spoke-wheel" pattern of vessels as they entered the tumor (Fig 1).

The patient underwent a transabdominal left nephrectomy. Grossly, the left renal mass was homogeneously tan-brown in color and well encapsulated, with a central depressed scar and without evidence of local infiltration (Fig 2). Histologically, it showed a uniform population of large cells with granular, eosinophilic cytoplasm and small, round, regular nuclei, arranged in an alveolar pattern. No mitoses were present (Fig 3A). Electron micrographs revealed that the cells contained an abundance of large mitochondria and a paucity of other organelles (Fig 3B). These morphologic findings were characteristic of renal oncocytoma. In addition, focal pyelonephritic changes were found in the remainder of the kidney.

The patient made an uneventful recovery. One year postoperatively, she has remained free of flank pain, urinary tract infection, or signs of tumor recurrence.

Comment

"Oncocyte" was the name given by Hamperl[3] to a particular type of large epithelial cell with granular, eosinophilic cytoplasm that is found in many organs.[4] These cells have certain similar structural and histochemical features, primarily an abundance of mitochondria, which imparts a granularity to the cytoplasm and results in high adenosine triphosphatase and oxidative enzyme activities by histochemical staining.[5] Tumors made up of these cells, namely oncocytomas, in organs other than the kidney, may behave in a malignant fashion.[6,7] This may not be the usual case in the kidney, although this is controversial. There is one report that even subclassifies oncocytic renal tumors into benign and malignant variants.[8] Clinically, however, most oncocytomas do seem to behave in a benign fashion with no evidence of distant metastases[1,2,9–19] or tumor recurrence after resection.[1,11,12,16,18,19]

Most authors agree that oncocytomas of the kidney have pathologic features that distinguish them from renal cell carcinoma.[1,2,11,14–16] The tumor described in this report clearly fulfills these criteria in respect to circumscription, homogeneity of the oncocytic cell population of the tumor, absence of nuclear pleo-

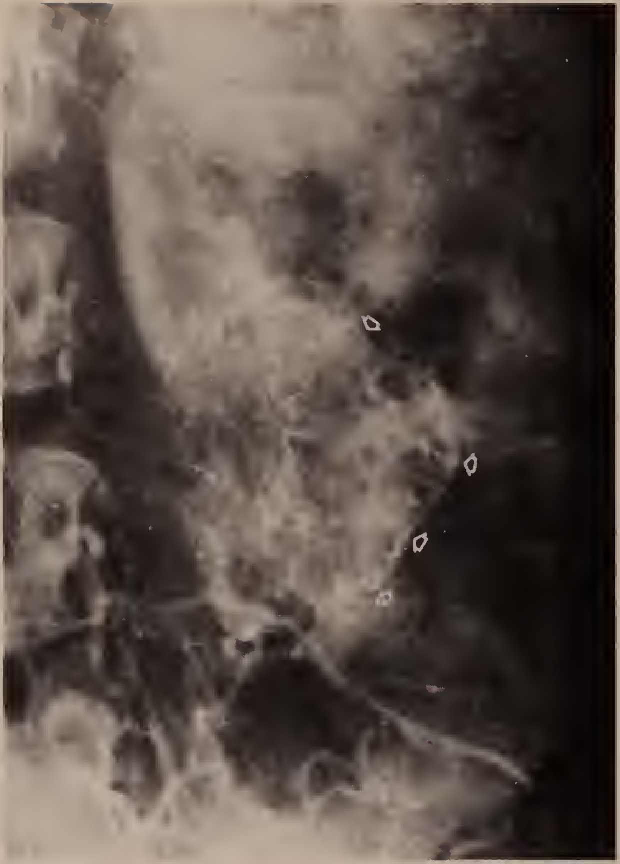

FIGURE 1. Late arterial phase from flush aortogram. Circumferential artery delinates outer margin of tumor at hilum of left kidney (arrows). Blood flows centripetally via "spoke-wheel" vessels (some are seen at tips of arrows).

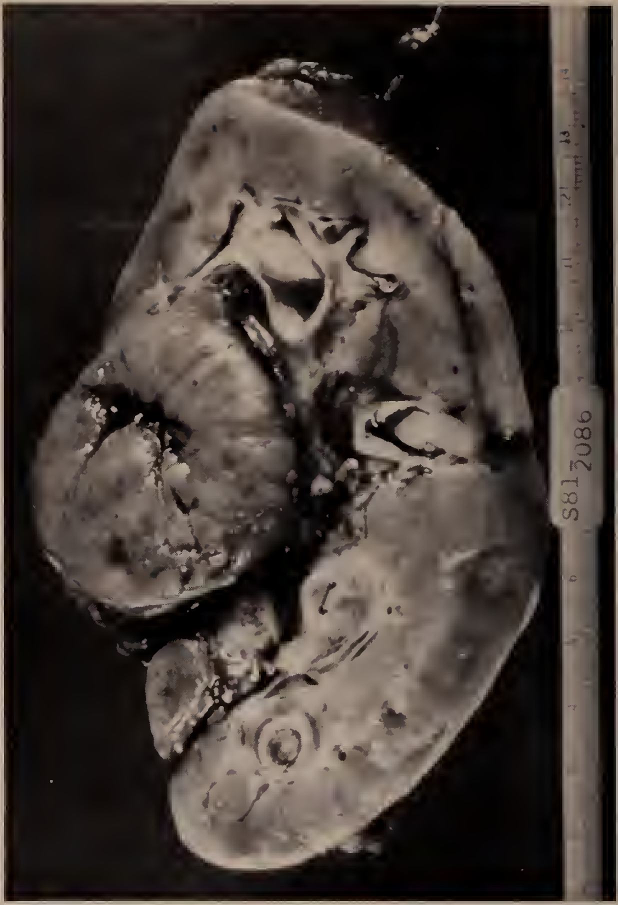

FIGURE 2. Cut surface of left kidney showing well-circumscribed, homogeneous tumor mass with central depressed scar. There is neither hemorrhage nor necrosis.

morphism and mitotic activity, and the characteristic ultrastructural finding of numerous mitochondria in tumor cells.

In contrast to the majority of patients, who are asymptomatic in reference to the tumor, our patient had symptoms of acute pyelonephritis. However, this was a secondary effect of the tumor; the symptomatology was attributable to its strategic location in the left renal hilum.

As with our patient, ultrasound, CT scans, and isotope scans using tubule-seeking agents may suggest the diagnosis of oncocytoma, but they have not yet offered definitive differentiation between oncocytoma and renal cell carcinoma.[10,19] Angiography is often suggestive of the diagnosis of oncocytoma,[10,17,19] the suggestion being strongest when all four of the following features are present: (1) a "spoke-wheel" vascular configuration, (2) a homogeneous capillary phase similar in density to the renal nephrogram, (3) a "lucent rim" implying a sharply marginating capsule, and (4) no wildly irregular vascular configurations.[19] The variations that may exist in the vascularity may be a function of the location of the tumor in the kidney.[19] Unfortunately, renal cell carcinoma may occasionally have any or all of these angiographic "characteristics."[19,20]

Additionally, aspiration biopsy may be performed preoperatively on a patient with an oncocytoma,[9] but the diagnosis of renal oncocytoma still has to be confirmed by tumor resection, since a careful pathologic search has to be made through the entire tumor to be certain that the cellular heterogeneity typical of renal cell carcinomas is not present.[1]

With the benign clinical course that most of these tumors have, it would be advantageous to refine any preoperative radiographic diagnosis, either to better alert the surgeon or, perhaps, to avoid nephrectomy altogether in selected cases. To this end, other recently introduced urographic contrast agents that undergo tubular secretion are being investigated.[10]

It is of further clinical interest that in the extensive review made by Klein and Valensi[1] of renal oncocytomas going back to 1952, none appeared before 1964, seven cases appeared by 1973, and six further cases by 1975. Although these tumors may indeed have gone unrecognized in the past, they concluded that the increased incidence is epidemiologically significant, with oncocytomas representing 0%, 6.6%, and then 14.6% of all renal neoplasms in the three time periods mentioned.[1] More recent accounts seem to be more conservative in their estimates,[11,15] although they do not indicate subdivisions of the periods of time covered. With this in mind, it would be of interest to try to account for the apparent increased

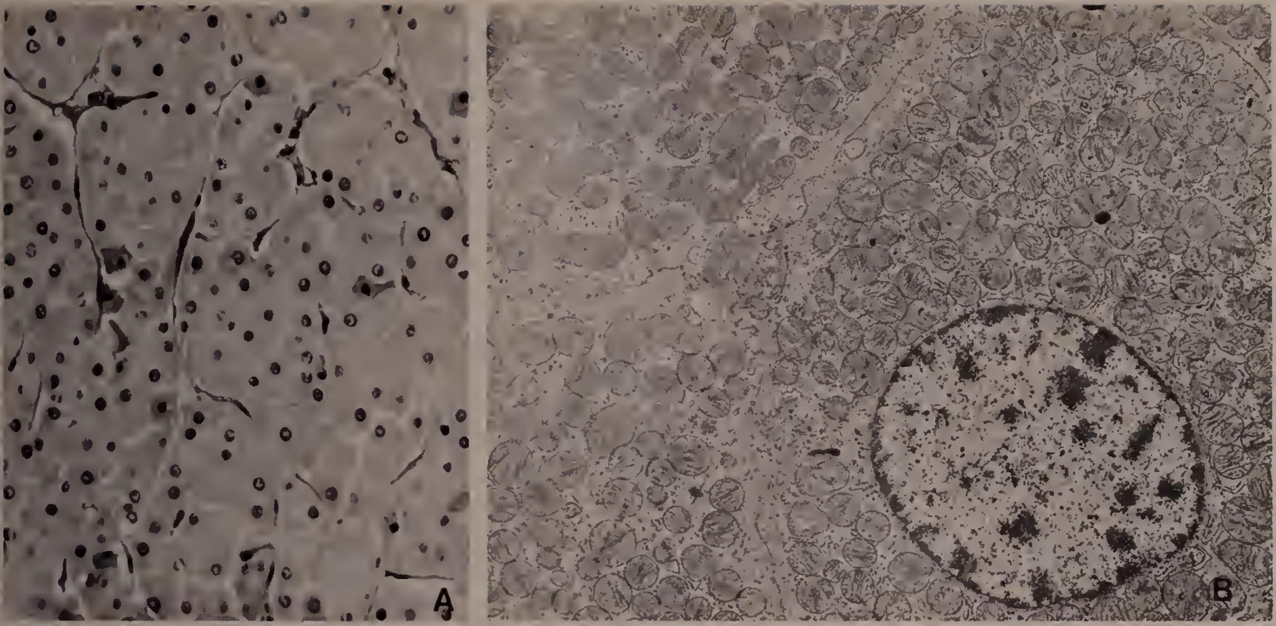

FIGURE 3. (A) Photomicrograph shows alveolar arrangement of uniform oncocytic cells with round, regular nuclei and granular, eosinophilic cytoplasm. This field is representative of entire tumor (hematoxylin and eosin stain, original magnification × 350). (B) Electron micrograph showing three tumor cells with numerous mitochondria. Other organelles are inconspicuous (original magnification × 4000).

incidence of renal oncocytomas epidemiologically, by environmental factors, medication histories, and other possible correlatives. This has already been suggested.[1,16]

Summary

Renal oncocytomas, generally nonaggressive tumors believed to be of tubular origin, are being reported with increasing frequency, possibly reflecting a rising incidence. The case presented here illustrates some of the salient features of the tumor's frequently incidental discovery and subsequent work-up. Oncocytic tumors are found in many organs, where some may behave in a malignant fashion, but those in the kidney seem to be clinically benign. Only a minority of patients with renal oncocytomas, in contrast to those with renal cell carcinomas, are symptomatic from the tumor. Pathologically, renal oncocytomas are well circumscribed and consist of a homogeneous population of large cells without mitoses, which are densely packed with mitochondria on electron microscopy. Certain patterns on renal angiography are often suggestive of oncocytoma but are not diagnostic. Hopefully, the use of newer, tubule-secreted contrast agents will enable more accurate diagnosis before surgery.

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Indications and Usage: Symptomatic relief and/or prevention of asthma and reversible bronchospasm associated with chronic bronchitis and emphysema.
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Gastrointestinal: Nausea, vomiting, epigastric pain, hematemesis, diarrhea.
Central Nervous System: Headaches, irritability, restlessness, insomnia, reflex hyperexcitability, muscle twitching, clonic and tonic generalized convulsions.
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4. Data on file, Key Pharmaceuticals, Inc.

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Medical Meetings

AAP announces annual meeting program

The American Academy of Pediatrics (AAP) will hold its 1982 Annual Meeting October 23–28 in New York City, with headquarters at the Hilton Hotel. Highlights of the meeting include addresses by Mayor Edward Koch; Hugh Downs, chairman of the board of the United States Committee for UNICEF and host of the ABC-TV program "20/20"; and C. Everett Koop, M.D., FAAP, Surgeon General of the United States.

Scientific program 13th annual meeting

The American Academy of Psychiatry and the Law announces its 13th annual meeting on "Critical Issues in Psychiatry and the Law." The program will be held at the Hotel Roosevelt, New York City, on October 21 through 24, 1982.

Among the featured speakers will be Alan Stone, M.D., and Alfred Freeman, M.D., both past presidents of the American Psychiatric Association; Walter Bromberg, M.D., Guttmacher awardee of 1981; Robert Cancro, M.D., Chairman of the Department of Psychiatry of New York University; and Liam N. Daly, M.D., visiting Lecturer from Central Mental Hospital, Dublin, Ireland.

Included are two special AAPL education committee programs: Forensic Psychiatry Review Course and Neuropsychiatry and the Forensic Psychiatrist.

For advance registration information, contact: Miss Beverly Parsons, Administrative Secretary, (301) 539-0872.

Change in program date

The Division of Adolescent Medicine and the Department of Pediatrics of Long Island Jewish-Hillside Medical Center is pleased to announce that the Anorexia Nervosa: Causes and Cures seminar will be held on November 3, 1982.

For further information, contact: Anne J. Boehme, (212) 470-2114

Accredited visiting faculty program announced on colorectal cancer

An accredited Visiting Faculty Program that will give primary care physicians around the country access to the latest clinical information on one of the more prevalent cancers, colorectal cancer, was announced today.

The Visiting Faculty Program is a key element of a two-year, accredited, continuing medical education course entitled *Colorectal Cancer: Essentials for Primary Care Physicians*, being presented (without charge) by an independent group of experts in gastrointestinal and family medicine.

(continued on page 1508)

Serendipity in our files

. . . found in the 1853 Transactions of the New York State Medical Society, page 345.

Biographical Notice of Joel A. Wing, M. D.

The medical society has again lost one of its most valued members, and duty as well as inclination prompt that his memory should receive the usual tribute of respect.

Dr. Wing was a native of Dalton (now Hinsdale), a town in Berkshire, Massachusetts. He was the eldest son of James and Lydia Wing, and was born on the 13th day of August, 1788. His father was a farmer, in comfortable circumstances; but, with a large family to support, and himself in feeble health, he was unable to afford to his son the advantages of a collegiate education. To attain, therefore, the knowledge which Dr. Wing at an early age found to be necessary to qualify himself for professional pursuits, he was greatly thrown on his individual exertions. "The stepping stone to all that is great in New England, is the "employment of schoolmaster," Young Wing commenced life by teaching school; and this he continued during a part of his studentship in medicine, and, in 1809, taught the academy at New-Lebanon.

He studied his profession under the direction of Dr. John Delameter (now a distinguished professor in the medical school at Cleveland, Ohio), and was licensed to practice by the Montgomery County Medical Society, in this State, in May, 1811.

He commenced the duties and business of his profession in Columbia county, but, in 1814, removed to Albany, where he spent the remainder of his life. In 1818, he married the daughter of the late Matthew Gregory (a revolutionary soldier, an ensign in the battalion of Hamilton, at the siege of Yorktown), by whom he had seven children, four of whom still survive.

In 1825, he received the honorary degree of Doctor of Medicine from Williams College.

In 1843, he was chosen President of the State Medical Society, and, in compliance with its by-laws, delivered an annual address. The subject was spinal irritation, being one that he had much studied, and one in which he felt a deep interest, as modifying and influencing various diseases: it was published in the transactions.

He was appointed one of the managers of the New-York State Lunatic Asylum in 1847, and continued in that office by re-appointment, until the period of his fatal illness.

In 1848, he was elected as one of the members of the House of Assembly of this State, for the city and county of Albany, but he very readily declined a re-election. His disposition was not to crave political elevation, or to share in the turmoils of public life.

From the period of his settlement in Albany, to the last moments that he was enabled to attend to professional pursuits, his business was large, profitable, and most acceptable to his patients; and among these, few men had more devoted friends. He read and informed himself on whatever was new in the profession, so far as was compatible with his constant engagements. A constitutional peculiarity probably had some effect in characterising his professional labors, viz. that he was prone to delay his visits; but all this was amply compensated by the devoted and permanent attention that he bestowed on every case.

While engaged nearly every hour in the twenty-four, scarcely allowing himself any rest or relaxation, during the fearful visitation of cholera in this city in 1832, he was violently attacked with that disease, and certainly was one of the most remarkable cases of recovery during the season; but there is every reason to suppose that this was the foundation of his subsequent ill-health.

In the autum of 1843, a cough (quite resembling whooping cough in its spasmodic efforts) attacked him, and there was no hope of recovery from it during our rude and variable winter. He accordingly left his business, and, with no flattering prospect of ever returning, repaired to the island of St. Thomas, in the West Indies, where he resided during several months. This excursion greatly improved his health, and he returned in the spring much invigorated, and plunged again at once into the toils of his profession.

Thus employed, he again found his health to fail very seriously in August, 1851. He was indeed in a state of mental and physical exhaustion. A visit to the seashore of Long Island, extended through several weeks, promised some amendment; but the month following, he suffered from an attack of epilepsy, which, in addition to its ordinary effects, greatly impaired his memory. He returned home a few days afterwards, but the attacks recurred with such frequency and severity in November, as to put an end to all reasonable hopes of his recovery. It is quite probable, from the attendant symptoms, that there was softening of the brain.

The remainder is a blank. Suffering both physical and mental, was the sad record of his melancholy remaining days. In August, 1852, with a hope that change of air, and devoted attention, might be of some service, he was taken to the Retreat at Hartford; but there was no amendment, and he died suddenly on the 6th of September, 1852, in the 65th year of his age.

The reader will find, in the transactions of this year, the proceedings of the State Society, consequent on his death. We republish by request, those adopted by the Albany County Medical Society.

THE LATE DR. JOEL A. WING

At a special meeting of the Albany County Medical Society, held at the City Hall on the 8th inst., the president, Dr. JAMES H. ARMSBY, called the society to order, and made the following brief address:

Gentlemen of the Society: The object of our meeting to-day is to give expression to our feelings of sorrow and sympathy in regard to the death of one of our number, one of the oldest and most respected members of this society. With one exception (that of our venerable father in the profession, Dr. BAY), Dr. WING was the oldest practitioner of medicine in Albany, having labored more than forty years, faithfully, zealously, successfully, in the arduous and responsible duties of his profession. His death, not unexpected to us, calls for a suitable expression of our grief for his loss, our sympathy for the bereaved relatives and friends, and of our respect for his memory. The older members of our society, who are present to-day, who have been so long and so pleasantly associated with the decreased, and who so well know his worth, will please to direct as to the most appropriate form in which our mournful tribute of respect shall be rendered.

Whereupon, Dr. T. ROMEYN BECK presented the following preamble and resolutions:

The members of the Albany County Medical Society have learned, with deep regret, that their honored and respected fellow member, Dr. JOEL A. WING, has departed this life, after a severe and protracted illness; and entertaining feelings of affection and respect for his long continued and useful course of practice during the last forty years, for his kindness and attention to his patients, and for the many excellent traits in his social relations, kind, generous and hospitable; they have unanimously adopted the following resolutions:

Resolved, That the members of the Albany County Medical Society unite with their brethren of the profession throughout the State, in mourning the death of the late Dr. JOEL A. WING.

Resolved, That in the various offices held at different times by the deceased, as president of the County and State medical societies, and as a manager of the State lunatic asylum, he at all times evinced a due sense of the duties and responsibilities conferred upon him.

Resolved, As a mark of respect to his memory, that the members of the Society will attend the funeral, and wear the usual badge of mourning for the ensuing thirty days.

Resolved, That a copy of the above resolutions be communicated to the family of the deceased, as an expression of our sincere sympathy.

Dr. JAMES MCNAUGHTON said he most cheerfully concurred in the sentiments expressed in the resolutions of Dr. BECK; that he had known the deceased intimately for many years; that he entertained the most endearing respect for his character as a citizen and a physician, and that he therefore moved the adoption of the resolutions.

The resolutions were adopted, and the Society adjourned to meet on the 9th inst., at the City Hall, at 4 o'clock, preparatory to attending the funeral.

In preparing this notice, it is proper to add, that we are greatly indebted to Dr. S. D. WILLARD of this city for most of the facts stated, and indeed sometimes for the very language used. Dr. W. is a relative of the deceased.

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AMA

These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

health
issues
of the
80's

the new federalism and medicine

The fate of President Reagan's "new federalism" proposal, which would shift programs between federal government and the states, is yet to be decided. And only general plans are known so far. Legislation to accomplish the program responsibility shifts is still to be drafted, and officials at the White House and the National Governors Association have reportedly reached an impasse in negotiations for the swap. But the Administration can be expected to continue pressing for action on the proposal, and Presidential Spokesman Larry Speakes has indicated a compromise may yet be reached.

A key component of the "new federalism" is moving financial responsibility for the Medicaid program from the states to the federal government in 1984. At the same time, under the President's proposal, states would accept responsibility for administration and funding of the Aid to Families of Dependent Children (AFDC) and food stamp programs.

While the federal Office of Management and Budget estimates that states, overall, would come out ahead in Fiscal Year 1984, the Congressional Budget Office figures show states would have a net loss in the exchange. Both estimates for individual states, however, show some very large gain or loss figures. In any case, future economic conditions may affect the accuracy of the estimates.

A second part of the federalism initiative calls for returning responsibility for 124 categorical grant programs, including some health programs, back to the states—this is the "turnback" provision. These programs are estimated to cost $30.2 billion in FY1984 (assuming about $5 billion in FY1983 cuts).

To finance the program turnback and equalize gains and losses among states, a federalism trust fund would be established. In FY1984, the fund of $28 million would come from windfall profits taxes ($16.7 billion) and federal excise taxes ($11.3 billion) on gasoline, tobacco, alcohol, and telephone services.

Between 1984 and 1987, states could choose to take the funds they would have received under the 124 categorical programs, either through the same categorical structure or without the categorical restrictions (similar to revenue sharing). In FY1988, these grants would end, and the trust fund would decrease by 25 percent each year. States would then have to raise taxes or cut program budgets accordingly.

Some additional features of the proposal have been announced, but many details are missing. Many questions are unanswered, also. Particularly interesting to physicians will be resolution of such questions as: Will the federal government equalize the state-by-state differences in Medicaid eligibility and benefits? If so, how? Will states be required to continue provision of services at the same level to all recipients now eligible for AFDC and food stamps? Will the initial trust funds be sufficient? Will states be able to maintain quality and quantity of various program services as trust funds are phased out?

We, the physicians of America, must continue our advocacy of high quality medical care for all. Working together, we must ensure that the three "A's" of good health programs—availability, accessibility, and acceptability—are retained. At the national level, the AMA will continue to analyze the proposal and details of it as they are developed. The effects of "new federalism" on health care programs in the future could be vitally important.

Such leadership requires your support. The larger our membership, (now nearly 240,000) the greater our influence and our strength as the only representative for all of medicine. **For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196 collect.**

Obituaries

Henry V. Agin, M.D., Brooklyn
Died January 31, 1982; age 79.
SUNY Downstate Medical Center, 1927. Membership: American Academy of Neurology; American Psychiatric Association; Diplomate American Board of Psychiatry and Neurology; Medical Society of the State of New York.

Arpad Benedig, M.D., New York City
Died May 11, 1982; age 79.
PECSI Tudomanyegyetem Orvostudomanyi Fakultas, 1928. Membership: American Academy of Family Practice; American Geriatrics Society; New York County Medical Society; Medical Society of the State of New York.

William T. Berry, M.D., Syosset
Died January 16, 1982; age 92.
Jefferson Medical College of Philadelphia, 1915. Membership: Medical Society of the County of Queens; Medical Society of the State of New York.

Kurt Bluehdorn, M.D., Bridgeton, New Jersey
Died March 31, 1982; age 98.
Schlesische-Friedriche-Wilhelms-University (Prussia), 1909. Membership: New York County Medical Society; Medical Society of the State of New York.

Max Brahms, M.D., Brooklyn
Died December 12, 1981; age 76.
University of Maryland School of Medicine, 1929. Membership: American Academy of Family Practice; Medical Society of the County of Kings; Medical Society of the State of New York.

Morris J. Chernack, M.D., Bronx
Died May 3, 1982; age 82.
University of Minnesota Medical School, 1930. Membership: American Academy of Allergy; American Association for Cancer Research; Fellow American College of Allergists; Bronx County Medical Society; Medical Society of the State of New York.

Robert R. Coleman, M.D., North Miami Beach, Florida
Died May 30, 1981; age 71.
University of Virginia School of Medicine, 1932. Membership: Medical Society of the County of Queens; Medical Society of the State of New York.

Samuel Dimond, M.D., Brooklyn
Died October 25, 1981; age 77.
Cornell University Medical College; 1928. Membership: Diplomate American Board of Pediatrics; Medical Society of the County of Kings; Medical Society of the State of New York.

Harry Goldman, M.D., Lawrence
Died April 24, 1982; age 74.
Washington University School of Medicine, 1933. Membership: American Society of Colon and Rectal Surgeons; American Geriatrics Society; Nassau County Medical Society; Medical Society of the State of New York.

Anna J. Gosline, M.D., New Hartford
Died May 5, 1982; age 84.
Baylor University College of Medicine, 1926. Membership: Medical Society of the County of Oneida; Medical Society of the State of New York.

Delmar V. Hughes, M.D., New Rochelle
Died May 2, 1982; age 75.
Georgetown University School of Medicine, 1935. Membership: Medical Society of the County of Westchester, Medical Society of the State of New York.

Robert Iervolino, M.D., Jamaica
Died August 13, 1981; age 72.
Universita di Napoli Facolta di Medicina e Chiurgia, 1936. Membership: Medical Society of the County of Queens; Medical Society of the State of New York.

Michael Interrante, M.D., Albertson
Died April 13, Died 1982; age 81.
New York Medical College, 1926. Membership: Medical Society of the County of Kings; Medical Society of the State of New York.

William M. Jackson, M.D., Rochester
Died April 1, 1982; age 66.
University of Rochester School of Medicine and Dentistry, 1943. Membership: Academy of Medicine; Fellow American College of Obstetricians and Gynecologists; Diplomate American Board of Obstetrics and Gynecology; Medical Society of the County of Monroe; Medical Society of the State of New York.

Murray Kalkin, M.D., Flushing
Died April 15, 1982; age 82.
SUNY Downstate Medical Center, 1928. Membership: Medical Society of the County of Queens; Medical Society of the State of New York.

Roy E. Kinsey, M.D., Peekskill
Died April 24, 1982; age 73.
Johns Hopkins University School of Medicine, 1934. Membership: American Geriatrics Society; Fellow American College of Physicians; Diplomate American Board of Internal Medicine; Medical Society of the County of Westchester; Medical Society of the State of New York.

James B. Lawler, M.D., Vernon
Died April 30, 1982; age 85.
SUNY Upstate Medical Center, 1926. Membership: Academy of Medicine; Medical Society of the County of Oneida; Medical Society of the State of New York.

Martin Lichtenstein, M.D., Yonkers
Died April 6, 1982; age 67.
Vytauto Didziojo Universiteto Medicinos Fakulteto (Kaunas), 1940. Membership: American Academy of Family Practice; Bronx County Medical Society; Medical Society of the State of New York.

Harry H. Moorhead, M.D., White Plains
Died May 5, 1982; age 60.
University of Louisville School of Medicine, 1950. Membership: Fellow American Psychiatric Association; Diplomate American Board of Psychiatry and Neurology; Medical Society of the County of Westchester; Medical Society of the State of New York.

Gdali Rubin, M.D., Brooklyn
Died May 11, 1982; age 82.
Universite de Paris Faculte de Medecine, 1930. Membership: New York State Dermatological Society; Diplomate American Board of Dermatology; Medical Society of the County of Kings; Medical Society of the State of New York.

Jacob Ruchman, M.D., Long Beach
Died May 8, 1982; age 91.
SUNY Downstate Medical Center, 1916. Membership: American Academy of Ophthalmology and Otolaryngology; Fellow International College of Surgeons; Diplomate American Board of Otolaryngology; Medical Society of the County of Kings; Medical Society of the State of New York.

Alfred J. Schmitt, M.D., Hollyday, Florida
Died December 8, 1981; age 72.
Georgetown University School of Medicine 1936. Membership: Medical Society of the County of Dutchess, Medical Society of the State of New York.

Oscar Schneller, M.D., Lonsdale, Minnesota
Died April 9, 1982; age 71.
University of Vermont College of Medicine, 1936. Membership: Medical Society of the County of Queens; Medical Society of the State of New York.

Oscar S. Stern, M.D., Brooklyn
Died April 18, 1982; age 80.
New York Medical College, 1928. Membership: New York State Society of Internal Medicine; Medical Society of the County of Kings; Medical Society of the State of New York.

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Schedule of Sessions 1485
Officers, Councilors and Trustees 1486
Members of the House 1489
Reference Committees 1493
Nominating Committee 1494
Report of the House Committee on Bylaws 1495

HOUSE OF DELEGATES

November 7 through 10, 1982
Concord Hotel

SCHEDULE of SESSIONS

Sunday, November 7
Opening Session .... 1:00 p.m.

Monday, November 8
Reference Committee Hearings .... 8:30 a.m.–12:30 p.m.
Reference Committee Hearings .... 1:30 p.m.–6:00 p.m.
Reference Committee Hearings .... 8:00 p.m. (to completion)

Tuesday, November 9
Second Session .... 9:00 a.m.
Third Session .... 1:30 p.m.
Fourth Session .... 8:00 p.m. (if necessary)

Wednesday, November 10
Closing Session .... 9:00 a.m.

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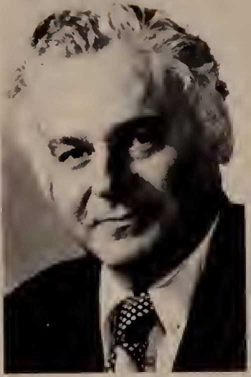

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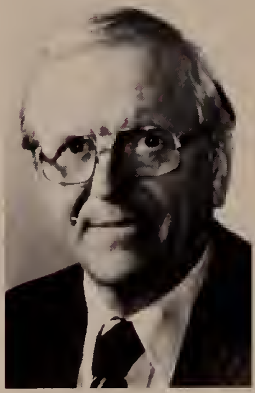

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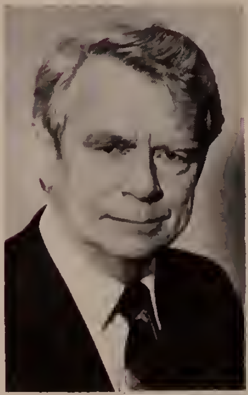

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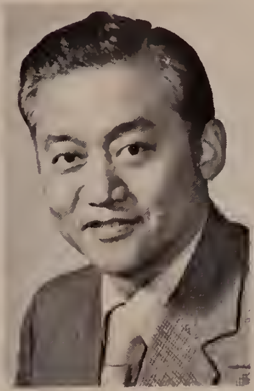

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Section Delegates

(*Delegates from Scientific Sections*)
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Dermatology and Syphilology—Franklin S. Glickman, Kings
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Medical-Legal and Workers' Compensation Matters—Max N. Howard, New York
Neurology—Charles R. Salamone, Monroe
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Occupational Medicine—Thomas J. Doyle, Queens
Ophthalmology—Francis J. Gilroy, Broome
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Otolaryngology and Maxillofacial Surgery—Fouad B. Michael, Nassau
Pathology, Clinical Pathology, and Blood Banking—Herbert Lansky, Erie
Pediatrics—Emanuel Chusid, Westchester
Physical Medicine and Rehabilitation—Jack Sokolow, Queens
Plastic, Reconstructive, and Maxillofacial Surgery—Philip C. Bonanno, Westchester
Preventive Medicine and Public Health—Russell C. Johnson, Orange
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Radiology—Victor A. Panaro, Erie
School Health—Martin C. Ushkow, Onondaga
Surgery—Theodore C. Max, Oneida
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John W. Abbuhl, Albany
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Bronx (12)
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Raul Pohorille, New Rochelle
Edward Shumofsky, The Bronx
Aftab A. Siddiqui, The Bronx

Broome (4)
Louis W. Giordano, Endicott
Lloyd C. Peters, Binghamton
Theodore R. Poritz, Binghamton
John F. Spring, Binghamton

Cattaraugus (1)
Ruth R. Knobloch, Little Valley

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Richard J. Freeman, Auburn

Chautauqua (2)
Russell S. Elwell, Westfield
George W. Lewis, Jamestown

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Delaware (1)
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George Liberman, Brooklyn
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Martin Markowitz, Brooklyn
Bentley D. Merrim, Brooklyn
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Richard A. Konys, Syracuse
Carl E. Marlow, Liverpool
David L. Poushter, Syracuse
John T. Prior, Syracuse
George P. Tilley, Syracuse

Ontario (*2*)
Thomas A. McCormick, Geneva
Kenneth T. Steadman, Geneva

Orange (*4*)
Ansel R. Marks, Middletown
Albert A. Mazzeo, Newburgh
Seymour J. Wiener, Port Jervis
W. Brewster Wolfe, Newburgh

Orleans (*1*)
Antoine A. Nassar, Albion

Oswego (*1*)
James F. Grant, Oswego

Ostego (*1*)
Rodman D. Carter, Cooperstown

Putnam (*1*)
Zane A. Miranda, Carmel

Queens (*16*)
John W. V. Cordice, St. Albans
Alexander M. De la Garza, Flushing
Robert M. Farrell, Flushing
Fred N. Flatau, Flushing
Irving G. Frohman, Rockaway Beach
Leo Arthur Green, Jackson Heights
Victor Guarneri, Bayside
Edith Gutman, Whitestone
Joseph Klements, Bayside
Nicetas H. Kuo, Flushing
Hilda Ratner, Beechhurst
Felix R. Rosenhain, Forest Hills
Morton M. Safran, Jamaica
Ralph E. Schlossman, South Ozone Park
Lester R. Tuchman, Connecticut
Ezra A. Wolff, Manhasset

Rensselaer (*2*)
Thomas D. Pemrick, Troy
William A. Whyland, Troy

Richmond (*3*)
Gerald J. Lustig, Staten Island
Robert J. O'Connor, Staten Island
William A. Schwarz, Staten Island

Rockland (*4*)
Michael A. Kalvert, Bardonia
S. Sheldon Katz, Monsey
Roy H. Lieberman, Nanuet
Stanley H. Oransky, Bardonia

St. Lawrence (*1*)
Maurice J. Elder, Massena

Saratoga (*1*)
Charles H. Richman, Saratoga Springs

Schenectady (*3*)
Robert J. Cassidy, Schenectady
Richard H. Lange, Schenectady
John M. Spring, Schenectady

Schoharie (*1*)
Frederick J. Michel, Cobleskill

Schuyler (*1*)
Joseph Y. Roberts, Watkins Glen

Seneca (*1*)
Timothy J. Ryan, Waterloo

Steuben (*2*)
Jack D. O'Neil, Corning
Wayne C. Templer, Corning

Suffolk (*10*)
William H. Bloom, Bay Shore
Stephen I. Braitman, Islip Terrace
Frank R. Collier, Port Jefferson
John G. Egner, West Islip
Robert E. Fear, Southampton
Phillip I. Levitan, Smithtown
Nathaniel B. Messinger, Islip Terrace
Frank H. Russell, Jr., Port Jefferson
Melvin Shuter, Islip Terrace
Jerry A. Wider, Smithtown

Sullivan (*1*)
J. Arthur Riesenberg, Liberty

Tioga (*1*)
John R. Scott, Apalachin

Tompkins (*2*)
Robert S. Perry, Ithaca

Ulster (*2*)
John A. Cooke, Jr., Kingston
John Peter Roberts, Kingston

Warren (*2*)
Robert A. Francomano, Glens Falls
Betty L. Voelker, Glens Falls

Washington (*1*)
Michael J. Lynch, Granville

Wayne (*1*)
Norbert Menuhin, Newark

Westchester (*9*)
Edwin I. Cleveland, Bronxville
Peter B. Farnsworth, Valhalla
Richard L. Fenton, Tarrytown
Armond V. Mascia, Tarrytown
Stanley M. Mendelowitz, Tarrytown
Richard L. Petrillo, Mount Vernon
John A. Ramsdell, White Plains
Thomas Dignan Rizzo, Bronxville
Michael Sierp, Yonkers

Wyoming (*1*)
Anil K. Mehta, Warsaw

Yates (*1*)
John E. Horn, Painted Post

Medical School Delegates—12

Albany Medical College—Joseph Theobald Doyle, Albany
Albert Einstein College of Medicine—Ira Greifer, Nassau
Columbia University—
Cornell University Medical College—Jack Richard, New York
Mount Sinai School of Medicine—David A. Dreiling, New York
New York Medical College—Saverio S. Bentivegna, New York
New York University School of Medicine—Stanford Wessler, New York
State University of New York at Brooklyn—Charles M. Plotz, Kings
State University of New York at Buffalo—Herbert E. Joyce, Erie
State University of New York at Stony Brook—Tamarath K. Yolles, Suffolk
State University of New York at Syracuse—Daniel L. Dombroski, Onondaga
University of Rochester—

Medical Student Delegates — 3

Mark Levitan, North Woodmere
Theodore Marc Mazer, Syracuse
Robin Tapper, Valhalla

ERRATA

The following was printed incorrectly in the March, 1982 New York State Journal of Medicine (Proceedings of the House of Delegates) Vol. 82 No. 4 (page 465). The last paragraph, left hand column, should read:

"The House voted to amend the substitute resolution by the deletion of the last resolved."

REFERENCE COMMITTEES

Credentials

William A. Schwarz, Richmond, *Chairman*
Ronald C. Bruce, Monroe
Wilbur J. Gould, New York
James J. Kropelin, Niagara
A. W. Martin Marino, Jr., Kings

Reports of Officers

President
President-Elect
Secretary
Treasurer
Board of Trustees
Budget and Finance
Executive Vice-President
New York Delegation to the AMA
District Branches
Physicians' Home
Research and Development
Search Committee
Résume of Instructions from the 1981 House of Delegates and Actions Thereon by the Council, Board of Trustees, Executive Committee, Officers, Council Committees, and Governmental Agencies
Ad Hoc Committee to Review the Job Description and Guidelines for the Appointment of Future Executive Vice-Presidents

David M. Benford, New York, *Chairman*
John W. Abbuhl, Albany
John D. Cahill, The Bronx
George W. Lewis, Chautauqua
John A. Ramsdell, Westchester

Bylaws

George Lim, Oneida, *Chairman*
Sheppard Arluck, Livingston
Robert M. Kohn, Erie
Allison Landolt, Westchester
Stanley H. Oransky, Rockland

Scientific Activities, Publications, and Miscellaneous

Administrative Committee for the MSSNY Pension Program
American Association of Medical Assistants, New York State Society, Inc., Advisory to
Awards and Prize Essays
Foreign Medical Graduates
General Insurance
Membership Benefits
Publications

Charles R. Salamone, Monroe, *Chairman*
Ray S. Crampton, Nassau
Stuart I. Orsher, New York
Joseph A. Prezio, Erie
George P. Tilley, Onondaga

Public Health and Education

Accident and Injury Prevention
Aging and Nursing Homes
Alcoholism
Cancer
Child Abuse
Drug Abuse
Emergency Health Services
Environmental Quality
Health Care in Correctional Institutions
Home Health Care and Hospice
Liaison Committee with Nursing
Maternal and Child Health
Medical Aspects of Sports
Mental Health
Metabolic Diseases
Physical Medicine and Rehabilitation
Preventive Medicine
School Health
Continuing Medical Education
Forensic Medicine
Information Technology in Medicine
Medical School Relationships
Physicians' Committee
Scientific Program

Frederick J. Michel, Schoharie, *Chairman*
David A. Dreiling, New York
Robert M. Farrell, Queens
Robert E. Fear, Suffolk
Donna B. O'Hare, New York

Medical Services

Cost Containment
Health Manpower and Rural Medical Service
IPA-HMO
Interspecialty
Medicaid
Medical Care Insurance
Peer Review
PSRO
Workers' Compensation and Occupational Health

Felix R. Rosenhain, Queens, *Chairman*
Edwin I. Cleveland, Westchester
William A. Dolan, Monroe
Richard A. Hughes, Warren
Felix A. Monaco, Nassau

Governmental Affairs and Legal Matters

Ethics
Judicial Council
Federal Legislation
State Legislation
New York State Association of the Professions
Professional Medical Liability Insurance and Defense Board

Seymour R. Stall, Dutchess, *Chairman*
Norman S. Blackman, Kings
James H. Cosgriff, Jr., Erie
* Theodore Marc Mazer
Jerome Weiss, New York

Tellers

James R. Nunn, Erie, *Chairman*
Daniel L. Dombroski, Onondaga
Norbert Menuhin, Wayne
John Peter Roberts, Ulster
Seymour J. Wiener, Orange

Sergeant at Arms

Stephen R. Chernay, Dutchess, *Chairman*
Vashti R. C. Curlin, Kings
Michael N. Lavacca, The Bronx
Norman C. Lyster, Jr., Chenango
Theodore R. Poritz, Broome

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* Medical Student Membership Delegate.

NOMINATING COMMITTEE

To the House of Delegates, Ladies and Gentlemen:

In accordance with Article XI, Section 2 of the Bylaws of the Medical Society of the State of New York, the Nominating Committee met at the Society's headquarters, 420 Lakeville Road, Lake Success, New York, on Thursday, May 20, 1982, at 10:30 a.m.

Members of the committee present were:
Member at Large—**Ralph M. Schwartz, M.D.,** Kings, *Chairman*
First District Branch—**Carl Goldmark, Jr., M.D.,** New York
Second District Branch—**Stanley A. Steckler, M.D.,** Suffolk
Third District Branch—**Frederick J. Michel, M.D.,** Schoharie
Fourth District Branch—**Daniel F. O'Keeffe, M.D.,** Warren
Fifth District Branch—**Robert M. George, M.D.,** Oneida
Sixth District Branch—**Charles N. Aswad, M.D.,** Broome
Seventh District Branch—**James M. Flanagan, M.D.,** Wayne
Ninth District Branch—**Seymour R. Stall, M.D.,** Dutchess
Member at Large—**William A. Schwarz, M.D.,** Richmond

Excused was: John T. Donovan, Jr., M.D., Eighth District Branch. President Milton Rosenberg, M.D., designated Henry I. Fineberg, M.D., to represent the interests of that District.

After careful consideration of the recommendations submitted by the district branches, county medical societies, and scientific sections in response to a memorandum, dated, January 19, 1982, and nominations from the floor, your committee respectfully nominated the following candidates for election on November 10, 1982:

President—**Richard D. Eberle, M.D.,** Onondaga
President-Elect—**Bernard J. Pisani, M.D.,** New York
Vice-President—**Allison B. Landolt, M.D.,** Westchester
Secretary—**Victor J. Tofany, M.D.,** Monroe
Assistant Secretary—**Daniel F. O'Keeffe, M.D.,** Warren
Treasurer—**John A. Finkbeiner, M.D.,** New York
Assistant Treasurer—**Charles D. Sherman, Jr., M.D.,** Monroe
Speaker—**John L. Clowe, M.D.,** Schenectady
Vice-Speaker—**Charles N. Aswad, M.D.,** Broome
Trustees (*one for five years*)—**Ralph M. Schwartz, M.D.,** Kings
(*one for two years*)—**Joseph F. Shanaphy, M.D.,** Richmond
Councilors (*four for three years*)—**James H. Cosgriff, Jr., M.D.,** Erie
Samuel M. Gelfand, M.D., Nassau
Richard A. Hughes, M.D., Warren
Antonio F. LaSorte, M.D., Broome

Delegates to the American Medical Association for two years commencing January 1, 1983:

Charles N. Aswad, M.D., Broome
Edgar P. Berry, M.D., New York
William P. Clark, M.D., Westchester
John L. Clowe, M.D., Schenectady
Richard D. Eberle, M.D., Onondaga
Carl Goldmark, Jr., M.D., New York
Robert E. Gordon, M.D., Kings
Wilbur J. Gould, M.D., New York
Joseph J. Kaufman, M.D., Ontario
James J. Kropelin, M.D., Niagara
Dattatraya Lanjewar, M.D., Bronx
Robert A. Mayers, M.D., Westchester
Richard N. Pierson, Jr., M.D., New York
Milton Rosenberg, M.D., Suffolk
Felix R. Rosenhain, M.D., Queens
Charles R. Salamone, M.D., Monroe
Ralph M. Schwartz, M.D., Kings
Joseph F. Shanaphy, M.D., Richmond
Clifford L. Spingarn, M.D., New York
Stanley A. Steckler, M.D., Suffolk

The ten nominees receiving the largest number of votes will be delegates; the second ten will be alternates.

Respectfully submitted,

Ralph M. Schwartz, M.D. *Chairman*

HOUSE COMMITTEE ON BYLAWS

To the House of Delegates, Ladies and Gentlemen:

The members of the House Committee on Bylaws are as follows:

Edgar P. Berry, M.D., *Chairman*	New York
Charles N. Aswad, M.D.	Broome
Allison B. Landolt, M.D.	Westchester
George Lim, M.D.	Oneida
Daniel F. O'Keeffe, M.D.	Warren
Milton Rosenberg, M.D., *President, ex officio*	Suffolk
Victor J. Tofany, M.D., *Secretary, ex officio*	Monroe
John L. Clowe, M.D., *Speaker, ex officio*	Schenectady

A meeting of the Reference Committee on Bylaws was held at the Grand Hyatt Hotel in New York City on October 12, 1981. The Reference Committee was appointed to receive input from delegates as to their thoughts on the resolutions referred to the House Committee on Bylaws. The input received from the meeting of the Reference Committee on Bylaws proved to be of great assistance to the House Committee on Bylaws.

In all, seven resolutions asking for amendments to the Bylaws were referred to the Committee for its consideration.

The following actions were taken with respect to the resolutions referred to this Committee:

Resolution 79-27, Age Qualification for Entitlement to Life Membership for Practicing Physicians

Introduced by Medical Society of the County of Queens

Whereas, The Bylaws of the Medical Society of the State of New York were changed to raise the age limit for life membership from seventy to seventy-five for "practicing" physicians; and

Whereas, The motivating factor for this change was the increase in the ratio of nonpaying members to the paying members; and

Whereas, Many practicing physicians over seventy years of age have a very limited practice, with limited income; and

Whereas, The increase in life membership age from seventy to seventy-five for these physicians is causing them to resign in bitterness; and

Whereas, Physician members with decreasing income are resigning from membership and the intended change in raising the age limit for life membership is, therefore, having the reverse effect; and

Whereas, Many of those resigning have been loyal, dues paying members for 30–40 years or more, and now feel betrayed, and are resentful, thus creating a poor image for MSSNY; and

Whereas, The Bylaws of the Medical Society of the State of New York should be amended to accommodate this change; therefore be it

Resolved, That Article II, Section 1, paragraph 6 of the Bylaws of the Medical Society of the State of New York be changed by deleting the word "seventy-five" and inserting the word "seventy" after the phrase "prior to the attainment of the age of."

Article II, Section 1, paragraph 6 would then read as follows:

> "An active member in good standing who has completely withdrawn from the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy years or an active member in good standing who continues the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy years, or an active member in good standing for ten consecutive years or more who is permanently disabled, may apply for life membership. The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership."

and

Resolution 79-39, Life Membership

Introduced by Nassau County Medical Society

Whereas, The Medical Society of the State of New York amended its Bylaws in 1978 concerning life membership; and

Whereas, The Nassau County Medical Society, in considering the changes in the MSSNY life membership category, believes there is no justifiable reason why a physician should not be entitled to life membership at the age of 70 rather than 75; and

Whereas, NCMS also believes that a physician who retires from the active practice of medicine, irrespective of age, and has been an active member in good standing for ten consecutive years should also be entitled to life membership; therefore be it

Resolved, That Article II, Section 1, paragraph 6 of the Bylaws be amended by deleting the phrase "prior to the attainment of the age of seventy years" after the words "ten consecutive years" and deleting the word "seventy-five" after the phrase "attainment of the age of" and inserting the word "seventy."

Article II, Section 1, paragraph 6 would then read as follows:

> "An active member in good standing who has completely withdrawn from the active practice of medicine and who has been a member in good standing for ten consecutive years or an active member in good standing who continues the active practice of medicine and who has been a member in good standing for the ten consecutive years prior to the attainment of the age of seventy years, or an active member in good standing for ten consecutive years or more who is permanently disabled may apply for life membership. The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership."

Resolutions 79-27 and 79-39 were referred back to the Committee by the House of Delegates. Because of the similarity of content, Resolutions 79-27 and 79-39 were reviewed at the same time.

The Committee firmly believes that the provisions relating to Life Membership should not be changed at this time. It is believed that the Bylaws adequately provide for those situations involving financial hardship or other extenuating circumstances. Attention is directed to Article II, Section 1, paragraph 6 of the Bylaws which provides, "The House of Delegates or the Council may waive the requirements [for Life Membership] in a proper case where there appear to be extenuating circumstances."

and

The House of Delegates in 1981 considered a substitute resolution for Resolutions 79-27 and 79-39 which reads as follows:

Whereas, The Bylaws of the Medical Society of the State of New York require 50 hours of CME credit per year to remain active members; and

Whereas, If a physician is retired he may not have the opportunity to obtain CME credits or if he is disabled he cannot obtain them and the expenses for these CME courses are high and not deductible if retired; therefore be it

Resolved, That Article II, Section 1, paragraph 6 of the Bylaws of the Medical Society of the State of New York be amended to read as follows:

> An active member in good standing who has completely retired from the practice of medicine or is totally disabled and who has been a member in good standing for a minimum of ten years prior to the attainment of the age of seventy years is entitled to apply for life membership. Those who have attained the age of seventy years and above but continue the practice of medicine and have been members in good standing for the below prescribed number of years may have their dues reduced according to the schedule outlined below.

Schedule

Age	Prescribed Years Good Standing	% of Reg. Dues
70	25	80%
71	22	60%
72	19	40%
73	16	20%
74	13	20%
75 + above	10	0%

> The House of Delegates or the Council may waive the requirements in a proper case where there appear to be extenuating circumstances. He shall apply for such life membership to the component county medical society of which he is a member. His application shall be governed by the constitution and bylaws of the component county medical society relative to active membership.

EXPLANATORY NOTES

In 1970 the active members numbered 24,261
In 1980 the active members numbered 21,431
This is a decrease of 11.6% or 2,830

In 1970 the life members numbered 2,791
In 1980 the life members numbered 4,348
This was an increase of 55.8% or 1,557

Proportion of life members to active members in 1970, 11%
Proportion of life members to active members in 1980, 20.3%
Proportion of life members to total members in 1970, 10%
Proportion of life members to total members in 1980, 16.86%

If our total membership had remained from 1970 to 1980, 16%
If our membership had increased an average of 1% per year, 15.4%

Our concern should be to recruit more younger physicians from the 22,000 that do not belong to the State Medical Society.

Resolutions, 79-27, 79-39 and the substitute resolution were referred back to the Committee by the House of Delegates in 1981.

The Committee reviewed the entire question concerning life membership, but remains convinced that the provisions relating to life membership should not be changed. It is the opinion of the Committee that the current requirements adequately provide for those situations involving financial hardship or other extenuating circumstances.

The Committee, therefore, unanimously recommends **DISAPPROVAL** of Resolutions 79-27, 79-39 and the substitute resolution.

Resolution 81-3, Chairman of the Board of Trustees as a Member of the Executive Committee

Introduced by Paul M. DeLuca, M.D., as an Individual

Whereas, Under the Bylaws of the Medical Society of the State of New York the Executive Committee has the authority to take action in case of emergency arising in the interim between the meetings of the Council; and

Whereas, Under the Bylaws, the Board of Trustees is given charge of property, including trust funds, and supervises the financial affairs of the Medical Society of the State of New York; and

Whereas, The chairman of the Board of Trustees is a member of the Council; and

Whereas, In his capacity as both a member of the Board of Trustees and Council, the chairman of the Board of Trustees may have expertise which may be of great assistance to the Executive Committee in its deliberations; therefore be it

Resolved, That the Medical Society of the State of New York amend its Bylaws so that the chairman of the Board of Trustees will become a member of the Executive Committee of the Council; and be it further

Resolved, That Article IV, Section 4, paragraph 1 be amended by adding the words "chairman of the Board of Trustees" after the word "treasurer."

Article IV, Section 4, paragraph 1 would then read as follows:

"The Council shall establish an executive committee to be composed of the president, the vice-president, the president-elect, the immediate past-president, the secretary, the treasurer, the chairman of the Board of Trustees, and two additional members of the Council appointed by the president with the approval of the Council."

The Committee was in unanimous agreement that the input from the Chairman of the Board of Trustees would be valuable to the Executive Committee and the Council.

The Committee, therefore, recommends **APPROVAL** of Resolution 81-3.

Resolution 81-7, Rescinding of Continuing Medical Education Requirement for Membership

Introduced by Medical Society of the County of Columbia, Inc.

Whereas, The Bylaws of the Medical Society of the State of New York state that continuing medical education be a requirement for membership; and

Whereas, Physicians have always taken pride in voluntarily continuing their education; and

Whereas, This often creates a hardship in smaller communities where physicians must leave their practices uncovered in order to obtain Category 1 credit; and

Whereas, The high cost of obtaining Category 1 credit may impose hardship; and

Whereas, Only 26,000 physicians of the estimated 48,000 licensed in New York State belong to MSSNY; and

Whereas, The remaining 22,000 do not have this mandate and may still practice good medicine; and

Whereas, This may cause some of the 26,000 members of MSSNY to resign; therefore be it

Resolved, That the Continuing Medical Education requirement for membership in the Medical Society of the State of New York be dropped; and be it further

Resolved, That Article II, section 3, of the Bylaws of the Medical Society of the State of New York be deleted to effectuate this change.

Article II, section 3 presently reads as follows:

"An active member who fails to fulfill the requirements for continuing medical education established by the Council of the Medical Society of the State of New York shall not be in good standing. This section shall become effective on March 1, 1981.

"An active member as defined in Article II, Section 1, who is found not to be in good standing as of March 1, 1981, or March 1 of any subsequent year, for failing to comply with paragraph 1 of this Section shall receive reasonable notice that he must fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing. An active member who does not fulfill continuing medical education requirements by the last day of December of the year in which he is found not to be in good standing shall automatically cease to be a member of the component county medical society and the State Society, unless, in the view of the Council, specific mitigating circumstances exist that the physician could not complete the CME requirements."

The Committee fully explored the question of CME requirements and was satisfied that the present requirements are reasonable in providing members with ways in which they can be in compliance. The Committee fully believes that the Medical Society's CME program is vastly preferable to any CME program that could be mandated by legislative action. It is the concern of this Committee that, if the Medical Society discontinues its CME program, there would be a greater impetus to mandate CME by legislation, and, in all likelihood, CME requirements imposed by legislation would be more onerous.

The Committee, therefore, unanimously, recommends **DISAPPROVAL** of Resolution 81-7.

Resolution 81-41, Proposed Member of the Medical Student Membership as a MSSNY Delegate to the AMA House of Delegates

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates Medical Student Membership

Whereas, The precedent has been established by a number of state medical societies to annually reserve for a medical student member a position of society delegate or alternate delegate to the House of Delegates of the American Medical Association; and

Whereas, By voicing opinions, through their medical student member delegate to the House of Delegates of the American Medical Association, the medical student sections of these respective states have assumed unique and dominant positions in national medical politics; and

Whereas, The Student Membership of the Medical Society of the State of New York counts its constituents from among the largest per capita pool of students and schools of medicine and of osteopathy than any other state in the Union, but continues to lag behind much smaller states in both student interest and political clout of the national level of organized medicine; and

Whereas, The Student Membership of MSSNY is currently funded by the Medical Society of the State of New York to send a nonvoting observer to the proceedings of the House of Delegates of the American Medical Association; and

Whereas, Without a voice on the New York State Delegation to the House of Delegates of the American Medical Association the scope of accomplishment and impact of the Medical Student Membership of MSSNY on "organized student medicine" outside the confines of New York State is essentially crippled, relegating MSSNY's student membership to a back-seat when compared with the national voice exercised by the American Medical Student Association (AMSA) chapter in New York State; and

Whereas, The establishment of a New York State student delegate to the House of Delegates of the American Medical Association would significantly increase the interest and political leverage of New York State medical students and thereby serve as a positive factor in aiding membership recruitment efforts by the Medical Student Membership of the MSSNY; therefore be it

Resolved, That Article III, Section 2, paragraph 2 of the Bylaws of the Medical Society of the State of New York be amended by adding a sentence to read:

"In each year at least one delegate or one alternate delegate from the total number of delegates that the Medical Society of the State of New York shall be entitled at the American Medical Association shall have been elected from among qualified student members nominated by the medical student membership."

Article III, Section 2, paragraph 2 will then read as follows:

"It shall elect the officers, councilors, and trustees of the State Society and the delegates to the American Medical Association. In each year, at least one delegate or one alternate delegate from the total number of delegates that the Medical Society of the State of New York shall be entitled at the American Medical Association shall have been elected from among qualified student members nominated by the medical student membership."

The House Committee on Bylaws believes that qualified student members of the Medical Society of the State of New York may serve effectively as delegates to the American Medical Association, and, therefore, student members, in good standing, should be eligible for election as delegates to the AMA. The Committee, however, does not believe that any delegate position should be reserved for any group or class of membership. The Committee, therefore, recommends that the following substitute resolution be approved:

Resolved, That Article III, Section 2, paragraph 2 of the Bylaws of the Medical Society of the State of New York be amended by adding a new sentence to read:

"A student member of the Medical Society of the State of New York, who is in good standing, is eligible for election as delegate to the American Medical Association, provided he is a member of the AMA."

Article III, Section 2, paragraph 2 would then read as follows:

"It shall elect the officers, councilors, and trustees of the State Society and the delegates to the American Medical Association. A student member of the Medical Society of the State of New York, who is in good standing, is eligible for election as delegate to the American Medical Association, provided he is a member of the AMA."; and be it further

Resolved, That Article II, Section 2, paragraph 4 of the Bylaws be amended by adding a sentence to read:

"In addition, student members shall be entitled to the rights and privileges otherwise accorded in these Bylaws."

Article II, Section 2, paragraph 4 would then read as follows:

"Student members shall be entitled to receive the *News of New York*. Each student member shall only be entitled to receive the *New York State Journal of Medicine* upon his individual written request, on an annual basis. Student members shall not be entitled to receive the *Medical Directory of New York State* free of charge. In addition, student members shall be entitled to the rights and privileges otherwise accorded in these Bylaws."

Accordingly, the Committee unanimously recommends **APPROVAL** of the substitute resolution for Resolution 81-41.

Resolution 81-43, Student Membership in County Medical Societies

Introduced by Jeffrey H. Dresner and Matthew J. Kuhn, Delegates, Medical Student Membership

Whereas, It is to the advantage of the Medical Society of the State of New York to encourage early interest in the activities of organized medicine by students of medicine or of osteopathy enrolled in respective programs in New York State; and

Whereas, The county medical societies are in the best position to provide the forum for involvement by locally enrolled students of medicine or of osteopathy; and

Whereas, There is not currently a consistent policy among the sixty-one component county medical societies of the Medical Society of the State of New York relative to student membership and extent and avenues of involvement; therefore be it

Resolved, That Article XVIII, Section 2 of the Bylaws of the Medical Society of the State of New York be amended by adding a new paragraph 5 and 6 to read:

"Every component county medical society shall provide for a student membership class. Membership in the student membership class of the component county medical society shall be extended to any student member of the Medical Society of the State of New York who is enrolled in a recognized school of medicine or of osteopathy situated in the county, or who maintains legal residence in the county."

"Student members shall not be subject to the dues or assessments of the county medical society but shall be accorded rights and privileges in the county medical society to include the right to attend membership meetings, to have voice and vote thereat, and to hold elective office."

The Committee is opposed to mandating that the county medical societies create a student classification. The Committee wishes to urge all county medical societies to adopt a student membership category. This, however, does not require a change in the Bylaws.

The Committee, therefore, unanimously recommends **DISAPPROVAL** of Resolution 81-43.

Resolution 80-27, Proposed Revisions of the Principles of Professional Conduct

Introduced by Clifford L. Spingarn, M.D., as an Individual

Whereas, The Speaker of the House of Delegates has requested that a review of the PRINCIPLES OF PROFESSIONAL CONDUCT be made by the House Committee on Bylaws; and

Whereas, The fact that this study of the PRINCIPLES OF PROFESSIONAL CONDUCT has been called to the attention of the Committee on Ethics; and

Whereas, In the spirit of being cooperative with this study, the Council Committee on Ethics has proposed the attached update and revision of the PRINCIPLES OF PROFESSIONAL CONDUCT; therefore be it

Resolved, That the attached draft of the revised PRINCIPLES OF PROFESSIONAL CONDUCT be considered by the House Committee on Bylaws in accordance with Article XX of the Bylaws.

PROPOSED REVISIONS

PRINCIPLES OF PROFESSIONAL CONDUCT

DRAFT

CHAPTER I — *General Principles*

Section 1: The prime object of the medical profession is to render competent medical service with compassion and respect for human dignity.

Section 2: These Principles of Professional Conduct shall apply to doctors of medicine as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, partnerships, corporations or groups, by whatsoever name they may be known.

Section 3: The Medical Society of the State of New York does not prohibit the use of advertising when used in making certain information known to the public, which is entitled to know the names of physicians, the types of their practice, the location of their office, their office hours, fixed fees for specified routine professional services, and biographical data that will enable people to make a more informed choice of a physician.

The physician may furnish this information through the accepted local media for advertising; i.e., office signs, professional cards, dignified announcements, telephone directory listings, reputable directories and news media, which are open to all physicians on like conditions.

Solicitation of patients not in the public interest, directly or indirectly by a physician, by groups of physicians, clinics, institutions or organizations is unethical. Solicitation shall include:

(1) The not always obvious devices of furnishing or inspiring, by use of public relations firms or the news media, comments concerning cases in which the physician, group or institution has been or is concerned;

(2) the use of statements or claims intended or likely to create inflated or unjustified expectations of favorable results;

(3) the use of statements or claims that are self-laudatory and imply that the physician's skills are superior to other physicians engaged in his field or specialty of practice;

(4) offering gratuitous services or discounts in connection with professional services.

Section 4: Doctors of Medicine may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers, which have been published, and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. When any sort of medical information is released to the public, the promise of radical cures or boasting of cures or extraordinary skill or success, is unethical.

Section 5:

(a) The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of the patient is unethical.

(b) When a patient is referred by one doctor of medicine to another for consultation or treatment, the offering, giving, soliciting or receiving any fee or other consideration is unethical.

(c) The prescription or dispensing by a doctor of medicine of secret medicines or other secret remedial agents, of which he does not know the composition or the manufacture or promotion of their use is unethical.

(d) A doctor of medicine shall not have any financial interest in or own a pharmacy or an optical dispensing facility, unless it is established to the satisfaction of the local county medical society that such participation or ownership is necessary to meet the needs of the community.

(e) Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient or in areas where they are not available.

CHAPTER II

Section 1: A doctor of medicine is free to choose whom he will serve. He should respond to any request for his assistance in an emergency.

Section 2: Once having undertaken a case, the doctor of medicine should not neglect the patient, nor should he withdraw from the case without giving notice to the patient and/or his relatives or his guardian sufficiently long in advance of his withdrawal to allow them to secure another medical attendant.

Section 3: The doctor of medicine should safeguard the confidences which he may receive from his patient; this obligation extends beyond the period of professional services. None of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by doctors of medicine except when required by state law or by the courts.

Section 4: All voluntarily associated activities with cultists are unethical. Such activities lower the honor and dignity of the profession; in the same degree, it elevates the honor and dignity of the cultist.

CHAPTER III

Section 1: Every doctor of medicine should aid in safeguarding the profession against admission to it of those who are deficient in moral character or education.

Section 2: A doctor of medicine should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession.

CHAPTER IV

Section 1: Doctors of medicine should request consultations in perplexing cases, and the attending doctor of medicine should cheerfully consent to a consultation when desired by the patient or his representative.

Section 2: All due respect should be observed toward the doctor of medicine in charge of the case and no statement or remark should be made which would unjustly impair the confidence reposed in him.

Section 3: As soon as possible after the consultant has seen the patient, he should address the doctor of medicine in charge and advise him of the results of his investigation. Statements then may be made to the patient and/or his family or guardian in presence of all doctors of medicine concerned or unless another arrangement has been consented to by all physicians involved.

Section 4: The doctor of medicine in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such change is warranted. However, after such a change, it is best to call another consultation; then the doctor of medicine in charge should state his reasons for departing from the course decided at the previous conference. When an emergency occurs during the absence of the doctor of medicine in charge, a consultant may assume authority until the arrival of the doctor of medicine in charge.

Section 5: It may happen that the attending doctor of medicine and the consultant cannot agree in their views of the case or of the treatment to be pursued; with the consent of the patient another consultant may be called.

Section 6: When a doctor of medicine has acted as consultant in an illness, he should not become the doctor of medicine in charge in the course of that illness, except with the consent of the doctor of medicine who was in charge at the time of the consultation, unless the patient insists on the change.

Section 7: When a doctor of medicine makes social calls on another doctor of medicine's patient, he should avoid conversation about the patient's illness.

Section 8: A doctor of medicine should not take charge of, or prescribe for, another doctor of medicine's patient during any given illness (except in an emergency) until the other doctor of medicine has relinquished the case or has been formally dismissed.

Section 9: When a doctor of medicine does succeed another doctor of medicine in charge of a case, he should not disparage, by comment or insinuation, the one who preceded him. Such comment or insinuation tends to lower the confidence of the patient in the medical profession and so reacts against the patient, the profession, and the critic.

Section 10: When a doctor of medicine is called in an emergency because the personal or family doctor of medicine is not at hand, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the personal or family doctor of medicine. However, he should first report to the personal or family doctor of medicine the condition found and the treatment administered.

Section 11: Whenever a doctor of medicine requests another doctor of medicine to attend his patients during his temporary absence from his practice, professional courtesy requires the acceptance of such appointment if consistent with his other duties. The doctor of medicine acting under such an appointment should give the utmost consideration to the interests and reputation of the absent doctor of medicine. All such patients should be restored to the care of the latter upon his return.

CHAPTER V

Section 1: A doctor of medicine should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patient concerned might be deprived of immediately necessary care.

Section 2: Contract practice as applied to medicine means the practice of medicine under an agreement between a duly licensed doctor of medicine or a group of doctors of medicine, as principals or agents, and a corporation, organization, political subdivision, or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for salary or for a fixed rate per capita. Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Professional Conduct or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered. Contract practice which allows diversion of fees for professional medical services to a hospital, organization, or political subdivision is unethical.

Section 3: It is not unethical for a fee to be prorated among two or more doctors of medicine when such physicians have actively participated in the medical and/or surgical care of a patient and each physician's fee is commensurate with the services he had rendered. The patient who has received such joint services shall be advised of the participation of each physician and shall receive a separate, itemized statement from each.

CHAPTER VI

Section 1: Doctors of medicine, as good citizens, possessed of special training, should promote the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations.

Section 2: Doctors of medicine should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases. At all times the doctor of medicine should notify the constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules, and regulations of the health authorities. When an epidemic prevails, a doctor of medicine must continue his labors without regard to the risk of his own life.

Enforcement of the Principles of Professional Conduct

Component county medical societies should cooperate with the properly constituted authorities in the enforcement of the laws to the State of New York and of their respective localities relating to the public health and to the practice of medicine and should report promptly to such authorities any evidence received by them indicating any violation of such laws. The commission of an act or acts by a doctor of medicine which would subject him to reprimand or discipline or which would subject his license to practice medicine to revocation, suspension, or annulment shall constitute a violation of these Principles of Professional Conduct.

Amendments or Alterations

Any component county medical society may adopt other or amend or alter these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Bylaws of the Medical Society of the State of New York.

Enforcement, Discipline, and Punishment

Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws provisions adopted in accordance with its own constitution and bylaws, and in accordance with the Bylaws of the Medical Society of the State of New York, shall (a) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (b) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction.

APPENDIX I

The Oath

I swear by Apollo the physician and Aesculapius and Hygeia and Panacea and all the gods and goddesses that according to my ability and judgment I will keep this Oath and this stipulation — to reckon him who taught me this Art equally dear to me as my parents — to share my substance with him and relieve his necessities if required — to look upon his offspring in the same footing as my own brothers and to teach them this Art if they shall wish to learn it without fee or stipulation — and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the Art to my own sons and those of my teachers and to disciples bound by a stipulation and oath, according to the Law of Medicine, but to none others.

I will follow the system of regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times. But should I trespass and violate this Oath, may the reverse be my lot.

Hippocrates
(460–357 B.C.)

Prayer

I begin once more my daily work. Be thou with me, Almighty Father of Mercy, in all my efforts to heal the sick. For without Thee, man is but a helpless creature. Grant that I may be filled with love for my art and for my fellowmen. May the thirst for gain and the desire for fame be far from my heart. For these are the enemies of Pity and the Ministers of Hate. Grant that I may be able to devote myself, body and soul to thy children who suffer from pain.

Preserve my strength, that I may be able to restore the strength of the rich and the poor, the good and the bad, the friend and the foe. Let me see in the sufferer the man alone. When wiser men teach me, let me be humble to learn, for the mind of man is so puny and the art of healing is so vast. But when fools are ready to advise me or to find fault with me, let me not listen to their folly. Let me be intent upon one thing, O Father of Mercy, to be always merciful to thy suffering children.

May there never rise in me the notion that I know enough, but give me strength and leisure and zeal to enlarge my knowledge. Our work is great and the mind of men presses forward forever. Thou has chosen me in thy grace, to watch over the life and death of Thy creatures. I am about to fulfill my duties. Guide me in this immense work so that I may be of avail.

Maimonides
(1135–1204 A.D.)

Declaration of Geneva

At the Time of Being Admitted as Member of the Medical Profession:

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due.

I will practice my profession with conscience and dignity.

The health of my patient will be my first consideration.

I will respect the secrets which are confided in me.

I will maintain by all means in my power, the honor and the noble traditions of the medical profession.

My colleagues will be my brothers.

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient.

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely, and upon my honor.

Adopted by the General Assembly of the World Medical Association at Geneva, Switzerland, September, 1948.

The House Committee on Bylaws decided to accept the proposed revisions to the Principles of Professional Conduct as submitted by the Ethics Committee of the Medical Society of the State of New York as a substitute to Resolution 80-27. The proposed revisions provide:

CHAPTER I

General Principles

Section 1: The prime object of the medical profession is to render competent medical service with compassion and respect for human dignity.

Section 2: These principles of professional conduct shall apply to doctors of medicine as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, partnerships, corporations or groups, by whatsoever name they may be known.

Section 3: The medical profession should safeguard the public and itself by exposing those physicians deficient in moral character or professional competence or who engage in illegal or unethical conduct.

Section 4: A doctor of medicine shall respect the rights of colleagues.

Section 5: Doctors of medicine should strive continually to improve medical knowledge and skill. They can promote the health of their community by their contributions and by cooperating with the proper authorities in the administration of sanitary laws and regulations.

Section 6: Any conduct that results in the provision of unnecessary services or overutilization of services or facilities is unethical.

CHAPTER II

Specific Principles

Section 1: A doctor of medicine is free to choose whom he will serve, except in the case of an emergency.

Section 2: Once having undertaken a case, the doctor of medicine should not neglect the patient nor should he withdraw from the case without giving adequate notice to the patient and/or relatives or guardian.

Section 3: The doctor of medicine should safeguard the patient's confidences within the constraints of the law.

Section 4: Doctors of medicine should request consultations when necessary or upon request of patient and/or family.

Section 5:

(a) The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of the patient is unethical.

(b) When a patient is referred by one doctor of medicine to another for consultation or treatment, the offering, giving, soliciting or receiving any fee or other consideration is unethical.

(c) It is not unethical for a fee to be prorated among two or more doctors of medicine when such physicians have actively participated in the medical and/or surgical care of a patient and each physician's fee is commensurate with the services he had rendered. The patient who has received such joint services shall be advised of the participation of each physician and shall receive a separate, itemized statement from each.

Section 6:

(a) The prescription or dispensing by a doctor of medicine of secret medicines or other secret remedial agents, of which he does not know the composition or the manufacture or promotion of their use is unethical.

(b) In owning a commercial medical facility for adjunct treatment purposes, a physician must keep the primary benefit of the patient in mind and such ownership should not result in overutilization for profit motives. Such ownership or participation must be approved by the local county medical society.

(c) Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient or in areas where they are not available.

Section 7: A physician who has experienced problems with delinquent accounts may properly choose to request that payment be made at the time of treatment or add interest or other reasonable charges to delinquent accounts. The patient must be notified in advance of the interest or other finance or service charges by such means as the posting of a notice in the physician's waiting room or appropriate notations on the billing statement. The physician must comply with state and federal laws and regulations applicable to the imposition of such charges, i.e., the Truth in Lending Law.

Section 8: The attending physician should complete without charge the appropriate "simplified" insurance claim forms as a part of his service to the patient to enable the patient to receive his benefits. A charge for more complex forms may be made.

CHAPTER III

ADVERTISING

The Medical Society of the State of New York does not prohibit the use of advertising when used in making certain information known to the public, provided that the communication shall not be misleading, shall not contain any false or misleading statements and shall not deceive the public.

The public is entitled to know the names of physicians, their office hours, fixed fees for specified routine professional services and biographical data which will enable people to make a more informed choice of a physician. The physician may furnish this information through the accepted local media for advertising, i.e., office signs, professional cards, dignified announcements, telephone directory listings, reputable directories and news media, which are open to all physicians on like conditions.

Uninvited or in person solicitation of actual or potential patients, who because of their particular circumstances are vulnerable to undue influence, is unethical. Solicitation shall include:

(1) The not always obvious devices of furnishing or inspiring, by use of public relations firms or the news media, comments concerning cases in which the physician, group or institution has been or is concerned:

(2) the use of statements or claims intended or likely to create inflated or unjustified expectations of favorable results;

(3) the use of statements or claims that are self-laudatory and imply that the physician's skills are superior to other physicians engaged in his field or specialty of practice.

CHAPTER IV

CONTRACT MEDICINE

There are various financial or contractual arrangements that physicians may enter into. Medical care should not be subjected to lay interference on professional matters. The primary responsibility of physicians should be to the patients they serve.

AMENDMENTS OR ALTERATIONS

Any component county medical society may adopt other or amend these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Bylaws of the Medical Society of the State of New York.

ENFORCEMENT, DISCIPLINE, AND PUNISHMENT

Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws provisions adopted in accordance with its own constitution and bylaws and in accordance with the Bylaws of the Medical Society of the State of New York, shall (a) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (b) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction.

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I will follow the system of regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times. But should I trespass and violate this Oath, may the reverse be my lot.

Hippocrates
(*460–357 B.C.*)

Prayer

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Preserve my strength, that I may be able to restore the strength of the rich and the poor, the good and the bad, the friend and the foe. Let me see in the sufferer the man alone. When wiser men teach me, let me be humble to learn, for the mind of man is so puny and the art of healing is so vast. But when fools are ready to advise me or to find fault with me, let me not listen to their folly. Let me be intent upon one thing, O Father of Mercy, to be always merciful to thy suffering children.

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I will practice my profession with conscience and dignity.

The health of my patient will be my first consideration.

I will respect the secrets which are confided in me.

I will maintain by all means in my power, the honor and the noble traditions of the medical profession.

My colleagues will be my brothers.

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient.

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely, and upon my honor.

Adopted by the General Assembly of the World Medical Association at Geneva, Switzerland, September, 1948.

The House Committee on Bylaws unanimously believes that under the substitute proposal, the Principles of Professional Conduct will be more concise, while the pertinent principles will remain intact.

The Committee, therefore, recommends **APPROVAL** of the substitute proposal for Resolution 80-27.

This report would not be complete unless your chairman offered a tribute to the late J. Richard Burns, J.D. As General Counsel, Mr. Burns provided this Committee with much needed advice and guidance.

Your chairman would like to thank in addition to the members of the Committee and the physicians who testified before it, those members of the staff who aided this Committee; Donald R. Moy, J.D., General Counsel, and Mrs. Joan Grimm and Ms. Barbara Lacey, who provided their secretarial assistance to the Committee.

Respectfully submitted,

Edgar P. Berry, M.D. *Chairman*

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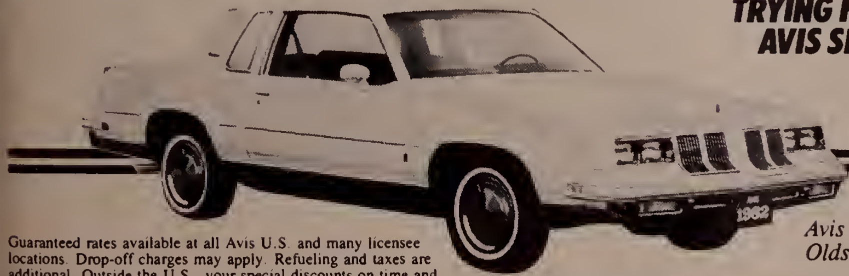

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Tables: Each table should be typed on a separate sheet of paper, be numbered consecutively, have a brief descriptive title, and its position in text indicated. Take care that columns add up correctly and that statistics are consistent in both tables and text.

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(*continued from page 1427*)

heavier bullet traveling at the same velocity may pierce the target in a straight path. An unstable bullet may tumble, causing a wider path of damage; or may be deflected easier once inside the body, again causing more damage. Thus high velocity alone does not explain the effect of this cartridge fired from an M=16.

Dennis Jukofsky
Research Scientist
New York State Division of Substance Abuse Services

Dr. Bakay's reply

To the Editor: I appreciate Mr. Jukovsky's professional comments since, once upon a time, I was a small arms instructor (infantry).

As a matter of basic physics I should have used the term "propellant" rather than explosive charge, it is more correct from a ballistic point of view although generally used without much discrimination.

The M-16 is a different matter. Here I wish to stick to my guns (no pun intended). The reason I did not dwell on this rifle is simply because my paper was intended for medical readership and injuries inflicted by military assault guns are very rare in this country.

The light M-16 round is indeed unstable. It has a tendency to tumble upon impact and deposit all its energy within the body without exiting. This results in extensive tissue damage, despite the small caliber (5.56 mm) of the projectile. By contrast, the 7.62 mm infantry rifle has greater fight stability, it is likely to pass completely through the body but still has an arresting (destructive) power similar to the M-16. Whether a bullet fired from an M-16 tumbles on impact or hits the body point on is a matter of random coincidence. When it hits straight and passes through the body, its effect will still be similar to that caused by the 7.62. $E = \frac{1}{2}mv^2$, where E is energy (call it destructive force for dramatic effect), m is the mass of the projectile, v its velocity. The mass of a 7.62 round is about three times that of an M-16; the difference in weight is compensated for by the velocity which is 3,250 fps for the M-16 as compared to about 2,600–2,700 for the 7.62 rifle. The edge of the M-16 then, considering all things equal, is its velocity.

Some of these speculations are somewhat theoretical, and the relative effectiveness of these guns is still a matter of conjecture (see J. Chase, *Armed Forces Journal*, Oct. 1981) because living tissue damage is hard to quantitate. But devastating they are.

LOUIS BAKAY, M.D.
Professor and Chairman, Department of Neurosurgery
State University of New York at Buffalo
462 Grider Street
Buffalo, New York 14215

(*continued from page 1476*)

Like other elements of the course, the Visiting Faculty Program is sponsored by the Office of Continuing Medical Education of Memorial Sloan-Kettering Cancer Center, which is accredited by the Accreditation Council of Continuing Medical Education to sponsor continuing medical education for physicians. The Visiting Faculty Program is accredited for up to six CME credit hours.

A five-membered Editorial Board directs the course. Sidney J. Winawer, M.D., Chief of the Gastroenterology Service at Memorial Sloan-Kettering Cancer Center, New York, is Executive Editor. Some 25 nationally recognized authorities comprise the balance of the Visiting Faculty.

The complete Visiting Faculty Program is comprised of two parts; Part 1 focuses on disease and diagnosis and Part 2 focuses on case finding and management. Each part consists of a lecture supported by slides, a discussion session, and a monograph for independent study and later referral. The Visiting Faculty will address audiences comprised mostly of primary care physicians at hospitals, medical schools, and medical association meetings throughout the United States.

According to Dr. Winawer, "Primary care physicians are in an ideal position to reduce the mortality of this disease through early case finding and prompt referral. It is imperative that they have the latest knowledge about colorectal cancer — including the methods available for early detection, diagnosis, management, and follow-up." The Visiting Faculty Program responds to this need for information by permitting physicians to interact directly with faculty members and discuss their personal experiences, questions, and concerns. The Program also allows for the dissemination of essential information to physicians and allied health care personnel unable to avail themselves of the complete course.

This year 120,000 new cases of colorectal cancer are expected to be diagnosed, and about 55,000 patients will die of this disease. The mortality rate for colorectal cancer is surpassed only by lung cancer, according to a recent report from the National Cancer Institute. The American Cancer Society has estimated that up to 75 per cent of all patients with colorectal cancer could be saved by early diagnosis and prompt, appropriate treatment.

The course and all its elements are developed and produced by Health Learning Systems Inc., under an educational grant from SmithKline Diagnostics, Inc. The course is provided in cooperation with the American Cancer Society, the American Society for Gastrointestinal Endoscopy, The American Society of Colon and Rectal Surgeons, the International Workgroup on Colorectal Cancer, and the National Cancer Institute.

For additional information about the Visiting Faculty Program, call Barbara Weinrib or Barbara Anderson at Health Learning Systems, (201) 338-3615.

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Material for inclusion in the medical meetings section must be received eight weeks prior to publication date.

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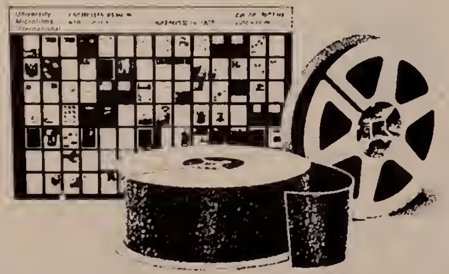

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The AMPAC official said tight controls are maintained on such funds to assure that no AMPAC officer has had any communication with the candidates involved.

To date this year, AMPAC has received contributions from some 42,000 people – primarily physician members of the American Medical Association and state medical societies — averaging about $25 per person. "Thus AMPAC serves as a means by which a large number of small contributors can pool their resources to more effectively participate in the political process," said Dr. Levis.

In 1978, AMPAC spent about $48,500 on two independent expenditures programs. One involved advertisements in local editions of national magazines; the other, campaign buttons for candidates in 10 congressional districts.

During the 1980 elections AMPAC spent $170,000 for television spots for seven candidates and direct mail for another seven.

Assessing the effectiveness of these programs, Dr. Levis said the magazine ads may have been effective in promoting awareness of the candidates, the campaign buttons may have helped to increase name recognition, and that the direct mail brochure appeared to have the most impact probably influencing the results. Television spots apparently improved the attitude of voters, particularly undecided voters, toward the candidates who were supported.

"It thus appears that carefully planned, positive independent expenditures may increase the chances of election of the candidate who is supported," Dr. Levis said.

*** *** ***

Prepared by the Washington, D.C. office of the American Medical Association.

Robert S. Asher, Esq.
Former Director, Division of Professional Conduct, New York State Board of Regents

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A first aid kit for trips abroad

If you are planning foreign travel and are wondering what personal, first aid items to take along, the American Medical Association has some advice.

Among personal supplies to pack in your baggage, the new AMA booklet entitled "Travelers' Health Abroad: A Guide For Physicians" recommends a medical insurance application form, a spare pair of spectacles, your refraction prescription (for having new prescription glasses ground), a sunscreen containing benzophenone, lip balm, water purification tablets or chemicals, cleansing tissue or toilet paper, your physician's telephone number, sunglasses, and footpowder.

Under the category of personal supplies, the booklet also advises that you not pack, but keep with you a supply of any prescription medicines that are of crucial importance, such as insulin or digitalis, as well as extra prescriptions in case you may need refills while you are away.

Recommended first aid items include bandages and small adhesive gauze pads, adhesive tape and safety pins, scissors and tweezers, soap, insect repellent (such as one containing diethyltoluamide, which can be applied to the skin), and a clinical thermometer.

In consultation with your physician, you may want to add antibiotics or other medicines or otherwise modify this list, depending on your destination, the possible environmental hazards that exist in the country you're traveling to and the expected duration of the trip.

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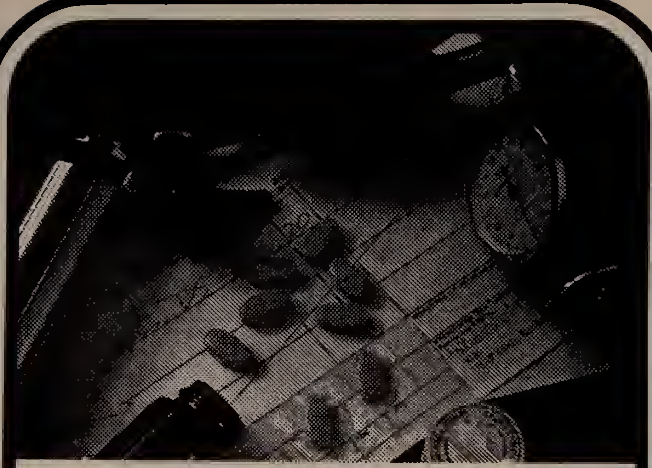

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NEW YORK

Memorial Sloan-Kettering Cancer Center

1275 York Avenue
New York, NY 10021
October 7–8, 1982
GENETICS IN CLINICAL ONCOLOGY
R. S. K. Chaganti, Ph.D. and James L. German, III, M.D.
CREDIT: AMA Cat. 1 (15 hrs.)
FEE: $200.00
October 7–9, 1982
CURRENT CONCEPTS IN PSYCHOSOCIAL ONCOLOGY
Jimmie C. B. Holland, M.D.
CREDIT: AMA Cat. 1 (18 hrs.)
FEE: $225.00
For further information contact Charlene H. Landis, CME Conference Planner, Memorial Sloan-Kettering Cancer Center, at 212/794-8406.

New York University Medical Center Post-Graduate Medical School

550 First Avenue
New York, NY 10016
*Alumni Hall
October 21–23, 1982—Thursday–Saturday
PITFALLS IN THE DIAGNOSIS OF MALIGNANT MELANOMA
A. Bernard Ackerman, M.D. and Geoffrey J. Gottlieb, M.D.
CREDIT: AMA Cat. 1 (16 hrs.)
FEE: $400.00
For further information contact Registration Office, NYU Post-Graduate Medical School, at 212/340-5295.

Beth Israel Medical Center Co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
New York, NY 10003
*Loeb Auditorium, Hospital for Joint Diseases
Orthopedic Institute, 301 East 17th Street, New York, NY 10003
October 27, 1982—8:30 AM–12:00 Noon—Wednesday
THE CURRENT STATUS OF GASTROINTESTINAL CANCER: A Review and Update
Alvin H. Gelb, M.D.
CREDIT: AMA Cat. 1
For further information contact Beverley R. Baptiste at 212/420-2000.

New York Trudeau Society Chapter of The American Thoracic Society

8 Mountain View Avenue
Albany, NY 12205
*Barbizon Plaza Hotel, New York City
October 21–23, 1982
BASICS OF LUNG DISEASE
CREDIT: AMA Cat. 1 (15.5 hrs.)
FEE: $230.00
For further information contact Alan Saltzman, M.D., Course Director, New York Trudeau Society, 8 Mountain View Avenue, Albany, NY 12205.

Beth Israel Medical Center Co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
New York, NY 10003
*Loeb Auditorium, Hospital for Joint Diseases
Orthopaedic Institute, 301 East 17th Street, New York, NY 10003
October 15, 1982—Friday—8:00 a.m.–5:00 p.m.
COSMETOLOGY UPDATE
Dr. Leo Orris
CREDIT: AMA Cat. 1 (7 hrs.)
October 29, 1982—Friday—8:00 a.m.–4:00 p.m.
THERAPY FOR PATIENTS WITH COMMUNICATION DISORDERS: AN OVERVIEW OF RECENT DEVELOPMENTS
Sylvia Balick, Ph.D.
FEE: $40.00 Students—$20.00
CREDIT: AMA Cat. 1 (6 hrs.)
For further information contact Beverley R. Baptiste at 212/420-2000.

College of Physicians & Surgeons of Columbia University

630 West 168th Street
New York, NY 10032
October 18–22, 1982
RENAL BIOPSY IN MEDICAL DISEASES OF THE KIDNEY
Conrad Pirani, M.D.
FEE: $525 Residents—$270
CREDIT: AMA Cat. 1 (35 hrs.)
For further information contact Dr. Elizabeth C. Gerst, Continuing Education Center, 630 West 168 St., New York, NY 10032. Tel: 212/694-3682.

Veterans Administration Medical Ctr. Co-sponsored by the Office of Continuing Medical Education, Downstate Medical Center

800 Poly Place
Brooklyn, NY 11209
October 19, 1982
"SYSTEMIC DISEASES—NEUROLOGICAL CORRELATES"
CREDIT: AMA Cat. 1 (8 hrs.)
For further information contact Dr. Walter R. Slade, Jr., Chief, Neurology Service, VA Vedical Center, 800 Poly Place, Bklyn., NY 11209. Tel: 212/836-6600, ext. 562.

New York University Medical Center Post-Graduate Medical School

550 First Avenue
New York, NY 10016
*Schwartz Lecture Hall—Classroom F
401 East 30th Street, New York City
October 13–December 22, 1982—Wednesdays—4:00–7:00 p.m.
COURSE #317—CLINICAL DILEMMAS IN INTERNAL MEDICINE
COURSE #152—A & B DERMATOLOGY FOR THE PRACTICING PHYSICIAN
CREDIT: AMA Cat. 1—(Course #317—30 hrs.)—FEE: $565
(Course #152—10 hrs.)—FEE: $215
For further information contact Registration Office, NYU Post-Graduate Medical School, at 212/340-5295.

Saint Mary's Hospital of Brooklyn The Department of Medicine

170 Buffalo Avenue
Brooklyn, NY 11213
*Third Floor—Board Room
October 6, 1982—Wednesday—8:00 a.m.–9:00 a.m.
CURRENT CONCEPTS IN THE MANAGEMENT OF ACUTE MYOCARDIAL INFARCTION
Sanford Leff, M.D.
CREDIT: AMA Cat. 1
October 13, 1982—Wednesday—8:00 a.m.–9:00 a.m.
CURRENT CONCEPTS IN CARDIAC CATHETERIZATION
Barry Saul, M.D.
October 20, 1982—Wednesday—8:00 a.m.–9:00 a.m.
CURRENT CONCEPTS IN NUCLEAR CARDIOLOGY
Bernhard Lisker, M.D.
October 27, 1982—Wednesday—8:00 a.m.–9:00 a.m.
CONGENITAL HEART DISEASE IN ADULTS
Sanford Leff, M.D.
For further information contact the Department of Medicine, at St. Mary's Hospital—774-3600, ext. 2044 or 2045.

Peninsula Hospital Center under the Auspices of Downstate Medical Center (West Pavilion) 51-15 Beach Cannel Drive

Far Rockaway, NY 11691
October 1982–March 1983—Every Sunday Morning
ANNUAL REVIEW OF MEDICINE FOR THE PRIMARY CARE PRACTITIONER
For further information contact Edward Davis, M.D., Peninsula Hospital Center. Tel: 212/945-7100, ext. 377.

State University of New York Downstate Medical Center, Kings County Hospital Center in cooperation with District 1, NYSSA Department of Anesthesiology

450 Clarkson Avenue
Brooklyn, N.Y. 11203
October 4, 1982—4 p.m.–5 p.m.
VISITING PROFESSOR PROGRAM—PHARMACOLOGY OF INHALED ANESTHETICS
Lawrence J. Saidman, M.D.
CREDIT: AMA Cat. 1
October 5, 1982—8 p.m.–9 p.m.
VISITING PROFESSOR PROGRAM—ENDORPHINS AND ENKEPHALINS IN ANESTHESIA
Lawrence J. Saidman, M.D.
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D., SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn 11203. Tel: 212/270-1233.

The Jewish Hospital and Medical Center of Brooklyn, Division of Hematology/Oncology, Dept. of Medicine in Association with the American Cancer Society Co-Sponsored by SUNY Downstate Medical Center supported in part by CIBA-GEIGY, Endo Lab, Adria Lab.

555 Prospect Place, Brooklyn, N.Y. 11238
*B-51 Conference Room, Basement, Leviton Bldg., 555 Prospect Place, Bklyn.
Wednesday, October 6, 1982 through May 11, 1983, 3:30 p.m.–4:30 p.m.
ADVANCES IN HEMATOLOGY AND ONCOLOGY
ENDOMETRIAL CARCINOMA
Norman Simon, M.D.
October 13, 1982—3:30 p.m.–4:30 p.m.
HODGKIN'S DISEASE IN CHILDREN
Charlotte Tan, M.D.
October 20, 1982—3:30 p.m.–4:30 p.m.
APPLICATIONS OF EXCHANGE PLASMAPHERESIS
Lilian Reich, M.D.
October 27, 1982—3:30 p.m.–4:30 p.m.
NEOPLASTIC INTESTINAL OBSTRUCTION
David Bryk, M.D.
For further information contact Harvey Dosik, M.D. at 212/240-1211 or 1212

Albert Einstein College of Medicine of Yeshiva Univ. and Montefiore Hospital and Medical Center

111 East 210th Street
Bronx, N.Y. 10467
*Vista International Hotel, New York, N.Y.
October 16–19, 1982—Part II
17th ANNUAL INTENSIVE REVIEW FOR AMERICAN BOARD OF SURGERY CERTIFICATION & RECERTIFICATION EXAMINATIONS
CREDIT: AMA Cat. 1
For further information contact Elizabeth Mazzella, Office of Continuing Professional Education, Einstein/Montefiore, Bronx, N.Y. Tel: 212/920-6676.

NASSAU COUNTY

Long Island Jewish-Hillside Medical Center Queens Hospital Center Affiliation and The Health Sciences Center, State University of New York at Stony Brook

***The School of Nursing**
on the Campus of the Queens Hospital Center
82-68 164th Street, Jamaica, NY 11432
October 6, 1982—Wednesday—11:00 a.m.

GRAND ROUNDS
CURRENT CONCEPTS IN TUBERCULOSIS
Peter Smith, M.D.
October 13, 1982—Wednesday—11:00 a.m.
GRAND ROUNDS
CLINICAL ASPECTS OF RENAL TRANSPLANTATION
T. K. S. Rao, M.D.
October 20, 1982—Wednesday—11:00 a.m.
GRAND ROUNDS
PULMONARY MANIFESTATIONS OF SYSTEMIC DISEASE
Faroque Khan, M.D.
October 27, 1982—Wednesday—11:00 a.m.
GRAND ROUNDS
BRAIN DAMAGE IN BOXERS
Ira Casson, M.D.
CREDIT: AMA Cat. 1
For further information contact Catherine Marino, M.D., Associate Director Dept. of Medicine, Long Island Jewish-Hillside Medical Ctr. Tel: 212/990-3681.

Westchester Square Hospital in collaboration with Albert Einstein College for Medicine/ Montefiore Hospital & Medical Center

2475 St. Raymond Avenue
Bronx, NY 10461
*Conference Room
October 7, 1982—Thursday—4:00–5:30 p.m.
"A REVIEW OF DERMATOLOGY IN GENERAL MEDICINE—I"
Michael Fisher, M.D.
CREDITS: AMA Cat. 1 (2 hrs.)
October 14, 1982—Thursday—4:00–5:30 p.m.
"MANAGEMENT OF PAIN"
CREDITS: AMA Cat. 1 (2 hrs.)
October 21, 1982—Thursday—4:00–5:30 p.m.
"A REVIEW OF DERMATOLOGY IN GENERAL MEDICINE—II"
Michael Fisher, M.D.
CREDITS: AMA Cat. 1 (2 hrs.)
October 28, 1982—Thursday—4:00–5:30 p.m.
"ANTIBIOTIC UPDATE"
Robert Lapin, M.D.
CREDITS: AMA Cat. 1 (2 hrs.)

Nassau Hospital—The Dept. of Medicine

259 First Street
Mineola, L.I., N.Y. 11501
*Breed Conference Room
October 13, 1982—June 1, 1983—Wednesday Evenings—7:00–10:00 p.m.
Part I—22 Sessions—Part II—8 Sessions
SECOND ANNUAL REVIEW COURSE FOR CERTIFICATION IN INTERNAL MEDICINE
CREDIT: AMA Cat. 1
For further information contact Dr. David Mumford, Medical Education Office, Nassau Hospital. Tel: 516/663-2528.

Long Island Jewish-Hillside Medical Center

New Hyde Park, New York 11042
The Department of Otolaryngology
*Teaching Center Auditorium—Room E202
October 22, 1982—Friday—8:15 a.m.–2:30 p.m.
SLEEP DISORDERS IN CHILDREN: SIDS—SLEEP APNEA RESEARCH AND EVALUATION
Mark N. Goldstein, M.D.
FEE: $50.00 CREDIT: AMA Cat. 1
For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, New Hyde Park, N.Y. Tel: 212/470-2114.

Long Beach Memorial Hospital in affiliation with The Page & William Black Postgraduate School of Medicine of The Mount Sinai School of Medicine (CUNY)

455 East Bay Drive
Long Beach, New York 11561
*Hospital Auditorium
October 19, 1982—4:00–6:00 p.m.
PROSTAGLANDINS
Edward Ronan, Ph.D.
CREDIT: AMA Cat. 1
For further information contact Community Relations Dept. Tel: 516/432-8000, extension 362 or 363.

WESTCHESTER COUNTY

White Plains Hospital Medical Center

Davis Avenue at East Post Road
White Plains, NY 10601
October 27, 1982
SIXTH ANNUAL TEACHING DAY IN CARDIOLOGY
For further information contact Toni Calabrese Boelsen, the Community Affairs Department at White Plains Hospital Medical Center, at 914/949-4500, ext. 2111.

DUTCHESS COUNTY

Harlem Valley Psychiatric Center—New York Medical College

Wingdale, NY 12594
October 1, 1982—Friday—10:00–11:30 a.m.
DSM III: UPDATE ON THE NEW NOMENCLATURE: SOMATOFORM DISORDERS, PSYCHOSEXUAL AND DISSOCIATIVE DISORDERS AND PSYCHOLOGICAL FACTORS AFFECTING PHYSICAL CONDITION
Michael Blumenfield, M.D.
October 8, 1982—Friday—10:00–11:30 a.m.
ADJUSTMENT DISORDERS, DISORDERS OF IMPULSE CONTROL AND PERSONALITY DISORDERS
Herbert Bengelsdorf, M.D.
October 15, 1982—Friday—10:00–11:30 a.m.
CHILDHOOD AND ADOLESCENT DISORDERS
Betrand New, M.D.
October 22, 1982—Friday—10:00–11:30 a.m.
MEDICAL UPDATE SERIES: INFECTIOUS DISEASE UPDATE
Gary Wormser, M.D.
October 29, 1982—Friday—10:00–11:30 a.m.
ONCOLOGICAL PERSPECTIVES FOR PSYCHIATRISTS
Michael Friedland, M.D.
For further information contact Seymour B. Jacobson, M.D., Director of Medical Education, Harlem Valley Psychiatric Center. Tel: 914/832-6611.

ALBANY

Center for the Study of Aging Co-Sponsored by The National Graduate University

706 Madison Avenue
Albany, NY 12208
*The Institute on Man and Science
Rensselaerville, New York
October 1–3, 1982
THE 10th ANNUAL FITNESS AFTER THIRTY WORKSHOP/CONFERENCE
"EXERCISE FOR HEALTH AND THERAPY"
Peter Jokl, M.D.
For further information contact Sara Harris, Executive Director, Center for the Study of Aging. Tel: 518/465-6927 & 518/462-1331

BINGHAMTON

Binghamton General Hospital

Mitchell Avenue
Binghamton, NY 13903
October 16, 1982
THE 5th ANNUAL GASTROENTEROLOGY TEACHING DAY
For further information contact Christine L. Bowen, Medical Education Coordinator, Binghamton General Hospital, at 607/771-2200.

SYRACUSE

SUNY-Upstate Medical Center
Office Of Graduate and Continuing Education

750 East Adams Street
Syracuse, NY 13210
*Marriott Inn
Syracuse
October 21–23, 1982
5th ANNUAL SYMPOSIUM: PRACTICAL PROBLEMS IN ABDOMINAL RADIOLOGY
William N. Cohen, M.D. and E. Robert Heitzman, M.D.
FEE: $190.00
For further information contact the Program Coordinator, Office of CME, Upstate Medical Center, State University of New York, at 315/473-4304.

BUFFALO

State University of New York at Buffalo
Children's Hospital

219 Bryant Street
Buffalo, NY 14222
*Hyatt Hilton Head Island
Hilton Head Island, South Carolina
October 28–30, 1982
RECENT ADVANCES IN PEDIATRIC LUNG DISEASES
Gerd J. A. Cropp, Ph.D., M.D.
CREDIT: AMA Cat. 1 (18 hrs.)
FEE: $225.00
For further information contact Rayna Dutton, Coordinator, SUNY at Buffalo, Children's Hospital, 219 Bryant Street, Buffalo 14222, at 716/878-7630.

Roswell Park Memorial Institute
Dept. of Health—State of New York

666 Elm Street
Buffalo, NY 14263
October 7–8, 1982—Thursday & Friday
"CANCER IN THE ELDERLY—AN INTERDISCIPLINARY PERSPECTIVE"
Dr. Evan Calkins
CREDIT: AMA Cat. 1
October 8–9, 1982—Friday & Saturday
"ANNUAL MEETING OF THE NEW YORK STATE CANCER PROGRAMS ASSOCIATION"
CREDIT: AMA Cat. 1
October 14, 1982—Thursday
"SYMPOSIUM ON DENTISTRY AND CANCER"
Dr. Norman Schaaf
CREDIT: AMA Cat. 1
October 21, 1982—Thursday
"COMPUTERS IN MEDICAL PRACTICE"
Fil E. Vanvoris, MBA, MA
CREDIT: AMA Cat. 1
For further information contact Gayle Bersani, R.N., Cancer Control Coordinator, Roswell Park Memorial Institute, at 716/845-4406.

State University of New York at Buffalo
School of Medicine

135 Cary Hall
3435 Main Street
Buffalo, NY 14214
October 1–2, 1982
NUTRITION
For further information contact Martin Wingate, M.D., Assistant Dean for CME at 716/831-5526.

FUTURE EVENTS

The New York Academy of Medicine

2 East 103rd Street
New York, NY 10029
November 3, 1982—Wednesday—8:00 p.m.–10 p.m.
SYMPOSIUM ON MYASTHENIA GRAVIS
Gabriel Genkins, M.D., Francis F. Foldes, M.D., Avron I. Weinreich, M.D.
For further information contact Paul A. Radnay, M.D., The New York Academy of Medicine, 2 East 103rd Street, New York, NY. Tel: 212/876-8200.

OUT OF STATE

Semmelweis Scientific Society

515 Madison Avenue—Suite 1720
New York, N.Y. 10022
*Caesars Palace
Las Vegas, Nevada
October 24, 1982—Sunday—1:30 p.m.–4:30 p.m.
THE SEMMELWEIS SCIENTIFIC SOCIETY ANNUAL MEETING
Michael M. Rask, M.D.
FEE: $25. CREDIT: AMA Cat. 1 (5 hrs.)
For further information contact Otto C. Kestler, M.D., President, 515 Madison Ave., New York, N.Y. 10022. Tel: 212/758-2590-1.

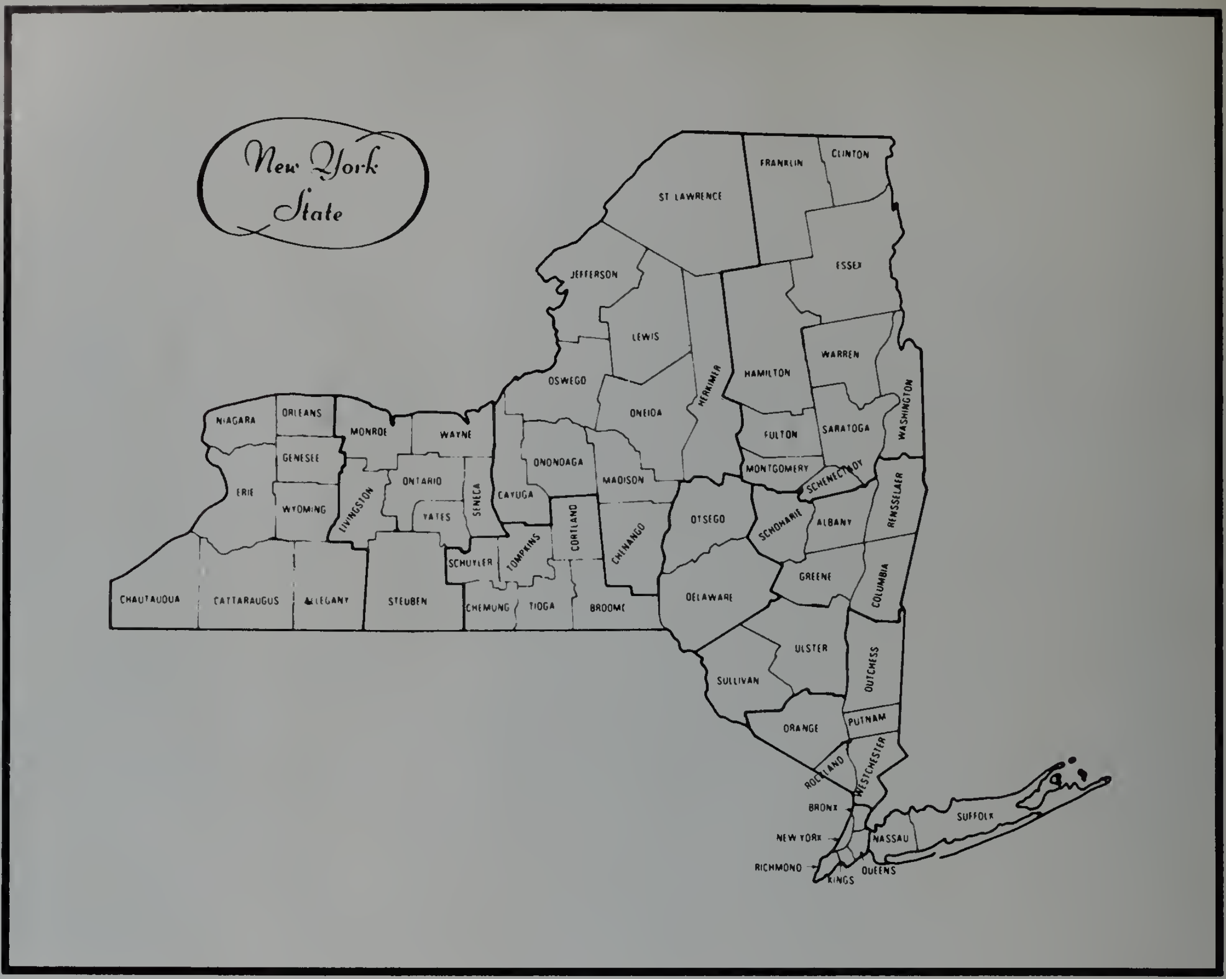
ATTENTION, ANYONE WISHING TO SUBMIT AN ANNOUNCEMENT FOR "WHAT GOES ON IN CONTINUING MEDICAL EDUCATION" ALL CONTINUING MEDICAL EDUCATION ANNOUNCEMENTS MUST BE RECEIVED THE 15th OF THE MONTH, THREE MONTHS PRIOR TO THE DATE OF THE EVENT.

AMA'S PHYSICIANS' PLACEMENT SERVICE

Physicians seeking placement opportunities outside New York State should contact AMA, Physicians' Placement Service, 535 N. Dearborn Street, Chicago, Ill. 60610. Tel: 312/751-6000 and also refer to the physicians' opportunities listed in the classified ad section of *JAMA*, the Journal of the AMA.

NOTICE

The Medical Society of the State of New York invites the Deans of Medical Schools and the Administrators of Hospitals to send notices of continuing medical education including teaching days, important lectureships, courses, and similar programs for publication in WHAT GOES ON to: The Editor, WHAT GOES ON, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100. This is a free service.



physicians' placement opportunities

Compiled by the
Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100

ALLERGIST

MONTICELLO, N.Y., contact Gustave Gavis, M.D., P.O. Box 710, 410 Broadway, Monticello Medical Bldg., Monticello, N.Y. 12701. Tel: 914/794-4900.

ANESTHESIOLOGIST

MONTICELLO, N.Y., contact Carl K. Heins, M.D., Hamilton Avenue Hospital, Monticello 12701. Tel: 914/794-4545.
NORWICH, N.Y., contact Martin H. Jacobi, M.D., Norwich, N.Y. 13815 at 607-334-2832.
SARATOGA SPRINGS, N.Y., contact Allen T. Jones, 384 Broadway, Saratoga Springs 12866. Tel: 518/584-1978.
WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

CARDIOLOGY

SIDNEY, N.Y., contact John W. Sands, Administrator, The Hospital, New York 13838. Tel: 607/563-3512.

EMERGENCY ROOM

BUFFALO, N.Y., contact Lafayette General Hospital, 113 Lafayette Avenue, Buffalo 14213. Tel: 716/885-8900.
ONEONTA, N.Y., contact Randolph E. Knob, M.D., Director or Mr. F. M. Isbell, Adm., A. O. Fox Memorial Hospital, 1 Norton Avenue, Oneonta 13820. Tel: 607/432-2000.

ENT

GLENS FALLS, N.Y., contact Orei Friedman, M.D., 591 Glen St., P.O. Box 444, Glens Falls 12801. Tel: 518/792-1404.
LONG BEACH, N.Y., contact Oscar Sreter, M.D., 270 Edward Blvd., Long Beach 11561. Tel: 516/431-7861.
OLEAN, N.Y., contact Dr. Edward R. Mountain, 1909 West State St., Olean, 14760. Tel: 716/372-2788.
ORCHARD PARK, N.Y., contact R. M. Patel, M.D., 55 Melroy Avenue, Lackawanna, N.Y. 14218

FAMILY PHYSICIAN

ADAMS, N.Y., contact South Jefferson Recruiting Comm., c/o Mrs. Fred Spinner, RFD#2, P.O. Box 1114, Adams 13605.
ALBION, N.Y., contact Jay Scott Parisella, Administrator, Arnold Gregory Memorial Hospital, 243 South Main Street, Albion, N.Y. 14411 Tel. #716-589-4422.
ATHENS, N.Y., contact Village Clerk, 2 First Street, Athens 12015. Tel: 518/945-1551.
AUBURN, N.Y., contact Charles D. Hicks; Director, Physician Procurement Committee, 157 Ross Street, Auburn 13021. Tel: 315/253-3388.
BINGHAMTON, N.Y., contact Broome County Medical Society. Tel: 607/729-9261.
BROCKPORT, N.Y., contact James P. Goetz, M.D., 80 West Avenue, Suite 204, Brockport 14420. Tel: 716/637-3905.
BROOKHAVEN, N.Y., contact Dorothy S. Lane, M.D., Dept. of Community Medicine, Brookhaven Memorial Hospital, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.
GROTON, N.Y., contact Dorothy Ambis, M.D., 100 Sykes Street, Groton, New York. Tel: 607/898-3631
HICKSVILLE, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.
HUNTINGTON, N.Y., contact Douglas R. Phillips, M.D., 1500 Mid Island Plaza, Hicksville 11801. Tel: 516/935-4100.
LATHAM, N.Y., contact Mrs. Joan Mosca, Latham Medical Group, Latham, New York. Tel: 518/785-5881
MANHATTAN and QUEENS, N.Y., contact Robert L. Mery c/o Dr. W. G. Grantham, 170 East 77th Street, New York 10021.
MARGARETVILLE, N.Y., contact Joseph Kehoe, Adm., Margaretville Hospital, Margaretville 12455. Tel: 914/586-2631.
NEW PALTZ, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel: 914-255-1200.
OLEAN, N.Y., contact Dr. John S. Reach, 2223 W. State St., Olean 14760. Tel: 716/372-7600.
ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.
OSWEGO, N.Y., contact J. Sherwood Dunham, Oswego Hospital, 110 West Sixth Street, Oswego 13126. Tel: call collect 315/349-5526.
POUGHKEEPSIE, N.Y., contact B. Lipton, M.D., 79 Hooker Avenue, Poughkeepsie 12601. Tel: 914/454-3232.
PULASKI, N.Y., contact George W. Chapman, M.D., 7580 Delano Street, Pulaski, N.Y., Tel. #315-298-6564.
STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.
TONAWANDA, N.Y., contact Mrs. Sophie Rosokoff, 128 Delaware St., Tonawanda 14150. Tel: 716/693-6715.
VICTOR, N.Y., contact Victor Medical Associates, 7120 Lane Road Extension, Victor 14564. Tel: 716/924-5120.
WATERTOWN, N.Y., contact Medical Society of Jefferson County 171 Clinton Street, P.O. Box 425, Watertown, N.Y., Tel. #315-788-1879.
WEBSTER, N.Y., contact Mr. D. H. Dessin, Adm. 193 W. Main Street, Webster, N.Y., #716-872-0650.
YONKERS, N.Y., contact Jerome Kupchan, M.D., 2 Sandore Lane Yonkers, New York. Tel: 914/779-1500.

GENERAL SURGEON

TROY, N.Y., contact John J. Pohl, M.D., 82 23rd Street, Troy, New York. Tel: 518/272-8243.

INTENSIVE CARE

FREEPORT, N.Y., contact Sheldon Klahr, Administrator, Lydia Hall Hospital, 320 West Merrick Road, Freeport 11520. Tel: 516/378-8500.

INTERNIST

BALDWIN, N.Y., contact Harish Sood, M.D., 680 Merrick Road, Baldwin, N.Y. 11510. Tel: 516-378-2070.
BROOKHAVEN, N.Y., contact Dorothy S. Lane, M.D., Dept. of Community Medicine, Brookhaven Memorial Hospital, 101 Hospital Road, Patchogue 11772. Tel: 516/654-7797.
CORNWALL, N.Y., contact Jos. Anthony Garcia, M.D., 295 Main St., Cornwall 12518. Tel: 914/534-2244/2088.
FREEPORT, N.Y., contact Lydia E. Hall Hospital, 320 West Merrick Road, Freeport 11520.
LITTLE FALLS, N.Y., contact Nicholas A. Prisco, Adm., Little Falls Hospital, 140 Burwell Street, Little Falls 13365. Tel: 315/823-1000, ext. 261 or 262.
NEW PALTZ, N.Y., contact Joseph F. Krivda, M.D., 40 Sunset Ridge, New Paltz, N.Y. Tel. #914-255-1200.
NEW YORK, N.Y., contact I. W. Eagle, M.D., 41 West 125th Street, New York 10027. Tel: 212/289-5795.
ONEIDA, N.Y., contact Frances B. Carlson, 577 Stoneleigh Rd., Oneida 13421.
ROCHESTER, N.Y., contact A. D. Crown, M.D., 7 Sandle Drive, Fairport 14450. Tel: 716/586-0443.
SARANAC LAKE, N.Y., contact David A. Johnson, M.D., Old Lake Colby Drive, Saranac Lake, New York 12983.
SIDNEY, N.Y., contact John W. Sands, Adm., The Hospital, Sidney 13838. Tel: 607/563-3512.
STAR LAKE, N.Y., contact John J. Carthy, M.D., P.C., Clifton-Fine Hospital, Star Lake 13690. Tel: 315/848-2848.
VICTOR, N.Y., contact John J. Gaidula, M.D. Tel: (Office) 716/924-5120 or (Home) 716/924-5217.

OBSTETRICIAN/GYNECOLOGIST

ALBION, N.Y., contact Jay Scott Parisella, Administrator, Arnold Gregory Memorial Hospital, 243 South Main Street, Albion, N.Y. 14411, Tel. #716-589-4422.

BINGHAMTON, N.Y., contact Dr. Joseph B. Watrous, Jr., 137 Hawley Street, Binghamton, N.Y. 13903 Tel. 607-772-0246.

NORWICH, N.Y., contact Richard B. Foster, M.D. 129 N. Broad Street, Norwich 13815. Tel: #607-334-9229.

WALTON, N.Y., contact Thomas E. Lavell, M.D., 1 Titus Place, Walton 13856. Tel: 607/865-6526.

OPHTHALMOLOGIST

JERICHO, N.Y., contact Norman Yourish, M.D., 400 N. Broadway, Jericho 11753. Tel: 516/681-2220.

TROY, N.Y., contact Robert M. Webb, M.D., 213 Pawling Avenue, Troy 12180.

ORTHOPEDIST

OSWEGO, N.Y., contact J.Sherwood Dunham, Coordinator, 110 West Sixth St., Oswego, 13126. Tel: call collect 315/349-5526.

ORTHOPEDIC SURGERY

FREEPORT, N.Y., contact Lydia E. Hall Hospital, 320 West Merrick Road, Freeport 11520.

JOHNSON CITY, N.Y., contact Farouq Al-Khalidi, M.D., 370 Main St., Johnson City 13790.

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INFORMATION REGARDING OPENING FOR A PHYSICIAN
(General Practice or Specialist Associate)

Date

Name of Town County State

Population Population of area served by physician

What type of specialty? New opening?
If this is a replacement, why did former physician leave?

When will position be available?

Please list special requirements: a) Residency training?
b) Board eligible? Board certified? Age?

Please describe type of practice: a) Solo? b) Association? Please describe the reason for associateship
c) Group practice? Please give details, i.e., number in group, number in this specialty, when group was commenced

Please show what type of financial agreement is acceptable: a) Straight salary?
b) Percentage basis? c) Will investment be necessary?
d) If partnership basis is acceptable, how soon would it be available?
e) Would written agreement be used?

Office space available? Yes No If yes, describe briefly

Living quarters available? Yes NO If yes, describe briefly

Is there a hospital in the town? Yes No If yes, please describe, i.e., number of beds, type of ownership, how soon can physician obtain hospital privileges

If no, please describe hospitals in nearby areas

List any other features which you consider would make the position attractive to a prospective physician

List person to be contacted by interested physician giving name, address and telephone number

When completed, kindly return to: Physicians' Placement Bureau, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100.

QUESTIONNAIRE FOR PHYSICIANS SEEKING LOCATIONS
(Please print in black)

Name______________________________Date__________

Address______________________________

____
(Zip code number) (Telephone Number)

Date of Birth__________Place of Birth______________________________

Citizenship Status______________________________Marital Status__________

Medical School______________________________Year Graduated__________

Internship______________________________

Hospitals______________________________Dates__________

Residency______________________________

Hospitals______________________________Dates__________

Specialty______________________________

Licensed in what States?______________________________

Applied for______________________________

American Board Certificates held?______________________________

Eligible______________________________Certified______________________________

Do you have a New York State License?__________Date of Certificate__________

Military Status______________________________

Professional Organization Memberships______________________________

Are you in practice at present?__________What type of practice are you interested in?

Solo________Associate________Industrial________Group________Institutional__________

Other______________________________

Date you will be available for practice__________Former locations in which you have practiced______________________________
(Give dates)

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In moderate depression and anxiety

TO SEE THE PATIENT THROUGH THE DAY, ONCE-DAILY DOSAGE... AT NIGHT

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Many patients respond well to a single bedtime dose of Limbitrol, a convenient schedule that may enhance compliance and minimize daytime drowsiness. Others may do best on divided doses, perhaps with the major portion at night. In all cases, caution patients about combined effects with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as driving or operating machinery.

Limbitrol® Ⓒ IV

Tablets 5-12.5 each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)
Tablets 10-25 each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)

puts anxious depression to rest

LIMBITROL® TABLETS Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e g , operating machinery, driving).

> ***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives Concomitant use with other psychotropic drugs has not been evaluated· sedative effects may be additive Discontinue several days before surgery Limit concomitant administration of ECT to essential treatment See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period Not recommended in children under 12 In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects

Adverse Reactions: Most frequently reported are those associated with either component alone drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs

Cardiovascular Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke

Psychiatric Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido

Neurologic· Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns

Anticholinergic Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic· Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic· Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia

Gastrointestinal· Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female and elevation and lowering of blood sugar levels

Other. Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling

Overdosage: Immediately hospitalize patient suspected of having taken an overdose Treatment is symptomatic and supportive I.V administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning See complete product information for manifestation and treatment

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s* dose may suffice for some patients Lower dosages are recommended for the elderly Limbitrol 10-25, initial dosage of three to four tablets daily in divided doses, increased to six tablets or decreased to two tablets daily as required. Limbitrol 5-12 5, initial dosage of three to four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: White, film-coated tablets, each containin 10 mg chlordiazepoxide and 25 mg amitriptyline (as th hydrochloride salt) and blue, film-coated tablets, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50.

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For broad symptom
response, including insomnia

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prescribing, please see summary of product information on preceding page.

175th Anniversary Year of the Medical Society of the State of New York

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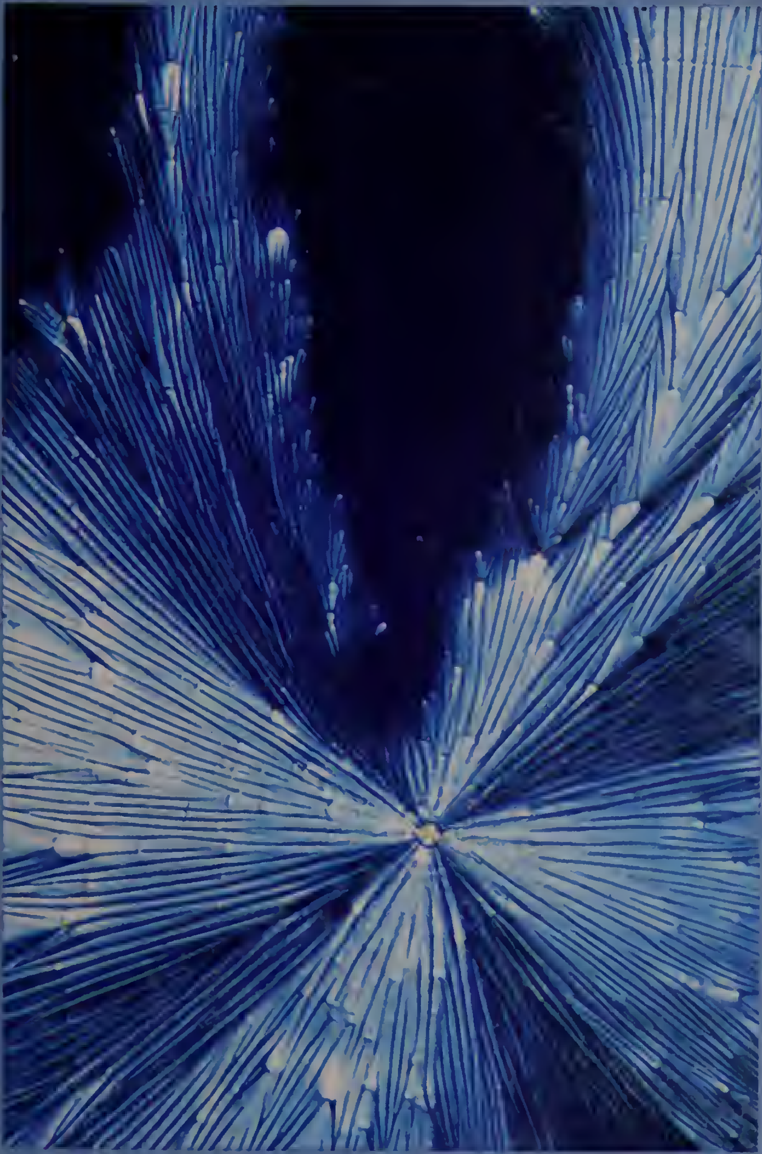

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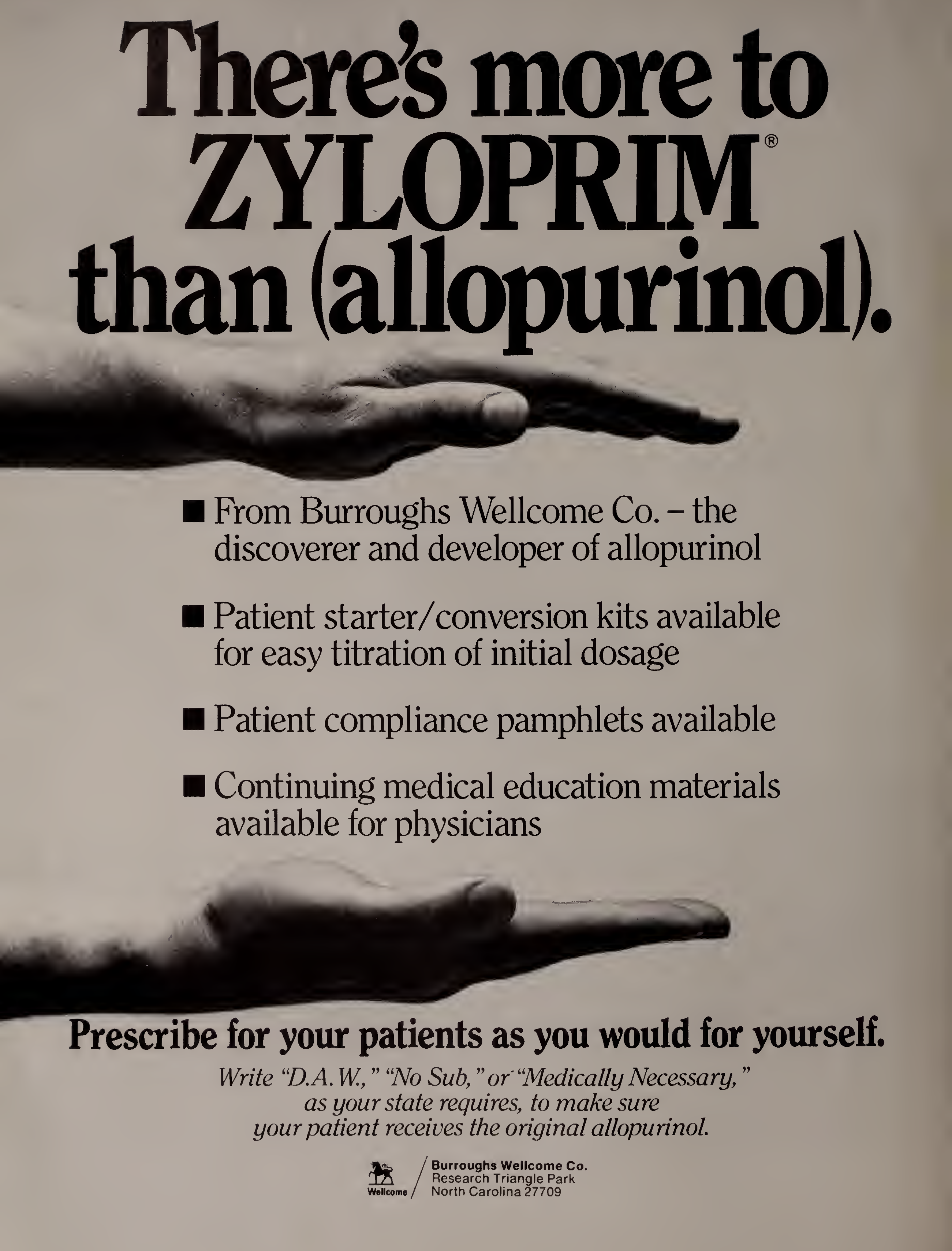

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(PROPRANOLOL HCl)

B.I.D. FOR HYPERTENSION

NEW TABLET SHAPE I™

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CONTRAINDICATIONS

1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e g , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes A precipitous elevation of blood pressure may accompany hypoglycemic attacks

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure; intensification of AV block, hypotension, paresthesia of hands; arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura *Central Nervous System*, lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress *Respiratory* bronchospasm *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

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Reference: 1 Freis, E D Hypertension (Suppl II) *3* 230 (Nov-Dec) 1981

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Abstracts

Kissel SM, Hoy WE, Freeman RB, Byer B, Yarger JM: Renal transplant urinary tract infections: effect of perioperative antibiotics and earlier catheter removal. ***New York State J Med 1982;*** 82:1543.

The incidence of urinary tract infections (UTIs) in transplant patients was studied before and after the use of single dose perioperative antibiotics and earlier catheter removal. The regimen change reduced the incidence of UTIs from 55.3% to 26%, but the decrease was only significant for males (56% to 12.9%) and for infections due to organisms other than *Eschericia coli* (42.9% to 10%). UTIs due to *E coli* and UTIs in females did not decrease. Possible explanations and implications for further UTI prophylaxis are offered.

Rosner F, St. Clair L, Karayalcin G, Tatsis B: A decade of experience with a sickle cell program. ***New York State J Med 1982;*** 82:1546.

Federal government-supported sickle cell screening, education, and counseling for large numbers of clients began at Queens Hospital Center in 1971. During the seven-year period 1974 to 1980, our sickle cell program screened 55,576 clients, 91.7% of whom had AA hemoglobin. Six percent of those screened (black and white) had sickle cell trait and 2% had hemoglobin C trait. We detected 27 individuals with sickle cell anemia, 26 with hemoglobin SC disease, 40 with thalassemia trait, 11 with sickle cell trait and hereditary persistance of high fetal hemoglobin, 8 with sickle thalassemia, 10 with homozygous hemoglobin C disease, and 28 individuals with other variant hemoglobins. Seven families with hemoglobin G Philadelphia and 5 families with hemoglobin-O-Arab were the most common variants. A new, previously undescribed hemoglobin variant, which we named hemoglobin Queens, was identified in our laboratory in a 16-year-old Korean girl. During the same seven-year period, our sickle cell program educated nearly a quarter of a million individuals and counseled over 3,000 clients. The latter figure represents about two thirds of the clients found to have a hemoglobinopathy. All were offered counseling but, despite vigorous efforts on our part, many did not avail themselves of this service. Our program also initiated and implemented a variety of special activities.

Felman YM: Penicillinase-producing *Neisseria gonorrhoeae* in New York City: recommendations for treatment and control. ***New York State J Med 1982;*** 82:1559.

Penicillin-resistant *Neisseria gonorrhoeae* (PPNG) reached epidemic proportions in 1981, with New York City contributing 15% of the nation's cases, and 30% of the nation's increase, in reported incidents. The large number of cases represented by these statistics has necessitated a phenomenal increase in special diagnostic, medical, and epidemiologic efforts by the City of New York Bureau of Venereal Disease Control. If these efforts are not successful, it is felt that penicillin and its derivatives will no longer be the first line of defense against gonorrhea and its complications. In that eventuality, huge increases in alternative and less efficient drug regimens will add to the economic burdens of increased epidemiologic surveillance and morbidity. The Bureau is requesting the continued cooperation of private physicians and laboratory services to report all cases of PPNG found in the city to (212) 239-1727; cases in all out-of-city locales should be reported to (518) 474-3595 at the State of New York Department of Health. Guidelines for the treatment of PPNG are given to help physicians in the control of this strain of gonorrhea.

Felman YM: Penicillinase-producing *Neisseria gonorrhoeae*: cases in New York City, 1979–1981. ***New York State J Med 1982;*** 82:1556.

The first reported case of penicillinase-producing *Neisseria gonorrhoeae* (PPNG) in the United States was reported in August 1976 and outbreaks have occurred since. A previous article (*NY State J Med* 1979; 79:697–699) discussed all reported cases in New York City from September 1976 through August 1978. The purpose of this article is to update the findings of all reported cases in New York City from 1979 through 1981. The results of this investigation showed dramatic increases in the total reported cases. There were 6 cases in 1979, 39 cases in 1980 (a 550% increase), and 440 cases in 1981 (a 1,028% increase over 1980). The distribution of these total reported numbers of cases (1980, 1981) by various categories, such as age, sex, and reporting source, are also discussed.

Month in Washington

Prepared by the Washington, D.C. office of the American Medical Association.

President Reagan won a stunning victory with the Congressional passage of a tax-increase, spending-cut bill in late August. The House vote was 226–207; the Senate vote, 52–47.

The bill, Tax Equity and Fiscal Responsibility Act of 1982, is projected to raise government revenues by $98.3 billion over the next three fiscal years, including $18.3 billion in fiscal year 1983. The legislation also includes spending cuts in Medicare (12.8 billion over three years) and Medicaid (1.4 billion over three years).

The support of House Democrats proved essential to the bill's passage; only 103 of the 192 House Republicans voted for the bill. The Senate vote was split largely along party lines with nine Democrats and 43 Republicans supporting the measure.

Numerous earlier provisions of the Senate and the House were not accepted by the Conference committee. One such provision that ended up on the cutting-room floor was a proposal that would have placed a limitation on the annual increase in physician fees through limits on the Economic Index.

The complex bill evolved from marathon sessions, some lasting until dawn, of a House-Senate Conference Committee. Few pieces of legislation have stirred more interest and controversy. The ten-day-long conference was attended day-and-night by more interested people than any "old timer" can recall.

American Medical Association lobbyists covered the marathon sessions in relays, "—there was never a minute an AMA representative was not on hand." In addition, senior AMA Chicago and Washington staff were constantly on call to determine the relative emphasis of different Association policies so that the lobbyists on the Hill at all times were clearly informed by "beepers" of AMA policy priorities.

Michael Bromberg, executive director of the Federation of American Hospitals, said:

"As always the AMA people were always there, were seen everywhere, did a wonderful job, and came out better than anyone."

Some of the highlights of the bill affecting physicians follow:

Inpatient radiology and pathology services

Medicare reimbursement for inpatient radiology and pathology services will be put on the same basis as Medicare payment for the services of other physicians. Reimbursement will be at 80% of the "reasonable" charges, and radiologists and pathologists will no longer be required to accept assignment for all cases.

Provider-based physicians

This provision calls for a differentiation between professional medical services furnished in a hospital that are directly furnished to an individual patient and that contribute to the patient's diagnosis or treatment, and those services that are a benefit to the general patient population. Services to an individual patient will be reimbursed under Part B and services to the general patient population will be reimbursed under Part A. To determine the reimbursement under Part A, the Secretary will establish a "reasonable compensation equivalent" through regulations.

Duplicate overhead payments for outpatient services

In determining "reasonable" charges for outpatient services, the Secretary is required to issue regulations to limit the "reasonable charge to a percentage of the amount of prevailing charge for similar services furnished in a physician's office, taking into account the extent to which overhead costs associated with such outpatient services have been included in the reasonable cost or charge of the facility."

Assistants at surgery

Reimbursement for assistants at surgery in hospitals with an approved training program will be prohibited if the training program related to the medical specialty required for the surgical procedure and a qualified individual from the hospital staff is available to assist. Exceptions will be allowed pursuant to regulations to be developed by the Secretary by October 1, 1982, for the following circumstances: (1) "exceptional medical circumstances;" (2) a team of physicians is needed to perform complex medical procedures; (3) a physician of another specialty is needed for concurrent care; and (4) other circumstances deemed appropriate by the Secretary. Where an assistant at surgery is entitled to reimbursement, the Secretary is to determine the appropriate method of reimbursement.

Pensions

Limits on Contributions and Benefits. Maximum contributions to a defined contribution plan would be reduced from $45,475 to $30,000. Maximum annual benefits under a defined benefit plan would be reduced from $136,425 to $90,000. The cost-of-living adjustments for these dollar limits would be suspended for two years. Beginning in 1986, the dollar limits would be adjusted for post-1984 cost-of-living increases. Maximum benefits under a defined benefit plan would be actuarially reduced if benefits commence before age 62 (present early retirement reduction occurs if distributions take place before age 55).

These provisions apply to new pension plans not in existence on July 1, 1982. For pension plans in exis-

(*continued on page 1629*)

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References: **1.** Williams RL, Karacan I: Introduction, chap. 1, in *Sleep Disorders: Diagnosis and Treatment*, edited by Williams RL, Karacan I, Frazier SH. New York, John Wiley & Sons, 1978, p. 2. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Kales A *et al*: *JAMA 241*:1692-1695, Apr 20, 1979. **4.** Kales A *et al*: *J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Kales A *et al*: *Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al*: *Behav Med 5*(10):25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **14.** Kales A, Kales JD: *Pharmacol Physicians 4*(9):1-6, Sep 1970. **15.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

Dalmane® (IV)
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Efficacy objectively demonstrated in the sleep laboratory—the most valid environment for measuring hypnotic efficacy.

In numerous sleep laboratory investigations patients fell asleep sooner, slept longer and woke up less during the night[3-12] with

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The efficacy of Dalmane has been studied in over 200 clinical trials with more than 10,000 patients.[3-15] During long-term therapy, which is rarely required, periodic blood, kidney and liver function tests should be performed. Contraindicated in patients who are pregnant or hypersensitive to flurazepam.

Please see summary of product information on following page.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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The Consumer Product Safety Commission (CPSC) and the Poison Prevention Packaging Act (PPA)

The CPSC position regarding the applicability of the child protection packaging standards promulgated under the PPA to dispensing physicians is summarized below for your convenience:

Prescription drugs dispensed by physicians are subject to the child protection packaging standards of the Poison Prevention Packaging Act in the same manner as prescription drugs dispensed by pharmacists. Therefore, a physician is responsible under the law for dispensing prescription drugs in child-resistant packaging.

The law does provide that non-child-resistant conventional packaging may be provided the consumer either at his request or at the direction of the prescribing physician. This does not, however, exempt drugs dispensed by physicians from the provisions of the law but rather allows the physician to consciously conclude within the spirit and intent of the noncomplying package exemption provision that a particular patient; i.e., the elderly or handicapped would be unable to gain access to the drug if dispensed in child-resistant packaging. The legislative history of this provision of the PPPA is clear in expressing the intent of Congress that **noncomplying packaging is to be the exception rather than the rule.**

In summary, the present law and the legislative history relating to the prescription drug regulation make it clear that dispensing physicians are subject to the PPPA and its requirements. The child protection packaging standards for aspirin and other substances have reduced childhood ingestions by as much as 60% while prescription drug ingestions have been reduced by only approximately 22%. Part of the reason for the relatively small reduction in childhood ingestions of prescription drugs may be confusion over the physician's responsibilities when dispensing prescription drugs. In addition, dispensing physicians can play a vital role in increasing consumer acceptance and use of child-resistant packaging by demonstrating its proper use and encouraging the consumer in the importance of its use in reducing childhood ingestions and deaths.

It is therefore important that physicians who dispense their own drugs clearly understand their responsibilities under the law.

Medical Meetings

Continuing Medical Education

The Armed Forces Institute of Pathology is offering a course in Pediatric Pathology and Neonatal Genetics for general pathologists at the AFIP, Washington, D.C., 20306, on November 1–5, 1982. This program is sponsored by the Armed Forces Institute of Pathology, American Registry of Pathology, and the Pediatric Pathology Club.

Family Therapy

The Department of Psychiatry of Long Island Jewish-Hillside Medical Center will present a program on "Clinical Techniques for the Practice of Family Therapy" on Friday, November 12, 1982. For further information contact: Ann. J. Boehme, Continuing Education Coordinator, (212) 470-2114.

Advanced Cardiac Life Support

SUNY-Upstate Medical Center is sponsoring a course on "Advanced Cardiac Life Support: Providers/Instructors" on November 10–12, 1982 at the Hotel Syracuse, Conference Center, Syracuse, New York. For further information contact: Betty Frost, Program Coordinator, Office of Continuing Education, Upstate Medical Center, 750 E. Adams Street, Syracuse, New York 13210.

Symposium

A symposium on "Unresolved Problems in Perinatal Medicine" will be presented by the Medical Education Advisory Committee of the Greater New York March of Dimes and the Office of Continuing Education, SUNY Downstate Medical Center, on Monday and Tuesday, November 22 and 23, 1982 at the Barbizon-Plaza Hotel in New York City.

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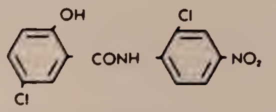
The scolex (below) has two elongated sucking grooves; the body (in background) may have as many as 4,000 proglottids

DESCRIPTION: NICLOCIDE (niclosamide) is an anthelmintic provided in chewable tablet form at a strength of 500 mg per tablet. Niclosamide is 2′, 5-Dichloro-4′-nitrosalicylanilide. The empirical formula is $C_{13}H_8Cl_2N_2O_4$ with the following structural formula.



CLINICAL PHARMACOLOGY: NICLOCIDE inhibits oxidative phosphorylation in the mitochondria of cestodes. Both in vitro and in vivo, the scolex and proximal segments are killed on contact with the drug. The scolex of the tapeworm, loosened from the gut wall, may be digested in the intestine, and thus may not be identified in the feces even after extensive purging. The use of NICLOCIDE has not been associated with the development of anemia, leukopenia or thrombocytopenia nor have there been any effects on normal renal and hepatic functions.

INDICATIONS AND USAGE: NICLOCIDE (niclosamide) is indicated for the treatment of tapeworm infections by Taenia saginata (beef tapeworm), Diphyllobothrium latum (fish tapeworm) and Hymenolepis nana (dwarf tapeworm).

CONTRAINDICATIONS: NICLOCIDE™ Tablets are contraindicated in individuals who have shown hypersensitivity to any of its components.

PRECAUTIONS: NICLOCIDE affects the cestodes of the intestine only. It is without effect in cysticercosis.

Drug Interactions: No data are available regarding interaction of niclosamide with other drugs.

Carcinogenesis, Mutagenesis, Impairment of fertility:

Carcinogenicity Potential: Although carcinogenicity studies on niclosamide per se have not been done, long-term feeding studies on its ethanolamine salt in rats and mice did not show carcinogenicity. Mutagenicity tests have not been performed.

Pregnancy: Pregnancy Category B: Reproduction studies in rabbits and rats at doses of 25 times the human therapeutic dose and in mice at 12 times the human therapeutic dose, have revealed no evidence of impaired fertility or harm to the fetus due to niclosamide. There are, however, no adequate and well-controlled studies in pregnant women. Because animal studies are not always predictive of human response, the drug should be used during pregnancy only if clearly needed.

Nursing Mothers: No studies are available.

Pediatric Use: In children under 2 years of age, the safety of the drug has not been established.

ADVERSE REACTIONS: The incidence of side effects has been reported as follows: nausea/vomiting 4.1%, abdominal discomfort including loss of appetite 3.4%, diarrhea 1.6%, drowsiness, dizziness, and/or headache 1.4%, and skin rash including pruritus ani 0.3%. Other side effects listed in decreasing order of frequency were: oral irritation, fever, rectal bleeding, weakness, bad taste in mouth, sweating, palpitations, constipation, alopecia, edema of an arm, backache and irritability. There was also one instance of a transient rise in SGOT in an i.v. narcotic addict. Two cases of urticaria reported may be related to the breakdown products of the tapeworm. All side effects were mild or moderate and transitory and did not necessitate discontinuation of the treatment.

OVERDOSAGE: Insufficient data are available. In the event of overdose a fast-acting laxative and enema should be given. Vomiting should not be induced.

DOSAGE AND ADMINISTRATION:

1. Taenia saginata and Diphyllobothrium latum
   a. Adults: 4 tablets (2.0 g) chewed thoroughly in a single dose.
   b. Children weighing more than 34 kg (75 lbs): 3 tablets (1.5 g) chewed thoroughly in a single dose.
   c. Children weighing between 11 and 34 kg (25 to 75 lbs): 2 tablets (1.0 g) chewed thoroughly in a single dose.
2. Hymenolepis nana
   a. Adults: 4 tablets (2.0 g) chewed thoroughly as a single daily dose for 7 days.
   b. Children weighing more than 34 kg (75 lbs): 3 tablets (1.5 g) chewed thoroughly on the first day, then 2 tablets (1.0 g) daily for next 6 days.
   c. Children weighing between 11 and 34 kg (25 to 75 lbs): 2 tablets (1.0 g) to be chewed thoroughly on the first day, then one tablet (0.5 g) daily for next 6 days.

   T. saginata and D. latum infections are usually due to a single adult worm and require an intermediate host in their life cycle. With Hymenolepis nana multiple infections are the rule. No intermediate host is required; both larval and adult stages of the worm may be found in the human intestine where the complete life cycle occurs. Since the drug is more effective against the

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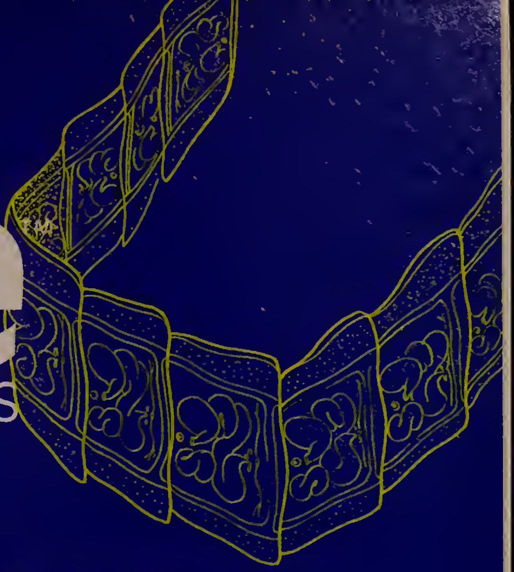

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Highly effective prompt taeniacidal action

NICLOCIDE™ (niclosamide) is considered as the drug of choice in eliminating beef tapeworm (Taenia saginata), fish or broad tapeworm (Diphyllobothrium latum), and dwarf tapeworm (Hymenolepis nana) from the intestines. Except for the dwarf tapeworm, which requires a seven-day treatment (SEE FULL PRESCRIBING INFORMATION BELOW), a one-day single-dose treatment is sufficient to kill these cestodes.

Breaks hold of head and chain of segments

NICLOCIDE works promptly and simply. After tablets are chewed thoroughly and washed down with a little water (for children tablets should be pulverized and mixed with a little water), the insoluble micronized crystals act by direct contact on the tapeworm head. As soon as NICLOCIDE reaches the parasite, the scolex and upper segments are killed, thus depriving the whole chain of its hold. It is then discharged in stool either in one piece or smaller portions.

Safe and well tolerated/ little gastrointestinal mucosa irritation

NICLOCIDE has proved exceptionally well accepted by adults as well as children weighing more than 11 Kg. (25 lbs.).

Convenient one-day single-dose administration[†]

NICLOCIDE Tablets are taken as a single dose after breakfast.[*] Tablets must be chewed or pulverized thoroughly and washed down with a little water. No special diet or preparation is necessary except in patients who are constipated. In these cases, a thorough cleansing of the bowels may be required before treatment. The avoidance of alcohol during treatment is the only other requirement.

---

[*] A drastic saline purge, such as magnesium sulfate or sodium sulfate should be given two hours after the NICLOCIDE dose if it is required that the tapeworms be expelled rapidly and in one piece.

[†] In infections with beef tapeworm (T. saginata) and fish tapeworm (D. latum) one single dose is sufficient; for infections with dwarf tapeworms (H. nana) a seven-day treatment is recommended (SEE FULL PRESCRIBING INFORMATION ON THESE PAGES).

mature than the larval stage, therapy must be extended over several days to cover all stages of maturation.

Patients with H. nana must be instructed to observe strict personal and environmental hygiene to avoid autoinfection with this parasite.

3. NICLOCIDE™ must be thoroughly chewed and then swallowed with a little water. No special dietary restrictions are necessary before or after treatment. The best time to take the drug is after a light meal (e.g., breakfast). A mild laxative may be desirable in constipated patients to achieve a normal bowel movement.
   Young children should have the tablets crushed to a fine powder and mixed with a small amount of water to form a paste.
   NICLOCIDE has a vanilla taste which is not unpleasant to most persons.
   NICLOCIDE is suitable for administration on an ambulatory or outpatient basis.
4. Follow-up:
   As the vermicidal action of NICLOCIDE renders the tapeworm, especially the scolex and proximal segments, vulnerable to destruction during their passage through the gut, it is not always possible to identify the scolex in stools. The sooner the tapeworm is passed and examined after treatment, the better the chance of identification of the scolex. Segments and/or ova of beef or fish tapeworm may be present in the stool for up to 3 days after therapy. Persistent T. saginata or D. latum segments and/or ova on the seventh day post therapy indicate failure. A second identical course of treatment may be given at that time.
   No patient should be considered cured unless the stool has been negative for a minimum of three months.

HOW SUPPLIED: NICLOCIDE is available as round, light yellow chewable tablets, scored on one side, embossed with the word Miles and number 721, each containing 500 mg of niclosamide, and is supplied in boxes of 4 tablets.

Storage Conditions: Store below 86°F (30°C), avoid freezing.

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Letters to the Editor

Cupping in Poland

To the Editor: I have read with interest the paper by Drs. Stoeckle and Carter, "Cupping in New York State—1978" (*New York State J Med* 1980;80:117–120).

It may be of interest to you that cupping is still a very frequent procedure in Poland. Almost every month we see patients with typical marks on the skin such as on the enclosed photo.

Dry cupping continues to be carried on as a household remedy for flu, colds, fever, bronchitis, chest pains, arthralgias, and so on. Only glass cups are in use. The negative pressure in the cup is obtained with use of burning flock of cotton moistened with alcohol being put into the cup just before applying it to the skin. In use is also another method of obtaining negative pressure in the cup: an ordinary, rather big button is wrapped around with a piece of paper in the form of a wick moistened with alcohol. This paper wick is placed on the skin. After igniting it, the cup is quickly applied over the burning wick to the skin of the patient. Wet cupping is not in use anymore, but about 20 years ago I saw a mechanical scarifier still in use.

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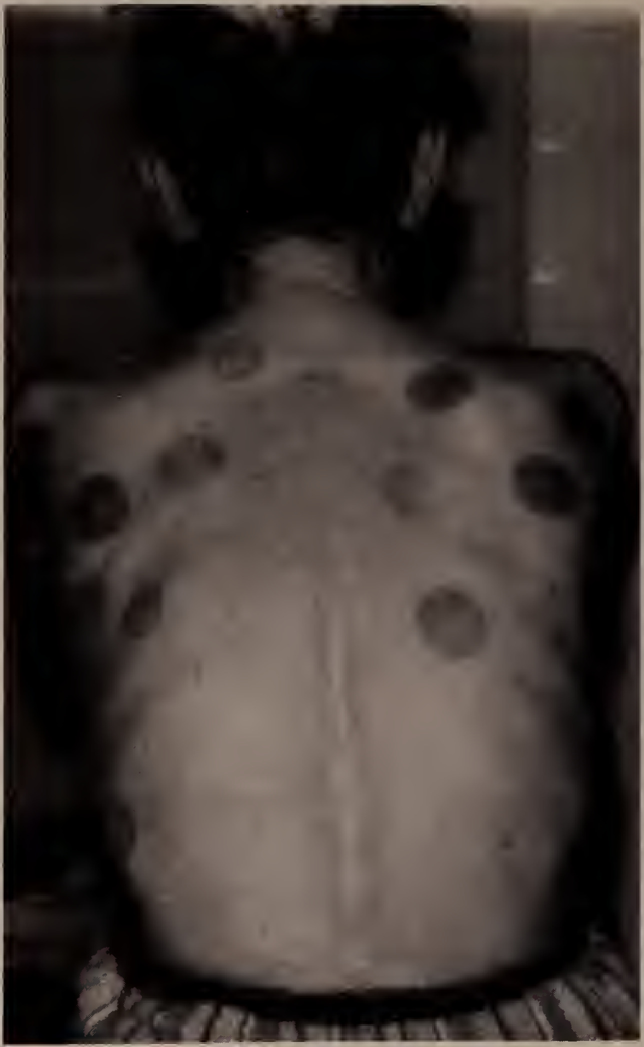

Dr. Stoeckle's reply

To the Editor: I read with much interest Dr. Wermut's letter concerning cupping in Poland. I cannot help but be amazed at finding it still so frequently practiced. But perhaps cupping should not be dismissed as being entirely ineffective too quickly. Recent discoveries concerning endogeneously produced opioid peptides (endorphins),* narcotic-like substances found in the brain, may soon shed some light on pathways of pain modulation and feelings of well being. George Bernard Shaw once said, "No question is so difficult to answer as that to which the answer is obvious."

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* Bunney WE Jr (moderator): Basic and clinical studies of endorphins. *Ann Intern Med* 1979; 91:239–250.

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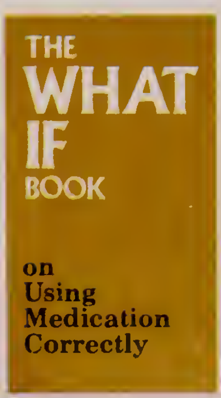
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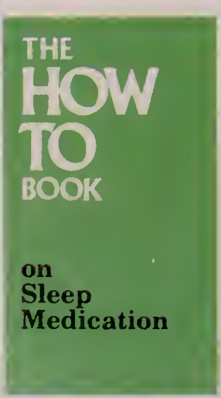
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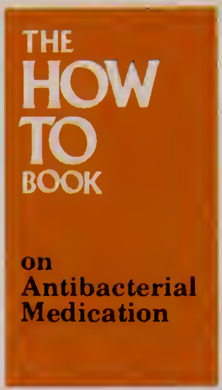
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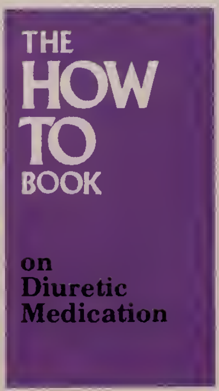
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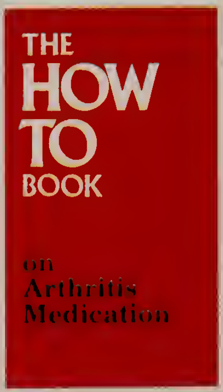
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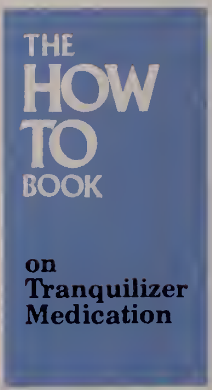
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Renal Transplant Urinary Tract Infections

Effect of perioperative antibiotics and earlier catheter removal

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The incidence of urinary tract infections (UTIs) in transplant patients was studied before and after the use of single-dose perioperative antibiotics and earlier catheter removal. The regimen change reduced the incidence of UTIs from 55.3% to 26%, but the decrease was only significant for males (56% to 12.9%) and for infections due to organisms other than Escherichia coli *(42.9% to 10%). UTIs due to* E coli *and UTIs in females did not decrease. Possible explanations and implications for further UTI prophylaxis are offered.*

Urinary tract infection (UTI) frequently complicates renal transplantation, with reported incidences ranging from 48% to 88%.[1] Although most are asymptomatic,[2] they cause added drug exposure and expense, can persist or recur, carry a risk of sepsis, and may adversely affect graft survival.[1,2]

This study compares the incidences and types of early post-transplant UTIs prior to and after the use of perioperative antibiotics and altered duration of Foley catheterization.

Materials and methods

Two populations were used for the study. Group 1 consisted of 168 patients transplanted between April 1966 and June 1979 who did not receive antibiotics and whose Foley catheter remained in the bladder for at least one week. Group 2 consisted of 50 patients transplanted from June 1979 to mid-December 1981 who received single-dose perioperative antibiotics and whose catheters were removed after 48 to 72 hours. Two thirds of each group received cadaver and one-third received live-related kidneys. No patient was transplanted while he had a UTI or was being treated for a UTI. Although the policy of routine pretransplant bilateral nephrectomy was discontinued in 1972, subsequent patients with recurrent or ineradicable bacteriuria or vesicoureteric reflux were still required to undergo removal of their native kidneys prior to transplant. Immunosuppressive therapy has been described previously.[3]

The antibiotic regimen consisted of single doses, only, of tobramycin sulfate 1.5 mg/kg intravenously (IV) and methicillin sodium 2 g IV preoperatively, and ampicillin 2 g IV intraoperatively. Patients allergic to penicillin received clindamycin phosphate 400 to 600 mg IV intraoperatively instead of methicillin and ampicillin. This regimen was introduced as prophylaxis against wound infections, and has been very successful.[3]

Foley catheters were inserted with sterile technique at the time of transplant and attached to a closed drainage system. They were not routinely irrigated or changed. Urine cultures were drawn by sterile technique through the drainage tubing.

A patient was considered to have a UTI with bacteria or yeast if specimens of catheter or clean-catch urine, cultured daily, grew more than 100,000/mL of the same organism on successive days, and the organism was not considered a contaminant. This study includes only UTIs developing from the time of transplant until the patient's initial discharge. The only patients excluded from the groups were those for whom the needed information was not available or whose management deviated from the protocol.

Results

Table I shows incidences of UTIs of 55.3% in group 1 and 26% in group 2, a significant difference. However, when analyzed according to sex, a significant decrease was demonstrated only for the male population.

Table II presents the infecting organisms. "Other" organisms cultured in group 1 but not further specified in Table III were two cases each of yeast, Enterobacter species, *Pseudomonas aeruginosa*, and beta hemolytic streptococcus, and one case each of a lactose-fermenting and a nonlactose-fer-

TABLE I. Incidence of Urinary Tract Infections

	Group 1, Infected/Total		Group 2, Infected/Total		
	n	%	n	%	
Males	56/100	56.0	4/31	12.9	$p < .001$
Females	37/68	54.4	9/19	47.4	NS
TOTALS	93/168	55.4	13/50	26.0	$p < .001$

menting organism, on which further identification was not available at the time of the review. In addition, in group 1 there were 14 mixed infections. In group 2 there was one such occurrence.

Table III shows the incidence of UTIs due to *Escherichia coli*, and to organisms other than *E coli* considered as a group, according to the sex of the patient. There was a reduction in non-*E coli* UTIs in group 2 although the difference failed to achieve significance for females. There was no change between groups 1 and 2, male or female, in the incidence of *E coli* UTIs.

Fifty-eight of the 93 group 1 patients with UTIs (62.3%) and 11 of the 13 group 2 patients with UTIs (84.6%) retained their native kidneys. Thirty-two of the infected group 1 patients (34.4%) and 2 of the infected group 2 patients (4%) had undergone prior splenectomy.

TABLE III. *Escherichia coli* versus non-*E coli* Urinary Tract Infections

Organism	Group 1, Infected/Total		Group 2, Infected/Total		
	n	%	n	%	
Escherichia coli					
Males	7/100	7.0	2/31	6.5	NS
Females	14/68	20.6	6/19	31.6	NS
TOTALS	21/168	12.5	8/50	16.0	NS
Other organisms					
Males	49/100	49.0	2/31	6.5	$p < .001$
Females	23/68	33.8	3/19	15.8	NS
TOTALS	72/168	42.9	5/50	10.0	$p < .001$

Comment

A reduction in the incidence of UTIs was associated with decreased duration of catheterization and use of perioperative antibiotics. The decrease, however, was significant only for males, and only for infections caused by organisms other than *E coli*. There was no decrease in *E coli* UTIs, and, perhaps due to a continued high rate of *E coli* infection, no significant change in the incidence of UTIs in women.

Reactivation of occult infection in the native kidneys is a possible source of post-transplant UTI, but cannot explain the reduction in infection rates, because a greater proportion of group 2 than group 1 patients were transplanted without prior bilateral nephrectomy. Although fewer group 2 patients had undergone prior splenectomy, two thirds of the infected patients in group 1 had also not had their spleens removed. Thus, potential immunosuppression by splenectomy does not appear to be a factor of major importance.

There is a strong association between wound infections and simultaneous urinary infections with the same organism,[3,4] so the reduction of UTIs in group 2 could have merely reflected the sharply reduced incidence of wound infections produced by prophylactic antibiotics.[3] However, when the 19 group 1 patients who had wound and urinary infections with the same organism were excluded, the incidence of UTIs in group 1 was 49.7%, still significantly greater than that of group 2. Hence the elimination of UTIs associated with wound infections does not explain the major part of the disparity between the groups.

The administration of antibiotics and decreased catheterization time may both have contributed to the reduction in non-*E coli* UTIs. The antibiotics may inhibit organisms contaminating the wound at operation, transferred with the kidney, or introduced at the time of catheterization. The effect of a single preoperative dose, however, lasts only a few hours, unless methicillin and tobramycin excretion is retarded by delayed graft function, and organisms later invading the urinary tract should not be affected.

Ascending bacterial contamination is a major source of UTIs in catheterized patients. Bacteria may migrate from periurethral flora around the catheter into the bladder or ascend along the lumen of the catheter.[5] In a study that included some pa-

TABLE II. Infecting Organisms in Post-Transplant Urinary Tract Infection

Organism	Group 1 (n = 168) Infections	Group 1 (n = 168) % of Population Infected	Group 2 (n = 50) Infections	Group 2 (n = 50) % of Population Infected
Escherichia coli	21	12.5	8	16
Staphylococcus epidermidis	20	11.9	2	4
Klebsiella pneumoniae	11	6.5	1	2
Enterococcus	6	3.8	0	0
Proteus species	5	3.0	1	2
Staphylococcus aureus	3	1.8	0	0
Other	10	6.0	0	0
Mixed infection	14	8.3	1	2
TOTALS	93	55.3	13	26

tients receiving antibiotics, Garibaldi et al[6] calculated an average daily rate of acquisition of infection in catheterized nontransplant patients of 4% for men and 10.4% for women. The risks for patients not receiving antibiotics were higher, but not broken down according to sex. Decreased catheterization from seven to three days is therefore likely to reduce the incidence of infection and was indeed associated with a marked reduction of UTIs in male transplant patients in our study.

E coli was a common pathogen in group 1, causing UTIs in 20.6% of the women and 7% of the men, and the incidence of *E coli* UTIs was not reduced by the altered regimen. It appears that, in patients destined to become infected with this organism, contamination of the urethra or bladder from bowel flora is already well established by day 2 or 3 of catheterization and persists when the catheter is removed. Susceptibility may be based on a property of mucosal cells of these patients that allows increased adherence of *E coli*, as demonstrated for UTI-susceptible females in the healthy population.[7] The infecting *E coli* were generally sensitive to the antibiotics used perioperatively, which may indicate, first, that these UTIs did not arise from an *E coli* inoculum during catheter insertion, and second, that single doses of antibiotics do not alter sensitivities of bowel coliforms.

Overall, the reduction in post-transplant UTIs was gratifying. Further action needs to be taken to prevent *E coli* UTIs and infections in females. If early urethral contamination causes these infections, it might be prevented by extending antibiotic coverage for *E coli* until the catheter is removed. Garibaldi et al[6] have demonstrated that antibiotic coverage for up to five days reduces UTIs in catheterized patients, but they note that the bacterial flora changes in those that do become infected. It remains to be determined which option is preferable: a greater number of easily treated *E coli* UTIs, or a reduced number of infections, some of which may be more difficult to treat.

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The dilated pupil

A single dilated pupil that does not constrict when a light is shined in the eye is a physical sign that physicians have been alerted to ever since they began examining patients. It can signal any number of potentially serious neurological conditions. Or it can mean, as physicians are now discovering, nothing very terrible at all.

In two case reports in this week's *Journal of the American Medical Association*, John A. McCrary III, M.D., and Nancy R. Webb, M.D., at Baylor College of Medicine in Houston, describe patients who each inadvertently contaminated an eye with medication from a chemically-impregnated patch that is worn behind the ear on the skin below the hair line, usually to counteract motion sickness.

The patch releases the drug scopolamine, which, with ordinary use behind the ear, would not cause any pupillary changes. However, according to the *JAMA* authors, "both patients doubtless got active medication into the eye via transfer from their fingers after application or manipulation of the patch."

The two physicians believe that there is the potential for an increased number of cases of pupil dilation in patients being treated with the scopolamine patches, and they want to call this to the attention of the medical community.

A Decade of Experience with a Sickle Cell Program*

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Federal government-supported sickle cell screening, education, and counseling for large numbers of clients began at Queens Hospital Center in 1971. During the seven-year period 1974 to 1980, our sickle cell program screened 55,576 clients, 91.7% of whom had AA hemoglobin. Six percent of those screened (black and white) had sickle cell trait and 2% had hemoglobin C trait. We also detected 27 individuals with sickle cell anemia, 26 with hemoglobin SC disease, 40 with thalassemia trait, 11 with sickle cell trait and hereditary persistance of high fetal hemoglobin, 8 with sickle thalassemia, 10 with homozygous hemoglobin C disease, and 28 individuals with other variant hemoglobins. Seven families with hemoglobin G Philadelphia and 5 families with hemoglobin-O-Arab were the most common variants. A new, previously undescribed hemoglobin variant, which we named hemoglobin Queens, was also identified in our laboratory in a 16-year-old Korean girl. During the same seven-year period, our sickle cell program educated nearly a quarter of a million individuals and counseled over 3,000 clients. The latter figure represents about two thirds of the clients found to have a hemoglobinopathy. All were offered counseling but, despite vigorous efforts on our part, many did not avail themselves of this service. Our program also initiated and implemented a variety of special activities.

Sickle cell anemia was first reported in 1910 by Herrick who described a West Indian college student with "peculiar elongated and sickle-shaped red corpuscles." In 1923, Taliaferro and Huck showed sickling to be an inherited autosomal dominant trait. Four years later, Hahn and Gillespie noted that sickling occurs at low oxygen tensions. In 1949, Pauling and Itano discovered sickle hemoglobin on electrophoresis, and, in 1957, Ingram identified the exact biochemical defect: substitution of valine for glutamic acid at the sixth amino acid from the nitrogen-terminal end of the beta chain of hemoglobin. The pathogenesis, incidence, geographic distribution, clinical characteristics, laboratory findings, pathology, and management of individuals with sickle cell trait, sickle cell anemia, and related hemoglobinopathies are described in great detail in the recent medical literature and in several books.[1–7]

Interest in sickle cell disease increased in the late 1960s when technologic advances made available simple, accurate, inexpensive, and reliable testing procedures to detect the presence of sickle cell hemoglobin in small blood samples. In 1970, a report in the widely read and highly prestigious *New England Journal of Medicine*[8] concerning the sudden death of four black army recruits was widely publicized. Although anecdotal, this report stimulated heated discussions about the level of general social ignorance concerning the nature and consequences of sickle cell disease. The health professions did not recognize the disease as a major community health concern. The civil rights movement, the surfacing of black consciousness, the recognition of social inequities, and the overall turbulence of this era, coupled with the political recognition of blacks as an active voting group, culminated in President Richard Nixon's singling out sickle cell anemia in his health message to Congress on February 18, 1971. According to one writer[9]:

> Suddenly everybody was talking about sickle cell anemia. As interest in the disease quickly accelerated, congressmen, athletes, actors, and community leaders all began to campaign for action against "the killer disease." This publicity, combined with the knowledge

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Presented in part at the Annual Meeting of the Comprehensive Sickle Cell Centers and Screening and Education Clinics, Hilton Head Island, South Carolina, December 1–4, 1981.

that accurate, low cost methods were available to identify disease carriers, resulted in a mushrooming of screening programs.

Legislation was introduced in both the Senate and the House of Representatives of the United States to provide for the control of sickle cell anemia. Public Law 92-294 was enacted by the 92nd Congress and signed by President Richard Nixon on May 16, 1972. In the law, Congress declared

1. that sickle cell anemia is a debilitating, inheritable disease that afflicts approximately two million American citizens and has been largely neglected;
2. that the disease is a deadly and tragic burden which is likely to strike one fourth of the children born to parents who both bear the sickle cell trait;
3. that efforts to prevent sickle cell anemia must be directed toward increased research in the cause and treatment of the disease, and the education, screening, and counseling of carriers of the sickle cell trait;
4. that simple and inexpensive screening tests have been devised which will identify those who have the disease or carry the trait;
5. that programs to control sickle cell anemia must be based entirely on the voluntary cooperation of the individuals involved; and
6. that the attainment of better methods of control, diagnosis, and treatment of sickle cell anemia deserves the highest priority.

The 1972 law, known as the National Sickle Cell Anemia Control Act, authorized awarding of grants or contracts for projects "for research and research training in the diagnosis, treatment, and control of sickle cell anemia, the development of programs to educate the public regarding the nature and inheritance of the sickle cell trait and sickle cell anemia, and the development of sickle cell anemia counseling and testing programs and other programs for diagnosis, control, and treatment of sickle cell anemia."

A Sickle Cell Disease Branch was formed in the Heart, Lung, and Blood Institute of the National Institutes of Health. Ten comprehensive sickle cell centers were established in existing medical schools with a mandate to develop programs of research, education, improved patient care, screening, counseling, and community involvement. The federal government also supported other projects through contracts, investigator-initiated studies, the development of screening and education clinics, and the formation of a hemoglobinopathy detection laboratory in the Centers for Disease Control in Atlanta. Basic and clinical investigation in abnormal hemoglobins was thus stimulated and resulted in more than 100 papers being presented at the first National Symposium on Sickle Cell Disease, held in Washington, DC, June 1974, under the auspices of the National Institutes of Health. The proceedings of this symposium were subsequently published.[10]

In 1975, the Sickle Cell Disease Branch and the University of Texas Health Science Center at Dallas cosponsored a symposium on molecular and cellular aspects of sickle cell disease which recorded some of the recent advances in sickle cell research. Much of the work presented at that meeting[11] was funded by the Sickle Cell Disease Branch or other parts of the National Institutes of Health.

The 1972 National Sickle Cell Anemia Control Act was modified in 1976 with the enactment by the 94th Congress of Public Law 94-278, called the Health Research and Health Services Amendments of 1976. Title IV of the Amendments, known as the National Sickle Cell Anemia, Cooley's Anemia, Tay-Sachs and Genetic Diseases Act, replaced the earlier 1972 legislation which dealt only with sickle cell anemia.

The new act provided for a national program of basic and applied research, research training, testing, counseling, and information and education programs for genetic diseases, including sickle cell anemia, Cooley's anemia, Tay-Sachs disease, cystic fibrosis, dysautonomia, hemophilia, retinitis pigmentosa, Huntington's chorea, and muscular dystrophy.

The act authorized the Department of Health, Education, and Welfare (DHEW) to make grants and award contracts for projects establishing genetic testing and counseling programs in conjunction with existing programs, including those currently funded. The participation of individuals in these programs had to be voluntary. This provision incorporated the experience gained in several state sickle cell testing programs in which mandatory mass screening procedures conflicted with the National Sickle Cell Control Act of 1972 and caused a strong outcry by the black community being served.

Before the 1976 legislation, Congress had tended to examine bills that emphasized specific genetic disorders found predominantly in one or another racial or ethnic group. The 1976 act was supposed to help genetic-disease screening, education, counseling, and treatment centers in their attempt to foster patient education and good medical practice, including preventive medicine, while de-emphasizing the racial overtones of previous programs.[12]

Also in 1976, the "First International Conference on Sickle Cell Disease: A World Health Problem" was held in Washington, DC under the auspices of the Howard University Center for Sickle Cell Disease. The presentations included international aspects of the natural history of sickle cell disease, basic and clinical research, education, screening procedures, socioeconomic, behavioral, and cultural aspects of the disease. An outgrowth of the conference was the formation of the International Association for Sickle Cell Disease. The publication of the proceedings of the conference was in consonance with the major goal of the Association; namely, to share knowledge about this disease on an international basis.[13]

In 1977, a bill was introduced by Congressman Charles Rangel of New York to the 95th Congress for the establishment of a National Sickle Cell Anemia Institute. The bill was not enacted into law.

However, September 1977 was declared by the US DHEW to be National Sickle Cell Month.

In 1978, the 95th Congress enacted Public Law 95-626 known as the Genetic Disease Amendments of 1978. The scope of the earlier laws was broadened to include "genetic conditions leading to mental retardation or mental illness, and conditions requiring genetic services."

The new law also established a change in the funding mechanism whereby federal monies were channelled through individual state health departments. In New York State, Health Research Inc, a nonprofit voluntary organization, successfully competed against other applicants and became the conduit for the awarding of genetics and sickle cell grants and contracts since block federal grants to the states were to be used to fund all genetic disease activities, not only those related to sickle cell.

The thrust of legislation on both the state and federal level over the past few years has been to include sickle cell disease among the many known genetic disorders. Sickle cell is thus losing the individual identity it enjoyed under the initial 1972 National Sickle Cell Anemia Control Act.

Queens Hospital Centers's sickle cell program

The Queens Hospital Center (QHC) is an acute general care municipal hospital in the City of New York and is affiliated with a voluntary teaching hospital, the Long Island Jewish–Hillside Medical Center. QHC services primarily the people of Queens County including a large black and hispanic population. Since its opening nearly half a century ago, the hospital has treated patients with sickle cell anemia requiring hospitalization for acute crises or other medical problems and has provided continuing care for these patients in adult and pediatric hematology clinics.

More than a decade ago, sickle cell-related activities increased dramatically. Early in 1971, QHC sent a team of technicians and professional personnel to Queens College where several hundred black students and faculty participated in a sickle cell screening, education, and counseling drive. Employee screening for sickle cell trait and related hemoglobinopathies began at QHC in mid-1971 and is still going on, initiated by a sickle cell disease symposium held at the hospital on June 30, 1971. Late in 1971, free screening, education, and counseling was provided by hospital technical and professional staff to many hundreds of clients in housing developments, youth and other community centers, churches, and a shopping center.

Informational booklets, posters, fliers, and other materials were prepared by hospital staff and widely distributed. During 1972, a grant application to provide comprehensive sickle cell services including public and individual education, diagnostic screening, genetic and other counseling, treatment, rehabilitation, and research was prepared and submitted to DHEW in Washington for consideration. In that same year, the 92nd Congress passed the now famous National Sickle Cell Disease Control Act (PL 92-924) "for the purpose of establishing a national program for the diagnosis, control, and treatment of, and research in, sickle cell anemia." A revised application was submitted by the QHC in 1973 and funded by a contract from the Health Services and Mental Health Administration of DHEW for the establishment of a sickle cell disease screening and education program.

Project initiation

The federally funded QHC sickle cell program began on July 2, 1973. News releases were featured in local newspapers. A news conference was held at the hospital on July 27, 1973. The first several weeks were devoted to getting the program off the ground. Physical facilities were identified, renovated, and occupied. Equipment and supplies to furnish the offices and laboratory were procured. Initial staff (program coordinator, health educator, counsellor, secretary, clerk, and laboratory technician) was engaged, oriented, and educated. The program was promoted in the press and on radio. The record keeping and filing systems were organized. Forms were devised. Education and screening details and methods were perfected. Education materials (slides, films, pamphlets, brochures, fliers, etc.) were prepared by the program and also procured from outside sources. Mechanisms to insure the confidentiality of the screening results were developed. Approaches and procedures for notification of results of screening and for counseling were devised, field tested, improved, and implemented.

Laboratory techniques were perfected for mass screening and for specific identification of any abnormalities detected on screening. Within a short period of time, our laboratory became a national hemoglobinopathy reference laboratory because of our ability to perform complete hemoglobin analysis including quantification of hemoglobins A_2 and F by DEAE chromatography and alkali denaturation, respectively, hemoglobin chain separation, peptide mapping, amino acid analysis, and globin chain synthesis studies.

Community participation was actively sought. An advisory council consisting of 38 representatives of local community organizations was formed and held its first meeting on November 27, 1973 at QHC.

The thrust of the program was to provide education about and screening for sickle cell trait/disease and related hemoglobinopathies to approximately 10,000 people annually. All clients found to be positive on laboratory screening were asked to provide another blood sample to confirm the presence of the aberrant hemoglobin. Counseling was offered to all clients with an aberrant hemoglobin.

Effort of sickle cell program staff in providing screening and education centered around public schools, day care centers, headstart centers, hospitals, churches, community centers, and shopping centers. In addition, employees and patients of QHC were offered education and screening on a voluntary basis. Follow-up treatment, where required, and genetic and other counseling were provided by program staff or the individual's private physician.

Several site visits from the central office of the Health Services and Mental Health Administration occurred during the program's first two years. Such visits included examination of the laboratory methods used for testing confirmation and definitive diagnosis, methods of advisement of test results, record keeping and confidentiality of results, counseling and referral, educational activities, community involvement, management procedures, and administration. Recommendations and suggestions for improvement were adopted.

A consultant group, Boone, Young and Associates, was engaged by the central office to assist the various federally funded sickle programs across the nation with any problems these programs might have. The consultants visited our program several times and made helpful suggestions.

Over the years, the philosophy of our work in this continually changing field has been discussed, examined, and revised. Major issues have included: What information should be included in an educational session? What is meant by informed consent? Who should be screened? How should results be presented to clients? Should participants be called patients? Clients? Counselees? Who should provide genetic counseling? What information should be included in a counseling session? What data should be maintained? Who should have access to the data? Should pregnant women receive sickle cell testing and counseling? Should the results be recorded in school documents and health records?

Keeping all of these inquiries in mind, we proceeded in a systematic manner. Our goals, objectives, and major emphasis remained the same. We were and are committed to provide hemoglobinopathy education, definitive diagnosis, individual counseling, and follow-up services in a setting with a capacity for referring persons with homozygous hemoglobin S disease, sickle cell thalassemia or other clinically significant variants for adequate medical care, as well as the capacity to refer all clients for social services, family planning, hypertension treatment and the like, as the need is identified.

Education and outreach

The goals of sickle cell anemia and sickle cell trait education are to create an informed public by providing accurate data, to convey an understanding of the genetic mechanism responsible for sickle cell disease, and to correct or dispel misconceptions about the anemia and the trait.

Early in our existence, primary schools and high schools became a large target population. Such schools were thought to be desirable because the audience of youngsters attending them is at a stage where they are beginning to be interested in intimate relationships that may lead to marriage and conception of children. In addition, they are acquiring scientific knowledge that aids in the understanding of the educational, screening, and counseling processes.

During the summer months when school is not in session, we devised another major method for education and screening, the mobile unit. Beginning with the summer of 1975, we organized outreach activities at various locations in the borough of Queens in New York City. The cooperation of the Consolidated Edison Company and the New York Telephone Company, which provided mobile vans for us to implement education and screening to community residents, gave us the opportunity to mount a highly successful program.

Local newspapers provided advance publicity, noting locations and dates. Other health service providers, such as the City of New York Department of Health, the American Red Cross, and local community clinics, worked with us to make this effort successful. Education was provided on the spot in the mobile unit by the health educator and the genetic counselor who, through verbal communication and literature, introduced our program to the public. Clerical staff registered interested persons. A laboratory technician was readily available for those individuals who consented to be screened.

Through this outreach approach, we attracted a general audience including all age groups, ethnic groups, professionals, paraprofessionals, allied health professionals, and local community residents. The method of education was especially important. It was provided on a one-to-one basis. The general response was good. Community residents responded with pleasant surprise and interest. Over 1,000 individuals were screened during the first summer, and the numbers have increased in succeeding years.

These efforts require extensive advanced planning. Schedules and mobile sites must be arranged with the New York Telephone Company and Consolidated Edison in March. Coordination with other health agencies must be arranged in April or May. Press releases must be submitted to local newspapers in June. Flyers must be circulated in the site vicinity a week prior to our arrival. In addition, sickle cell staff must gather education materials and screening equipment and make arrangements for transportation to the site. To insure successful outreach via mobile units, numerous persons are required for recruiting, registering, education, and screening interested persons. Fortunately, during the summer months, students from various work or volunteer programs assist our sickle cell program staff.

In addition to mobile units, our sickle cell program participates in many health fairs throughout the borough of Queens. Such efforts are instrumental in disseminating information about sickle cell trait and disease, and introduce our program to the community. Health fairs have been sponsored by various hospitals, clinics, community groups, and black associations. As our sickle cell program became more known to the community, the number of health fairs in which we participate has increased. In addition, we have been requested to provide our services to residents of Brooklyn, Manhattan and The Bronx and have, over the past two years, conducted screening and education events and participated in health fairs in these boroughs.

Before concluding the discussion on our experiences in the area of education, we should mention two important activities where we made major contributions to sickle cell education. First, we were one of the active participants in assisting the central office in the Department of Health, Education and Welfare in the development and implementation of a *Model Protocol for Sickle Cell Education.*[14] Second, we conducted and published the results of a study of the effectiveness of sickle cell education in New York City public elementary schools.[15] A brief questionnaire was devised gathering information concerning the understanding and retention of facts about sickle cell trait and disease. We chose six schools where we had previously carried out educational and screening events between four and ten months earlier. In four of the six schools we gave intensive sickle cell education to the teachers, who, in turn, devoted one class period of 45 minutes to an educational presentation and discussion of sickle cell disease in their respective classes. In the other two schools, the professional health educators of our sickle cell program directly taught the children. Four hundred fifty-five students from 18 classes filled out questionnaires. We found that professional sickle cell educators can successfully teach children about the disease and can do so more effectively than the average schoolteacher.

Many more studies of this nature could and probably should be carried out to answer the following types of questions: What has been the impact of education and screening for sickle cell disease? Has it been effective? What has it accomplished? What does the general population know about sickle cell disease? What did they know three or four years ago? Have they been exposed to sickle cell education? How do they react to it? Do they feel better having some knowledge about sickle cell which they did not have before? How has such knowledge changed their lives, if at all? What methods of education are most effective? Is a movie about sickle cell disease preferable to a lecture? How does an illustrated slide presentation compare in effectiveness to simple distribution of a fact sheet? Does the size of the audience or the type of audience affect the effectiveness of a sickle cell educational presentation? What have been the positive (and negative) effects, if any, of sickle cell education and screening on the general population, on society, and on "the establishment"?

For the most part, these are still unanswered questions. We have made an initial attempt to get some answers. We hope others will follow suit.

Screening

Clients who volunteer to be screened have blood drawn at schools, day care centers, day camps, churches, hospital clinics, satellite medical centers, mobile units, and the like. Consent forms must be signed before the blood specimen is obtained. The blood sample drawn by the technician is numbered and returned to our hospital hemoglobin laboratory for processing. Hemoglobin electrophoresis is used as the screening procedure. All positive results are repeated for confirmation and solubility tests and sickle cell preparations are performed. In some cases, more sophisticated testing including peptide mapping, globin chain analysis, and amino acid sequencing may be necessary to arrive at a definitive diagnosis.

Originally we drew blood by venipuncture but this method was a deterring factor for many people. We then converted to the finger stick method of blood sampling which has proved to be effective ever since. The record keeping system and logging of samples and results are performed in such a way as to insure complete confidentiality.

All persons receive notification of their test results. Over the years we have twice revised our notification letters to reduce potential or actual anxiety. At first, clients found to have AA, AS, or AC hemoglobin types were so notified by mail with an explanation or interpretation of results. Those with an aberrant hemoglobin were offered counseling.

Beginning in 1977, we advised only those clients found to have no abnormalities of their results by mail. All other clients were asked to call to arrange for an appointment to receive their results and counseling at the same time.

In 1981, the Committee of Genetic Associates of New York State, formed by Quame Yeboa, M.D., of Columbia Presbyterian Medical Center, standardized notification letters for use within the State. These letters inform clients of their results by mail. The contention is that clients who do not return for counseling will at least know their hemoglobin type. It is too early to judge the effect, if any, of this change on the clients, but this is something we are presently monitoring.

Follow-up

Patients who are detected to have homozygous sickle cell anemia, sickle cell hemoglobin C disease, sickle thalassemia, or any other homozygous or double heterozygous abnormality are referred either to their own private physician or to the hemoglobinopathy (sickle cell) clinic at QHC or a comparable health facility for follow-up and medical care. All such patients are first counseled by a physician from the hematology division of QHC or the genetic counselor, or both. Such individuals are encouraged to bring other members of their families for hemoglobin screening studies and counseling.

In the course of counseling persons with hemoglobinopathies, the counselor may discover areas wherein the counselee is in need of additional or supportive services. In such cases, the counselor obtains the counselee's informed consent for mechanically recorded documentation and for the release of information to referral resources. In addition, the counselor provides a list of approved individuals or agencies, or both, to which he or she can refer the counselee for additional information and assistance.

Genetic counseling

The goals of sickle cell counseling are: (1) to communicate to the individual with sickle cell trait an understanding of this hemoglobinopathy and the genetic mechanisms responsible for it; (2) to correct misconceptions about sickle cell trait and sickle cell anemia; (3) to relieve anxiety; (4) to support decision-making concerning family planning, and (5) to present all options to couples at risk. Personal, sensitive, and detailed information about the consequences of a diagnosed hemoglobinopathy distinguish counseling from prescreening education. Central to the delivery of this task is effective communication. The greater the ability of the counselor to interpret genetic risks, genetic facts, and other appropriate information, the greater the ability of the client to understand and make informed decisions. Therefore, a real effort has been made by our counselor to understand the various elements of communication and how these elements affect the counseling process. To communicate information well, the counselor should be aware of self, at both a feeling and behavioral level, while being aware of what is happening to the client being counseled. Privacy and confidentiality are assured as part of this process.

Prior to a given counseling session, our counselor prepares and organizes materials related to the specific hemoglobinopathy involved. During the session, the counselor establishes a good rapport with the client, delivers clear, factual information, assures the client of continued availability, and presents requested and required referral information. Areas that need reinforcement are repeated and the feelings of the client are carefully monitored and anxiety allayed. The entire approach of the counselor is nondirective to preserve the counselee's right to self-determination. The counselee is encouraged to verbalize concerns.

In an attempt to assess the effectiveness of the genetic counseling component of our sickle cell program, we conducted and published the results of a study.[16] For this purpose, we devised a questionnaire to evaluate our patients' understanding and retention of information about sickle cell trait and sickle cell anemia. Our findings indicated that the goals of sickle cell counseling outlined before are being accomplished, and that the counseling session, if conducted properly, does not produce anxiety, is very useful, and is an essential component of a sickle cell screening and education program.

More studies of this nature could and probably should be carried out to answer many questions: What has been the impact of genetic counseling on sickle cell disease? What did patients and families know three to four years ago? How do patients react to sickle cell counseling? How has such knowledge changed their lives, if at all? Have individuals with sickle cell trait changed their reproductive habits? Have they not married, or restricted reproduction, or resorted to abortion for fear of producing a child with sickle cell anemia? Finally, what impact have such efforts had on federal, state, and local funding for sickle cell activities?

Our program also actively participated in the development and implementation of the *Model Protocol for Sickle Cell Counseling* which was published and disseminated by the Health Services Administration of DHEW in 1977.[17]

Clinical review of our sickle cell disease patients

We reviewed the clinical, hematologic, and radiologic features in 127 of our patients with homozygous sickle cell anemia.[18–23] Clinically, the heart was enlarged and a murmur was heard in nearly 80% of patients. Pneumonia and pulmonary infarction occurred in 43% and 12% of patients, respectively. Musculoskeletal involvement included the hand-foot syndrome (15%), leg ulcers (55%), aseptic necrosis of bone (11%), and osteomyelitis (4%). Symptoms and signs related to the gastrointestinal system included jaundice (55%), hepatomegaly (50%), splenomegaly (23%), hepatitis (11%), and gallstones (9%). Three patients underwent cholecystectomy and three patients had their spleens removed. Pyelonephritis occurred in 17 patients, priapism in five and hematuria in seven.[20] Two patients had splenic calcification[21] and another had profound pancytopenia.[22] Eight of 33 patients (24%) tested for auditory function had various degrees of dysfunction.[23]

Nineteen women had 39 pregnancies, of which 35 resulted in the birth of healthy infants. Two pregnant women with sickle cell disease and clinical evidence of pulmonary infarction had significant numbers of erythrocytes resembling "blister cells." [24] At least 328 painful crises occurred in 73 patients. There were also 13 hemolytic crises, eight sequestration crises, and five aplastic crises. The well-known renal concentrating defect in most patients was confirmed. There were six deaths: hepatic coma secondary to post-transfusion hepatitis, thrombosis of inferior vena cava, congestive heart failure, exsanguination from erosion of the pancreaticoduodenal artery, extensive bronchopneumonia, and pulmonary infarction.[18]

Radiologically, the most common findings were cardiac enlargement, skeletal abnormalities involving long bones and other parts of the osseous structure, gallstones, hepatosplenomegaly, renal disturbances, and pneumonia.[19] We also found decreased leukocyte alkaline phosphatase activity[25] and decreased plasma and hair zinc but increased urinary zinc in 50 patients with sickle cell disease.[26,27] We further demonstrated that peripheral blood leukocyte counts[28] and serum alpha-hydroxybutyrate dehydrogenase levels[29] in children with sickle cell disease are useful in the differentiation between vaso-occlusive crisis and bacterial infection.

A prospective study of the prevalence of gallstones in 47 children with sickle cell disease revealed that 8 (17%) had gallstones both on cholecystography and cholecystosonography. All eight underwent elective cholecystectomy.[30]

A prospective trial of alkali therapy in 33 crises in children failed to produce beneficial effects greater than hydration and analgesics alone as used in the control group.[18]

We also reported spontaneous rupture of the spleen in a patient with homozygous hemoglobin C disease[31] and gross hematuria in a client with hemoglobin C trait.[32]

Special activities of our sickle cell program

A major symposium entitled "The Sickle Cell Phenomenon" was held at our medical center for physicians and other health service providers, health educators, and community action organizations. Guest speakers included the Commissioner of Health of New York City and the National Director of the Congress of Racial Equality. Various aspects of sickle cell disease were discussed at length.

We have already mentioned that our sickle cell program initiated, implemented, and published the results of a study evaluating the effectiveness of sickle cell education in New York City public elementary schools and another study on the effectiveness of the sickle cell counseling component of our program. We have also previously mentioned the fact that the QHC Sickle Cell Program has participated in many community and Hospital-sponsored health fairs and, through the courtesy of the New York Telephone Company and the Consolidated Edison Company, used mobile units during the summers for screening, education, and counseling.

Our sickle cell program also arranged for a group of children with sickle cell disease to spend one to two weeks during each of several summers in a sleepaway camp for healthy children. The published results of that experience indicate that it is possible for sickle cell disease children to attend a regular summer camp, mix with healthy children, and participate in many athletic and other activities.[33] Effective training of camp personnel resulted in a positive camping experience for the children as well as for the camp staff.

An annual Christmas party for our sickle cell disease patients has been traditional for several years. Funds to support this activity as well as the aforementioned camping experience were obtained by annual fund-raising fashion shows, raffles, concerts, and similar functions. These fund-raising events were spearheaded by a talented and dedicated employee at our medical center.

Over the past several years we have been a reference laboratory for hemoglobinopathies for the New York City Department of Laboratories and the Center for Disease Control in Atlanta.

We also serve as a referral center for many hospitals and health clinics in the borough of Queens and counsel many families with newborns detected to have hemoglobinopathies as part of the mandated newborn screening for sickle cell disease in New York City.[34]

We have translated all our letters of notification, educational materials, and consent forms into Spanish for our Spanish-speaking clients. We also conduct counseling sessions in Spanish where needed.

Statistical accomplishments

During the seven-year period 1974 to 1980, our sickle cell program screened 55,576 clients (black and white), 91.7% of whom had AA hemoglobin. Six percent of those screened had sickle cell trait and 2% had hemoglobin C trait. We also detected 27 individuals with sickle cell anemia, 26 with hemoglobin SC disease, 40 with thalassemia trait, 11 with sickle cell trait and hereditary persistance of high fetal hemoglobin, 8 with sickle thalassemia, 10 with homozygous hemoglobin C disease, and 28 individuals with other variant hemoglobins (Table I).

Most of the variant hemoglobins have been specifically identified using standard protein chemistry techniques which include electrophoresis in different media, ion exchange chromatography, peptide mapping, and aminoacid analysis. The variants identified to date are noted in Table II. Seven families with hemoglobin G Philadelphia and five families with hemoglobin-O-Arab were the most common variants.

A new, previously undescribed hemoglobin variant, which we named hemoglobin Queens, was also identified by one of us (B.T.) in our laboratory in a 16-year-old Korean girl. In hemoglobin Queens, the 34th amino acid on the alpha chain which is normally leucine is replaced by arginine.

Hemoglobin Queens has been registered with the International Hemoglobin Information Center in Augusta, Georgia, and its precise structure has been published.[35] Several other hemoglobin variants are still under investigation.

TABLE I. Summary of Seven Years of Hemoglobinopathy Screening

Year	No. of Clients Screened	Type of Hemoglobin									
		AA	AS	AC	SC	SS	AF	SF	STh	CC	Other
1974	6,423	5,869 (91.2%)	407 (6.4%)	133 (2.1%)	0	5	5	1	0	1	2
1975	9,949	9,060 (91%)	635 (6.4%)	230 (2.3%)	8	3	8	0	1	3	1
1976	8,022	7,311 (91.2%)	517 (6.5%)	171 (2.1%)	2	3	3	2	3	0	10
1977	8,748	8,076 (92.3%)	473 (5.4%)	168 (1.9%)	5	4	16 (0.2%)	1	0	2	3
1978	7,743	7,113 (92%)	459 (5.9%)	140 (1.8%)	3	7	3	5	1	3	9
1979	6,513	6,015 (92.4%)	375 (5.8%)	105 (1.6%)	3	3	3	2	3	1	3
1980	8,178	7,535 (92.1%)	461 (5.6%)	173 (2.1%)	5	2	2	0	0	0	0
TOTALS	55,576	50,979 (91.7%)	3,327 (6.0%)	1,120 (2.0%)	26	27	40	11	8	10	28

During the same seven-year period, our sickle cell program educated nearly a quarter of a million individuals (Table III) and counseled over 3,000 clients. The latter figure represents about two thirds of the clients found to have a hemoglobinopathy. All were offered counseling but, despite vigorous efforts on our part, many did not avail themselves of this service.

TABLE II. Variant Hemoglobins Discovered as Part of a Large Sickle Cell Screening Program

Hemoglobin (Hgb) Variant	No. of Families		
	Black	White	Oriental
Alpha chain			
Hgb G-Philadelphia	7	0	0
Hgb Montgomery	1	0	0
Hgb Hasharon	0	1	0
Hgb I-Philadelphia	1	0	0
Hgb J-Oxford	0	1	0
Hgb Queens	0	0	1
Beta chain			
Hgb O-Arab	3	2	0
Hgb E	2	0	0
Hgb N-Baltimore	1	0	0
Hgb G-Galveston	1	0	0
Hgb Richmond	1	0	0
Hgb D-Punjab	1	1	0

TABLE III. Summary of Seven Years of Hemoglobinopathy Education and Counseling

Year	Educational	No. of Clients Counseled	% Counseled of Clients Offered Counseling
1974	35,826	161	29
1975	48,200	480	53
1976	27,984	429	85
1977	28,239	450	66
1978	35,654	570	92
1979	42,090	519	64
1980	34,194	492	65
TOTALS	252,187	3,101	

Conclusion: the future

The nation's commitment to sickle cell screening, education, and counseling is firm. However, the financial resources to maintain this commitment are in doubt in view of the major federal budget cuts currently being implemented. The 1976 genetic diseases act and the transfer of funding for sickle programs from the federal to the state level resulted in sickle cell disease partially losing its individual identity by being "lumped" with other genetic disorders. Now, with federal and state funding for genetics programs being decreased, local funding sources will have to assume more responsibility. City health departments, individual hospitals, and private groups and organizations will have to be asked to help insure the continued successful operation of many of the ongoing sickle cell programs.

On a more positive note, it is gratifying to note that the past decade has brought an unparalleled escalation of research activity of sickle cell disease and other hemoglobinopathies. In addition, the medical and lay communities have become sensitized to the existence of this disease and to the needs of the patients and the teams of individuals caring for them. Let us hope that this momentum will not be lost.

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"Nursing home without walls"

A new community service for the aged

The Bronx now has a new program to which sick, elderly people can turn for long term health care—in their own homes. Kingsbridge Center of The Jewish Home and Hospital for Aged (JHHA) on West Kingsbridge Road was recently certified by the State of New York to implement a Long Term Home Health Care Program for homebound elderly who need continuing health care. This is the second site for JHHA's Long Term Home Health Care. The first phase began a year ago at Central House, serving Manhattan's Upper West Side elderly.

The JHHA Home Care Staff at both locations are licensed professionals and trained paraprofessionals, who provide individualized services as part of a comprehensive care plan. Ongoing professional supervision, contact with physicians and specialized training will enable patients and their families to assume some care responsibilities, using their own resources to prevent or delay the nursing home option. The patients will have all the back-up services of JHHA, a nursing home with over 110 years of experience in geriatric care, a history of research and innovative programs for the elderly.

Under enabling legislation known as "The Nursing Home Without Walls," sponsored by Senator Tarky J. Lombardi, Jr., Chairman of the New York State Senate Health Committee, The Jewish Home's program provides all traditional nursing home services in the patient's home.

These services include nursing and medical social work help, treatments by licensed therapists for physical and occupational therapy, home health aides, personal care workers, homemakers, medical supplies and equipment.

Eligibility is limited to those who meet State criteria for care at skilled nursing or health related levels. Patients must live in the North or West Bronx from The Hudson and The Harlem Rivers to the Hutchinson River. Medicaid and private pay patients are eligible for all benefits, if other requirements are met.

Patients may enter this program from a hospital, a nursing home or from the community. For further information call Barbara Fleming, R.N., Director of Patient Services, (212) 579-0501.

The Jewish Home and Hospital for Aged, the nation's largest voluntary long-term care center serving 2,000 elderly and established in 1870, maintains skilled nursing and health related residential facilities in both Manhattan and the Bronx. The Home also operates day care programs, enriched housing and long term home health care programs, an apartment residence, and is a teaching affiliate of Mount Sinai School of Medicine. It is a charter member and beneficiary of the UJA-Federation Campaign.

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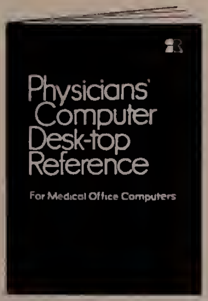
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Penicillinase-Producing *Neisseria gonorrhoeae*

Cases in New York City, 1979–1981

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The first reported case of penicillinase-producing Neisseria gonorrhoeae *(PPNG) in the United States was reported in August 1976 and outbreaks have occurred since. A previous article* (NY State J Med 1979; 79:697.) *discussed all reported cases in New York City from September 1976 through August 1978. The purpose of this article is to update the findings of all reported cases in New York City from 1979 through 1981. The results of this investigation showed dramatic increases in the total reported cases. There were 6 cases in 1979, 39 cases in 1980 (a 550% increase), and 440 cases in 1981 (a 1,028% increase over 1980). The distribution of these total reported numbers of cases (1980, 1981) by various categories, such as age, sex, and reporting source, are also discussed.*

Penicillinase-producing *Neisseria gonorrhoeae* (PPNG) is a relatively new phenomenon in the field of sexually transmitted diseases. In the United States, the Centers for Disease Control (CDC) in Atlanta, Georgia, identified this form of gonorrhea for the first time in August 1976.[1] Guidelines were formulated by the CDC in August of that year for prospective PPNG surveillance.[2] Among other things, the guidelines urged that one to two weeks after treatment, every gonorrhea case should receive a "test-of-cure." Those with positive findings should receive 2 g intramuscularly (IM) of spectinomycin. Moreover, state health departments were asked to test for resistant strains on each test-of-cure culture that turned up positive.[3]

In New York City, the Bureau of Laboratories of the City of New York Health Department decided to go further than the CDC guidelines mentioned here; they began to screen all positive cultures for PPNG. The City of New York Bureau of Laboratories obtains the cultures from a combination of sources, including New York City social hygiene clinics, screening programs for gonorrhea, and a number of private physicians.[4]

In 1979, the cases of PPNG recorded in New York City from September 1976 through August 1978 were reported.[5]

Subsequently, PPNG has caused serious outbreaks in the United States in 1980. Areas hard hit included Washington, Louisiana, New York City, and Los Angeles. Fortunately, methods used by health authorities, such as contact tracing, concentrated surveillance, proper therapy and detection of persons infected with the disease, had succeeded in limiting the spread; the majority of cases had either been associated with imported cases or were imported.[6] Presently, however, many cases are occurring locally.

The purpose of this article is to update the reports of PPNG recorded in New York City from 1979 through 1981.

Method

There were 440 cases of PPNG reported to the City of New York Department of Health during 1981, 39 cases in 1980, and 6 cases in 1979. Table I comprises data collected from the cases reported in 1980 and 1981 and shows various demographic and epidemiologic breakdowns of the totals. It is clear that a huge increase from 1980 through 1981 has occurred. This is reflected in the increases of the numbers in Table I.

In 1981, the program changed the form on which PPNG case data were collected. However, the basic demographic and epidemiologic information was collected on both forms. Table I gives a clear picture of the PPNG trends in New York City for 1980 and 1981.

As far as changes in the percentages in various categories from 1980 to 1981 are concerned, we see from Table I that in 1981, Manhattan and Brooklyn

Table I. Distribution of All Reported PPNG Cases in New York City by Borough of Residence

Borough	No.	(%) 1981	No.	(%) 1980
Manhattan	183	(41.5)	2	(5.1)
Brooklyn	118	(26.8)	24	(61.5)
Bronx	74	(16.8)	4	(10.3)
Queens	59	(13.4)	9	(23.1)
Richmond	6	(1.4)	0	(0)

Table II. Distribution of All Reported PPNG Cases in New York City by Age Group

Age Group	No.	(%) 1981	No.	(%) 1980
10–14	1	.2	0	(0)
15–19	53	12	7	(17.9)
20–24	166	37.7	17	(43.6)
25–29	103	23.4	7	(17.9)
30–plus	117	26.6	8	(20.6)

Table III. Distribution of All Reported PPNG Cases in New York City by Reporting Sources

Reporting Source	No.	(%) 1981	No.	(%) 1980
Public	345	(78.4)	35	(89.7)
Private	43	(9.8)	1	(2.6)
Hospital (outpatient)	24	(5.5)	2	(5.1)
Hospital (inpatient)	10	(2.3)	1	(2.6)
Hospital (emergency room)	18	(4.1)	0	(0)
Military	0	(0)	0	(0)

accounted for over two thirds of the cases (68.3%). There has been a shift from 1980 to 1981 where the percentage of reported cases in Manhattan increased by over 8 fold, whereas Brooklyn cases in that period of time decreased a great deal from 61.5% to 26.8%.

From Table II we see that in both years the largest single contribution was in the 20 to 24 year age group. In 1980 the rest of the cases were split almost evenly between the age groups 15 to 19, 25 to 29, and 30 plus. In 1981 the 15 to 19 age group contributed about half as much as each of the two other groups—25 to 29 and 30 plus.

Table III shows that the public and private reporting sources in both years contributed just about 90% of all reported cases; however, there was a drop in public reported cases from 89.7% to 78.4% and a simultaneous increase from 2.6% to 9.8% in the private cases reported. This could reflect more willingness and alertness on the part of private physicians to pursue the PPNG problem more actively in the City.

From Table IV, we see that in 1980, 97.4% of all reported cases were either voluntary or epidemiologic, whereas in 1981 this figure was 91.9%. In 1981, 36 cases came due to screening or retesting, accounting for 8.1% of the reported cases; in 1980, there were no such cases.

There was a rather large increase from 1980 to 1981 in the percentage of male cases, from 51.3% to 61.4% (Table V).

On the 440 cases in 1981, 756 contacts were named and on the 39 cases in 1980, 165 contacts were named. Table VI is a breakdown of the final disposition of those contacts. The two most notable changes in the percentages of Table VI occurred in the categories 0X (contacts epidemiologically treated) and 06 (unlocatable contacts). A drop from 41.8% to 31.6% occurred in the OX category, whereas the 06 category almost tripled, going from 8.5% to 23.5% from 1980 to 1981.

Comment

The dramatic rise in the total number of reported PPNG cases in New York City from 1979 to 1981 (from 6 to 39 and from 39 to 440) was mirrored in Florida where in 1976 health professionals began a testing program for those patients who had not been cured by primary, standard treatment regimens. Whereas there had been only six cases found in the prior four years, 12 cases were found from September

Table IV. Distribution of All Reported PPNG Cases in New York City by Reason for Examination

Reason for Examination	No.	(%) 1981	No.	(%) 1980
Volunteer	277	(63)	20	(51.3)
Epidemiologic	127	(28.9)	18	(46.1)
Screening	27	(6.1)	0	(0)
Retest	9	(2)	0	(0)
Other	0	(0)	1	(2.6)

Table V. Distribution of All Reported PPNG Cases in New York City by Sex

Sex	No.	(%) 1981	No.	(%) 1980
Male	270	(61.4)	20	(51.3)
Female	170	(38.6)	19	(48.7)

Table VI. Distribution of All Reported Contacts To All Reported PPNG Cases in New York City by Final Disposition

Final Disposition	No.	(%) 1981	No.	(%) 1980
01	165	(21.8)	29	(17.6)
0X	239	(31.6)	69	(41.8)
00	11	(1.5)	6	(3.6)
03	152	(20.1)	35	(21.2)
06	178	(23.5)	14	(8.5)
Other	11	(1.5)	12	(7.3)

01: brought to treatment; OX: epidemiologic treatment; 00: not infected; 03: previously treated; 06: unlocatable other administrative disposition due to death, relocation, refusal of examination, etc.

through December 1980.[7] Because of this finding, tests for PPNG were routinely done at the State health department laboratories on all specimens presented instead of just on those where standard therapy had not worked.[8] By use of contact tracing, authorities found that many of the contacts involved had not received adequate therapy from private physicians. This highlights the importance of maintaining a high suspicion level on the part of private physicians and social hygiene clinics when dealing with gonorrhea.[7] In the United States in 1981, approximately 2,725 cases were reported; in 1980, 1,118 cases were reported, and in 1979, 328 cases were reported.

In May 1981, CDC recommended that increasing surveillance be done by all laboratories[8] by examining all isolates of gonorrhea for production of β-lactamase; in areas with particularly high rates of PPNG, cultures routinely should be taken from all male urethritis sufferers (if that is not done already) and the positive ones examined for β-lactamase production. Such tests have been delineated.[9]

CDC dispatched a provisional protocol to state health laboratories concerning an inexpensive idiometric test using strip-paper. CDC tests with laboratory strains have shown the strip to be similar in specificity and sensitivity to commonly used tests. To maximize the chance of correctly diagnosing all PPNG cases, those isolates found negative on primary testing but which are obtained from high-risk patients—PPNG contacts, persons who still have their infection after penicillin treatment, and those cases who reside in an area with a PPNG problem—may be reexamined using a different test. Advice on this can be obtained from CDC and state health laboratories.[8]

One of the responses to the PPNG outbreak was that in November 1981 the City of New York Department of Health Bureau of Venereal Disease Control sent a letter to approximately 150 clinical laboratory directors requesting those who do cultures for *N gonorrhoeae* to start tests for β-lactamase-producing ability in all such isolates. The bureau offered materials and instructions to do this and also requested that positive findings for PPNG be reported to the Gonorrhea Screening Unit. Problem cases, such as doubtful isolates, for instance, were referred to the Microbiology Laboratory of the City of New York Department of Health.

At Travis Air Force Base, California, the first case of spectinomycin-resistant PPNG was discovered.[7] CDC advised that in cases of this type, 2 g IM of cefoxitin sodium preceded by 1 g of probenecid given by mouth should be administered.[10] Some authors make other suggestions.[11,12]

Summary

There have been recent reports in the literature concerning a serious increase of occurrence of PPNG in various parts of the United States. Some of these increases have occurred in Washington, Florida, and Los Angeles. These reports have prompted the City of New York Department of Health Bureau of Venereal Disease Control to update the epidemiologic and demographic information on PPNG cases reported in 1979 through 1981. Indeed, there were extremely large increases in the total number of cases during that time. In 1979, only six cases were reported; in 1980, 39 cases (a jump of 550%) were reported. It was in 1981 that a truly alarming 1,028% increase (relative to 1980) occurred, amounting to 440 reported cases. This shows that efforts in the epidemiologic area such as contact tracing and surveillance, along with diagnostic procedures and proper therapy, must be emphasized in the future.

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Penicillinase-Producing *Neisseria gonorrhoeae* In New York City

Recommendations for treatment and control

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Penicillinase-producing Neisseria gonorrhoeae *(PPNG) reached epidemic proportions in 1981, with New York City contributing 15% of the nation's cases, and 30% of the nation's increase, in reported incidence. The large number of cases represented by these statistics has necessitated a phenomenal increase in special diagnostic, medical, and epidemiologic efforts by the City of New York Bureau of Venereal Disease Control. If these efforts are not successful, it is felt that penicillin and its derivatives will no longer be the first line of defense against gonorrhea and its complications. In that eventuality, huge cost increases of alternative and less efficient drug regimens will add to the economic burdens of increased epidemiologic surveillance and morbidity. The Bureau is requesting the continued cooperation of private physicians and laboratory services to report all cases of PPNG found in the city to (212) 239-1727; cases in all out-of-city locales should be reported to (518) 474-3595 at the State of New York Department of Health. Guidelines for the treatment of PPNG are given to help physicians in the control of this strain of gonorrhea.*

The incidence of penicillin-resistant gonorrhea caused by penicillinase-producing *Neisseria gonorrhoeae* (PPNG) reached "epidemic proportions" in New York City in 1981. The City reported 15% of the nation's cases and accounted for over 30% of the nation's increase in reported incidence of PPNG in 1981. This outbreak of PPNG has continued into 1982 with 30 to 40 cases being identified weekly. Neighboring areas of New York State and New Jersey have reported significant increases as well. Even with these substantial increases in incidence, PPNG is still occurring in low frequency; the City of New York Department of Health Bureau of Venereal Disease Control is intensifying surveillance and control activities in an effort to avert continued increases in 1982. If PPNG becomes more common in the disease-transmitting population, the management of patients infected with *N gonorrhoeae* will become more difficult, since penicillin therapy will no longer be effective, and alternate medications are much more expensive. All these consequences will adversely affect the surveillance and control capabilities of the Venereal Disease Control Program in New York City. Therefore, the Bureau of Venereal Disease Control has designated PPNG as the Program's top priority.

The seriousness of unrecognized PPNG infections is well documented. An immediate consequence of further increases in PPNG cases will be the probable loss of penicillin as the drug of choice for treatment of gonorrhea. Such a change will not only alter the scope of present gonorrhea control activities, but will also have a major economic impact. The cost of alternate therapy to adequately treat PPNG is five to six times that of penicillin.

Additionally, the cost of laboratory services, diagnosis and treatment, and epidemiologic management will also increase proportionately as the identification and management of PPNG becomes more involved. The true consequences of the loss of penicillin cannot be accurately measured, but most certainly it will negatively affect the Venereal Disease Control Program, both in New York City and nationally. The added cost of therapy, medical care, and follow-up will require additional resources.

PPNG is the most serious threat to confront the Venereal Disease Program in New York City and every effort is being taken by the Bureau to achieve control. A PPNG Task Force has been established to ensure that all cases are managed epidemiologically. This includes medical management, interviewing, contact investigation, clustering, and targeted screening. Every attempt is made by Task Force casefinders to initiate epidemiologic follow-up on an immediate basis. The epidemiologic investigation required is extremely difficult, and requires continued persistence to locate those individuals infected and transmitting the disease.

The life-style and behavior of a significant population of the contacts, suspects (individuals named as a person's previous sex partner, or persons known to have similar symptoms), and associates (contacts of contacts, friends, household members) to PPNG cases is such that they infrequently seek health care. The Bureau of Venereal Disease Control casefinders expend an enormous amount of time and effort to motivate those potentially infected individuals to seek examination and treatment.

Although the Department of Health's Bureau of Laboratories has routinely continued to test all positive cultures for the ability to produce β-lactamase (penicillinase) since 1976, few other laboratories had been doing this. The Bureau viewed increasing screening and surveillance a critical element in our control effort. To combat this problem, the Bureau of Venereal Disease Control, in conjunction with the Bureau of Laboratories, requested by letter, in the fall of 1981, the assistance of all laboratories performing cultures for *N gonorrhoeae* to test all positive isolates for β-lactamase production. The Bureau made testing materials available to encourage increased surveillance for PPNG. Cooperation has been excellent, with over 120 laboratories participating and reporting their findings to the PPNG Task Force for follow-up. This means that when a physician receives a laboratory culture report positive for *N gonorrhoeae*, the report will also state whether or not the strain of *N gonorrhoeae* cultured produces β-lactamase. If the culture is also positive for β-lactamase, the patient has PPNG.

The City of New York Department of Health Bureau of Venereal Disease Control needs your assistance in controlling this current PPNG public health problem. During the past year, the Bureau has detected a sharp and dramatic increase in the number of PPNG cases in New York City. From January 1981 through December 1981, 440 confirmed cases were reported to the Department of Health. When compared with the last five years, PPNG has increased by over 1,500%. The table, based on a preliminary analysis of 1981 cases including those still under epidemiologic follow-up, gives an overview of PPNG trends in New York City for 1981. Increased reporting from private and hospital sources now comprises about 40% of each week's case reports.

Unfortunately, the usual gonorrhea testing methods and treatment schedules are not adequate for PPNG infections. Therefore, the Bureau of Venereal Disease Control has formulated the following recommendations:

PPNG Trends in New York City—1981

Data	Percent
Borough distribution	
Manhattan	41
Brooklyn	28
Bronx	17
Queens	12
Richmond	2
Age grouping	
10–14	1
15–19	12
20–24	36
25–29	27
30+	25
By sex	
Male	63
Females	28
Reporting source	
Public	78
Private	11
Hospital (outpatient)	6
Hospital (inpatient	2
Hospital (emergency room)	3

1. Culture all patients suspect of gonorrhea, particularly those who have had positive smears; cultures should also be taken from all other orifices that are exposed to the organism during sexual contact, since that is the only way to determine if the patient has PPNG.
2. Patients found presumptively positive for *N gonorrhoeae* by direct smear examination on initial visit should be treated with aqueous procaine penicillin G (APPG) preceded by 1 g probenecid, or with 3.5 g ampicillin plus 1 g probenecid in accordance with recommended treatment schedules.
3. Alert all gonorrhea patients about the existence of PPNG strains and stress the importance of returning for their test-of-cure culture five to seven days after treatment is completed.
4. Patients found to have uncomplicated anogenital PPNG infections are to receive spectinomycin hydrochloride (HCL), 2 g intramuscularly (IM) in a single injection.
5. Patients with a positive test-of-cure culture after treatment with APPG or ampicillin should also receive 2 g spectinomycin HCL.
6. Sexual contacts of PPNG infected patients are to be culture-tested at all sites and preventively treated with spectinomycin HCL, 2 g IM in a single injection.
7. Test-of-cure cultures should be done one week after therapy with spectinomycin. Patients who do not respond to spectinomycin are to be treated with cefoxitin, 2 g IM given with 1 g probenecid orally.
8. Since spectinomycin and cefoxitin are ineffective for pharyngeal gonococcal infection, patients with PPNG pharyngeal infections are to be treated with sulfamethoxazole/trimethoprim, nine tablets (400 mg sulfamethoxazole/80 mg trimethoprim per tablet) daily, in three divided doses, given for five days. Alternatively, the daily dose of nine tablets of sulfamethoxazole/trimethoprim may be given in a single daily dose.
9. Females with PPNG-pelvic inflammatory disease (PID), males with PPNG epididymitis, and patients with disseminated PPNG infections are to be treated with spectinomycin HCL, 2 g IM each day for five to ten days. Such patients can also be treated with cefoxitin, 2 g IM or intravenous every eight hours for five to ten days.
10. In all instances, test-of-cure cultures are to be taken from both non-PPNG and PPNG patients seven days after completion of therapy to ensure the effectiveness of treatment.
11. Gonorrhea patients with a history of recent travel (within 30 days) to the Far East, or other areas of endemic infection, should be considered as probable

PPNG patients and should be treated with spectinomycin, 2 g IM in one dose.

12. Gonorrhea patients should be questioned as to any recent sexual encounter (within 30 days) with prostitutes. If this has occurred, this individual should also be considered a probable PPNG patient and should be treated with spectinomycin, 2 g IM in one dose.

In conjunction with these recommendations, a special epidemiologic task force has been set up for the purpose of contact tracing. This is absolutely essential in controlling this major public health problem. The Bureau strongly recommends that you advise your patients of the importance of contact tracing and make arrangements with the Bureau of Venereal Disease Control to interview your patients to secure contact-tracing information. Your cooperation and assistance in this vital and most crucial element of control is greatly needed if we are to deal effectively with this current epidemic of PPNG.

A special PPNG Hotline has been set up in New York City at (212) 239-1727 for reporting suspected or confirmed cases of PPNG. Cases identified in New York State, other than in New York City, should be reported to the State of New York Department of Health Bureau of Venereal Disease Control at (518) 474-3595.

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Popular Treatment for Genital Herpes Found Ineffective

One of the most popular treatments for genital herpes infections has been found ineffective, according to a report in the August 27 *Journal of the American Medical Association*.

Results from a study conducted at the University of Washington Herpes Clinics, Seattle, revealed that the antiviral agent idoxuridine did little more than shorten the period of viral shedding from open lesions—the time when the genital herpes sufferer is most contagious. The drug did not alleviate symptoms, hasten healing, reduce new lesion formation or delay subsequent recurrences of the disease, according to Dianne L. Silvestri, M.D., primary author of the *JAMA* article.

In the double-blind Washington study, 96 patients were assigned randomly to three therapy groups. One group was treated with 30% idoxuridine in dimethyl sulfoxide, the potent organic solvent popularly referred to as DMSO that enhances penetration of chemicals through the skin. The second group was treated with DMSO alone and the third group with normal saline. The chemicals were applied directly to the lesions four times a day for seven days.

While the idoxuridine in DMSO shortened the contagious period, Silvestri's team found no clinical sign that heralded the end of viral shedding. Because there is no way that patients can pinpoint the end of their contagious period without laboratory tests, they should abstain from sexual contact until all lesions have healed, Silvestri advises.

In a separate study of the drug's toxicity, Silvestri and colleagues found mild burning sensations in 13 of 31 patients treated with DMSO alone or with idoxuridine in DMSO in concentrations from 5% to 40%. More severe irritation occurred in the three patients of six who received the 40% solution.

In a previously published survey of almost 200 dermatologists, idoxuridine was the second most popular therapy prescribed for recurrent genital herpes infections.

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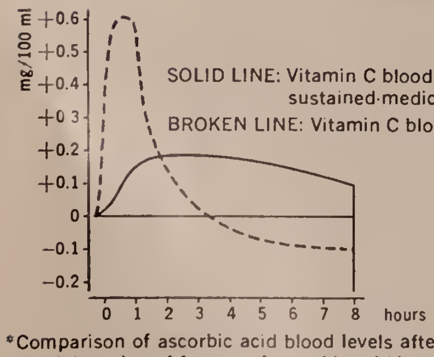

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Recommendations of the National Advisory Committee on Immunization Practice

Diphtheria, Tetanus, and Pertussis*

Guidelines for vaccine prophylaxis and other preventive measures

This is a revision of the 1977 ACIP statement on diphtheria, tetanus, and pertussis.[†] It includes a review of the epidemiology of these diseases, a description of the available immunobiologic preparations, the appropriate immunization schedules, and precautions of contraindications to vaccine use. It contains no major changes in immunization policy.

Simultaneous immunization against diphtheria, tetanus, and pertussis during infancy and childhood has been a routine practice in the United States since the late 1940s. It has played a major role in markedly reducing the incidence of cases and deaths from each of these diseases.

Diphtheria

Diphtheria has declined remarkably in the United States in recent years. From 1970 through 1976, an average of 248 cases were reported annually. Since then, the average has been 56. However, diphtheria remains a serious disease. About 5% to 10% of respiratory diphtheria cases are fatal, the highest case-fatality ratios being in the very young and the elderly.

At one time respiratory diphtheria was common and occurred primarily in children. Now it is rare, especially in children. This is due, in part, to an apparently reduced circulation of toxigenic strains of *Corynebacterium diphtheriae* and to an increased proportion of children who are adequately immunized. Most cases, both in children and adults, occur in unimmunized or inadequately immunized persons. The age distribution of recent cases and the results of serosurveys conducted in the United States suggest that many American adults are not protected.

Toxigenic and nontoxigenic strains of *C diphtheriae* can cause disease. However, only strains that produce toxin result in the common complications of myocarditis and neuritis. Furthermore, toxigenic strains are more often associated with severe or fatal illness in noncutaneous (respiratory or other mucosal surface) infections, and a higher proportion of them are recovered from respiratory than from cutaneous infections. *C diphtheriae* can contaminate the skin of certain individuals, usually at the site of a wound. Although a sharply demarcated lesion with a pseudomembraneous base often results, the appearance may not be distinctive and the infection can be confirmed only by culture. Usually other bacterial species can also be isolated. Cutaneous diphtheria most commonly affects certain groups of American Indians and indigent adults.

Adequate immunization is thought to protect for at least 10 years. It significantly reduces both the risk of developing diphtheria and the severity of clinical illness. It does not, however, eliminate carriage of *C diphtheriae* in the pharynx or on the skin.

Tetanus

The incidence of tetanus has decreased dramatically with routine use of tetanus toxoid. Nonetheless, the number of reported cases has remained relatively constant in the last decade (approximately 100 cases annually). In 1980, 95 tetanus cases were reported from 33 states. In recent years, approximately two thirds of patients have been 50 years or older. The disease has occurred almost exclusively in persons who are unimmunized or inadequately immunized or whose immunization history is unknown.

In 1% to 20% of recent tetanus cases, no wound could be implicated. In 5% to 10% only minor acute wounds or chronic skin lesions, such as decubitus ulcers, were reported.

Neonatal tetanus occurs in infants born under conditions where infection is likely to mothers who are not adequately immunized. Immune pregnant women confer protection to their infants through transplacental maternal antibody.

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* Reprinted from *Morbidity and Mortality Weekly Report* (1981; 30:392–396, 401–407), Centers for Disease Control, Atlanta, Ga.

[†] Immunization Practices Advisory Committee: Diphtheria and tetanus toxoids and pertussis vaccine. *MMWR* 1977; 26: 401–402, 407.

Spores of *Clostridium tetani* are ubiquitous, and there is essentially no natural immunity to tetanus toxin. Thus, universal, primary immunization with subsequent maintenance of adequate antitoxin levels by means of appropriately timed boosters is necessary to protect all age groups. Tetanus toxoid is highly effective and generally induces protective levels of serum antitoxin which persist for at least 10 years after full immunization.

Pertussis

General use of standardized pertussis vaccine has resulted in a substantial reduction in cases and deaths from pertussis. However, the number of reported cases has changed relatively little during the last 10 years, when there has been an annual average of 2,300 cases and 10 fatalities. Accurate data do not exist since many cases go unrecognized and diagnostic tests for *Bordetella pertussis*—culture and direct-immunofluorescence assay—may be unavailable, difficult to perform, or incorrectly interpreted. Most reported illnesses from *B pertussis* occur in infants and young children; two thirds of reported deaths occur in children less than 1 year old. In older children and adults, who may serve as reservoirs of infection, the disease may result in nonspecific symptoms of bronchitis or a severe upper respiratory tract infection; pertussis may not be diagnosed because classic signs, especially the inspiratory whoop, are often absent.

Pertussis is highly communicable (attack rates of over 90% have been reported for unimmunized household contacts). It frequently is associated with complications, severe sequelae, and a high case-fatality ratio in infants. Vaccination early in life is essential.

Because the incidence and severity of pertussis decrease with age and because the vaccine may cause side effects and adverse reactions, routine pertussis immunization is neither needed nor recommended for persons 7 years old or older, except under unusual circumstances (see "Vaccine Usage").

Preparations used for immunization

Diphtheria and tetanus toxoids are prepared by formaldehyde treatment of the respective toxins and standardized for potency according to the regulations of the Food and Drug Administration. The Lf content (quantity of toxoid as assessed by flocculation) varies among the different products but does not necessarily reflect potency. The concentration of diphtheria toxoid in preparations intended for use in adults is lower than that of the pediatric formulation; this is to facilitate lower dosage because adverse reactions are thought to be related to both dose and age.

Tetanus toxoid is available in fluid and aluminum salt adsorbed forms. Although the rate of seroconversion is essentially equivalent with either form, adsorbed toxoids induce more persistent antitoxin titers and are therefore strongly recommended for both primary and booster injections.

Pertussis vaccine is a suspension of inactivated *B pertussis* bacteria. Potency is assayed by comparison with the US Standard Pertussis Vaccine in mouse protection tests. Each dose of vaccine contains an estimated 4 protective units.

The two toxoids and the pertussis vaccine are currently available in the United States singly and in various combinations:

1. Diphtheria and Tetanus Toxoids and Pertussis Vaccine Adsorbed (DTP) and Diphtheria and Tetanus Toxoids Adsorbed (For Pediatric Use) (DT) are combinations recommended for use in infants and children less than 7 years old.
2. Tetanus and Diphtheria Toxoids Adsorbed (For Adult Use) (Td) is a combined preparation recommended for use in persons 7 years old and older. This product contains a limited amount of diphtheria antigen (not more than 2 Lf per dose).
3. Single antigen products, such as Pertussis Vaccine Adsorbed (P).* Tetanus Toxoid and Tetanus Toxoid Adsorbed (T), and Diphtheria Toxoid Adsorbed (D), are available for situations where combined antigens should not be used.

Vaccine usage

Dosage and administration. These products should be injected according to the recommendations in the manufacturers' package inserts. Adsorbed preparations should be administered intramuscularly. Jet injection may be associated with more frequent local reactions.

Primary immunization.

Children 6 weeks through 6 years old (*up to the seventh birthday*) (*Table I*). One dose of DTP should be given intramuscularly on four occasions, the first 3 doses at 4- to 8-week intervals, beginning when the infant is approximately 6 weeks to 2 months of age. The fourth (reinforcing) dose is given approximately 1 year after the third to maintain adequate antibody levels for the ensuing preschool years. This dose is an integral part of the primary immunizing course. If a contraindication to pertussis vaccination exists, DT should be substituted for DTP (see "Precautions and Contraindications").

Children 7 years old and older and adults (*Table II*). A series of 3 doses of Td should be given intramuscularly; the second dose should be given 4 to 8 weeks after the first, and the third dose, 6 months to 1 year after the second. Td is the agent of choice for immunization of all patients 7 years old and older because side effects from higher doses of diphtheria toxoid are more common in older children and adults,

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* Distributed by the Michigan State Department of Public Health within that state, available for use outside Michigan under special circumstances, by consultation with that department.

TABLE I. Routine Diphtheria, Tetanus, and Pertussis Immunization Schedule Summary for Children Less than 7 Years Old, 1981*

Dose	Age/Interval	Product
Primary 1	6 weeks old or older	DTP**
Primary 2†	4–8 weeks after first dose	DTP
Primary 3†	4–8 weeks after second dose	DTP
Primary 4†	approximately 1 year after third dose	DTP
Booster	4–6 years old, prior to entering kindergarten or elementary school (not necessary if fourth primary immunizing dose administered after fourth birthday)	DTP
Additional boosters	every 10 years after last dose	Td

* Important details are in the text.
† Prolonging the interval does not require restarting series.
** DT, if pertussis vaccine is contraindicated.

TABLE II. Routine Diphtheria and Tetanus Immunization Schedule Summary for Persons 7 Years Old and Older, 1981*

Dose	Age/interval	Product
Primary 1	first visit	Td
Primary 2†	4–8 weeks after first dose	Td
Primary 3†	6 months–1 year after second dose	Td
Boosters	every 10 years after last dose	Td

* Important details are in the text.
† Prolonging the interval does not require restarting series.

and because pertussis in these age groups is infrequent and less severe than in infants and young children.

Interruption of primary immunization schedule. Interrupting the recommended schedule or delaying subsequent doses does not reduce the ultimate immunity. There is no need to restart a series regardless of the time elapsed between doses.

Booster immunization.

Children 4 through 6 years (up to the seventh birthday). Those who received all 4 primary immunizing doses before their fourth birthday should receive a single dose of DPT just before entering kindergarten or elementary school. This booster dose is not necessary if the fourth dose in the primary series was given after the fourth birthday.

Persons 7 years old and older. Tetanus toxoid should be given with diphtheria toxoid as Td every 10 years. If a dose is given sooner as part of wound management, the next booster is not needed for 10 years thereafter (see "Tetanus Prophylaxis in Wound Management"). More frequent boosters are not indicated and have been reported to result in an increased incidence and severity of adverse reactions.

Special considerations.

Persons recovering from tetanus or diphtheria. Tetanus or diphtheria infection often does not confer immunity; therefore active immunization should be initiated or completed during convalescence.

Children recovering from pertussis. Children who have recovered from bacteriologically confirmed pertussis need not receive more pertussis vaccine. However, without reliable laboratory confirmation, DTP immunization should be completed because presumptive pertussis may have been caused by agents like other Bordetella species or some viruses.

Neonatal tetanus prevention. An unimmunized pregnant woman whose delivery may occur under circumstances and in surroundings where the infant could become infected should be immunized against tetanus with Td. The risk of neonatal tetanus is minimal if a previously unimmunized mother has received at least two properly spaced doses of toxoid before delivery. Inadequately immunized pregnant women or those immunized more than 10 years previously should have a booster dose.

Pertussis immunization for persons 7 years old and older. Routine immunization against pertussis is not recommended for those 7 years old and older. In exceptional cases, such as persons with chronic pulmonary disease exposed to children with pertussis, or health-care personnel exposed to children with pertussis, or health-care personnel exposed during nosocomial or community outbreaks, a booster dose of adsorbed pertussis vaccine may be useful. A dose of 0.20 to 0.25 mL is most often used for adults. There is insufficient evidence to warrant routine pertussis vaccination of all hospital personnel.

Side effects and adverse reactions

Local reactions, generally erythema and induration with or without tenderness, are common after the administration of vaccines containing diphtheria, tetanus, or pertussis antigens. These reactions are most common following DTP (40% to 70% of doses) and are usually self-limited and require no therapy. A nodule may be palpable at the injection site of adsorbed products for several weeks. Abscess at the site of injection has been reported (6 to 10 per million doses*). Mild to moderate fever (38.0 to 40.4 C) occurs frequently in infants following DTP (about 50% of doses administered), generally within several hours of administration. The fever may persist for one to two days and is often accompanied by mild somnolence, vomiting, irritability, or malaise. Fever and other systemic symptoms are much less common following administration of preparations not containing pertussis vaccine.

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* In 1978, one lot of DTP released in the United States was found to be associated with sterile abcesses in 1 per 1,000 vaccinees and was subsequently withdrawn from use.

Arthus-type hypersensitivity reactions, characterized by severe local reactions (generally starting two to eight hours after an injection), may occur, particularly in persons who have received multiple prior boosters.

Rarely, severe systemic reactions such as generalized urticaria, anaphylaxis, or neurologic complications have been reported after receiving diphtheria, tetanus, and pertussis antigens. A few cases of peripheral neuropathy have been reported following tetanus toxoid administration, although a causal relationship has not been established.

Severe and occasionally fatal adverse events have been reported following administration of pertussis antigen-containing vaccines. It has not been possible to establish pertussis vaccine as the cause of these conditions as it is not known whether the rate of illness following receipt of pertussis vaccine exceeds the expected incidence rates of conditions such as seizures and encephalopathy in children in the age groups usually receiving DTP.

In one recently reported case-control study from England, children with serious neurologic disorders were more likely to have received DTP in the seven days preceding onset than were their age, sex, and neighborhood matched controls. However, pertussis vaccine could account for only a small proportion of cases of serious neurologic disorders in the population studied.

The exact frequency of severe events following pertussis vaccination is unknown; reported ranges for some are shown in the following list.* Should any of these events occur, further vaccination with pertussis antigen is contraindicated.

1. Collapse or shock-like state (60 to 300 per million doses).
2. Persistent screaming episodes—prolonged periods of peculiar crying or screaming which cannot be controlled by comforting the infant (70 to 2,000 per million).
3. High temperatures—40.5 C or greater (104.9 F or greater).
4. Isolated convulsion(s) with or without fever (40 to 700 per million).
5. Encephalopathy, with or without convulsions, manifested by a bulging fontanel, changes in the level of consciousness, or focal neurologic signs; the encephalopathy may lead to permanent neurologic deficit (1.3 to 30 per million).

Sudden infant death syndrome (SIDS) has been reported rarely following administration of DTP. A causal relationship between DTP immunization and SIDS has not been established. It should be recognized that the first three primary immunizing doses of DTP are usually administered to infants 2 to 6 months old and that approximately 85% of SIDS cases occur at ages 1 through 6 months, with the peak incidence being at 2 to 4 months. In countries where immunizations with pertussis antigen-containing vaccines are started at 6 months of age, the age distribution of SIDS is the same as that reported in the United States.

Comments on adverse reactions. When there is a marked reaction following DTP administration which is not in itself a contraindication to further pertussis vaccination, some health-care providers divide the remaining inoculations into multiple small doses. There has not been adequate study of the efficacy of such schedules by clinical or serologic means or of the effects on the subsequent frequency and severity of adverse reactions.

Reporting of adverse reactions temporally related to antigen administration by parents and patients should be encouraged. Reports of severe or unusual reactions should be forwarded by health-care providers to local and/or state health departments.

Precautions and contraindications

When an infant or child returns for the next dose in a series of DTP injections, the parent should be questioned about severe side effects or adverse reactions after the previous dose. If any of the following occurred, additional doses of pertussis antigen are contraindicated, and immunization should be completed with DT: collapse or shock, persistent screaming episodes, temperature 40.5 C or greater, convulsion(s) with or without accompanying fever, severe alterations of consciousness, generalized and/or focal neurologic signs, systemic allergic reactions, thrombocytopenia, or hemolytic anemia. Lesser reactions than these do not, in themselves, preclude the further use of DTP.

The presence of an evolving neurologic disorder contraindicates use of pertussis vaccine. A static neurologic condition like cerebral palsy or a family history of neurologic disease is not a contraindication to giving vaccines containing pertussis antigen.

The only contraindication to tetanus and diphtheria toxoids is a history of neurologic or severe hypersensitivity reaction following a previous dose. Local side effects alone do not preclude continued use. If a systemic reaction is suspected to represent allergic hypersensitivity, appropriate skin testing may be useful before discontinuing tetanus toxoid immunization altogether; this would be helpful in documenting immediate hypersensitivity although mild, nonspecific skin-test reactivity to tetanus toxoid appears to be fairly common. Most vaccines develop cutaneous delayed hypersensitivity to the toxoid.

Major local reactions generally beginning two to eight hours after injection have been reported in some adults, particularly those who have received frequent (eg, annual) doses of tetanus toxoid. Persons experiencing these severe reactions usually have very high serum tetanus antitoxin levels. They should not be given further routine or emergency booster doses of Td more frequently than every 10 years.

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* Reported risks of events following vaccination with DTP vary greatly, perhaps due to differences in (1) the baseline rate of an illness due to all other causes, (2) the criteria used to define adverse events, (3) the methods of collecting adverse reports, (4) the denominators and/or the clarity of their descriptions (eg, doses distributed, doses administered, or the number of children vaccinated); and (5) the many preparations used and populations studied in various countries.

If a contraindication to using tetanus toxoid-containing preparations exists, passive immunization against tetanus should be considered whenever an injury other than a clean, minor wound is sustained (see "Tetanus Prophylaxis in Wound Management").

A severe febrile illness is reason to defer routine vaccination. Minor illness without fever, such as a mild upper respiratory infection, should not be cause for postponing vaccination.

Immunosuppressive therapies including irradiation, corticosteroids, antimetabolites, alkylating agents, and cytotoxic drugs may reduce the immune response to vaccines. Routine vaccination should be deferred, if possible, while patients are receiving such therapy.

Diphtheria prophylaxis for case contacts

All household contacts of patients with suspected respiratory diphtheria—particularly persons previously unimmunized or inadequately immunized—should receive an injection of a diphtheria toxoid-containing preparation appropriate for their age and should be examined daily for seven days for evidence of disease. In addition, asymptomatic unimmunized or inadequately immunized household contacts should have prompt chemoprophylaxis with either intramuscular injection of benzathine penicillin (600,000 units for persons less than 6 years old and 1,200,000 units for those 6 years old and older) or a seven-day course of oral erythromycin. (Erythromycin may be slightly more effective, but intramuscular benzathine penicillin is preferred since it avoids problems of noncompliance with an oral drug regimen.) Primary immunization should be completed in persons who will have received fewer than the recommended number of doses as a result of the prophylaxis. Bacteriologic cultures before and after antibiotic prophylaxis may aid in management and follow-up. Identified untreated carriers of toxigenic *C diphtheriae* should receive antibiotics as recommended above for unimmunized household contacts. Penicillin-therapy failures should receive a seven- to ten-day course of oral erythromycin.

Controlled studies demonstrating the efficacy of chemoprophylaxis have not been done. Therefore, a few experts have recommended the use of equine diphtheria antitoxin in unimmunized contacts when close surveillance is impossible. However, the risk of allergic reaction to horse serum constrains prophylactic antitoxin use. Immediate hypersensitivity reactions occur in about 7% and serum sickness in 5% of adults receiving the recommended prophylactic dose of equine antitoxin. The risk of adverse reaction must be weighed against the small risk of diphtheria in an unimmunized household contact who receives chemoprophylaxis. Therefore, antitoxin is not generally recommended. If it is to be used, the usually recommended dose is 5,000 to 10,000 units intramuscularly—after appropriate testing for sensitivity—at a site separate from that of toxoid injection. The immune response to simultaneous diphtheria antitoxin and toxoid inoculation has not been adequately studied. These recommendations for household contacts of respiratory diphtheria cases also apply to other contacts with unusually intimate exposure.

Most recent cases of cutaneous diphtheria represent infections with nontoxigenic strains of *C diphtheriae.* Often a case, whether due to a toxigenic or nontoxigenic strain, is not definitely diagnosed for some time after onset. An infection highly suspected of being cutaneous diphtheria should be considered as having been caused by a toxigenic strain until proven otherwise. Recommendations for prophylaxis of close case contacts are the same as for respiratory diphtheria since cutaneous diphtheria may be more contagious for close contacts than is respiratory infection. If a cutaneous case is known to be due to a nontoxigenic strain, routine investigation or prophylaxis of contacts is not necessary.

Tetanus prophylaxis in wound management

Chemoprophylaxis against tetanus is neither practical nor useful in managing wounds; proper immunization plays the more important role. The need for active immunization, with or without passive immunization, depends on the condition of the wound and the patient's immunization history (Table III; see also "Precautions and Contraindications"). Rarely have cases of tetanus occurred in persons with a documented primary series of toxoid injections.

Available evidence indicates that complete pri-

TABLE III. Summary Guide to Tetanus Prophylaxis in Routine Wound Management, 1981[*]

History of Tetanus Immunization (doses)	Clean, Minor Wounds		All Other Wounds	
	Td[†]	TIG	Td[†]	TIG
Uncertain	Yes	No	Yes	Yes
0–1	Yes	No	Yes	Yes
2	Yes	No	Yes	No[**]
3 or more	No[††]	No	No[***]	No

[*] Important details are in the text.

[†] For children less than 7 years old DTP (DT, if pertussis vaccine is contraindicated) is preferred to tetanus toxoid alone. For persons 7 years old and older, Td is preferred to tetanus toxoid alone.

[**] None, if wound is more than 24 hours old.

[††] Yes, if more than 10 years since last dose.

[***] Yes, if more than 5 years since last dose. (More frequent boosters are not needed and can accentuate side effects.)

mary immunization with tetanus toxoid provides longlasting protection—10 years or more in most recipients. Consequently, after complete primary tetanus immunization, boosters—even for wound management—need be given only every 10 years unless the wound is "tetanus prone" (eg, a severe, deep puncture). In this case, a booster is appropriate if the patient has not received tetanus toxoid within the preceding 5 years. Antitoxin antibodies develop rapidly in persons who have previously received at least 2 doses of tetanus toxoid.

Persons who have not completed a full primary series of injections may require tetanus toxoid and passive immunization at the time of wound cleaning and debridement. It is not sufficient to ascertain only the interval since the most recent toxoid dose. A careful attempt should be made to determine whether a patient has previously completed primary immunization and, if not, how many doses have been given.

Td is the preferred preparation for active tetanus immunization in managing the wounds of patients 7 years old and older. This is to enhance diphtheria protection, since a large proportion of adults are susceptible. Thus, by taking advantage of acute health care visits, such as for wound management, some patients can be protected who otherwise would remain susceptible. For routine wound management in children less than 7 years old, DTP (or DT, if pertussis immunization is contraindicated) should be used instead of Td or tetanus toxoid alone. Primary immunization should ultimately be completed in persons documented to have received fewer than the recommended number of doses including those given as part of wound management (Tables I and II).

If passive immunization is needed, human tetanus immune globulin (TIG) is the product of choice. It provides longer protection than antitoxin of animal origin and causes few adverse reactions. The currently recommended prophylactic dose of TIG for wounds of average severity is 250 units intramuscularly. When tetanus toxoid and TIG are given concurrently, separate syringes and separate sites should be used. Most experts consider the use of adsorbed toxoid mandatory in this situation.

Pertussis prophylaxis for case contacts

Spread of pertussis can be limited by decreasing infectivity of the case and by protecting close contacts of that case. To shorten the period of infectivity, oral erythromycin is recommended for patients with clinical pertussis. Chemotherapy, however, probably does not affect the duration of severity of disease.

There are two possible approaches for protecting close contacts of patients with pertussis, such as children exposed in a household or day-care center—active immunization and chemoprophylaxis. Close contacts less than 7 years old who have not completed the 4-dose primary series of DTP injections or who have not received a dose of DTP within 3 years of exposure should be given a dose of vaccine. Children who will not have completed the primary series with this dose should receive further immunizations in accordance with the schedule in Table I.

The usefulness of chemoprophylaxis with oral erythromycin has never been demonstrated. It may be prudent to consider a seven- to ten-day course of erythromycin in close contacts less than 1 year old and unimmunized close contacts less than 7 years old.

Prophylactic postexposure passive immunization is not recommended. Studies have shown that use of human pertussis immune globulin alters neither the incidence nor the severity of the illness.

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An added complication... in the treatment of bacterial bronchitis*

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H. influenzae
S pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

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Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

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Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90).

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae*.[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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A series of articles on hypertension, prepared under the auspices of the American Heart Association, New York State Affiliate, Inc.

Hypertension: Current Concepts

LIONEL U. MAILLOUX, M.D., Editor

Adolescent Hypertension

*A new dimension**

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It is generally recognized that the current high incidence of coronary heart disease, cerebrovascular accidents, and congestive heart failure in the United States is caused in part by essential hypertension. Evidence that control of hypertension will reduce such morbid events by the recognition and reduction of cardiovascular events and regular treatment of mild hypertension is increasing.[1] It is logical to assume that prevention of these serious complications would be even more successful if hypertension could be controlled in its earlier phases.

We have learned from necropsy studies that coronary artery disease begins in early childhood.[2] From our clinical studies, along with others, we also believe essential hypertension begins early in life.[3] The early onset of essential hypertension is indicated by the high order of "tracking" of blood pressure levels; that is, children tend to remain in their ranks of blood pressure levels relative to their peers.[4] All these findings support the idea that early cardiovascular disease prevention is important. However, though we know a great deal about the effects of essential hypertension and its clinical, physiologic, and biochemical parameters at its end stage, we really know little of the early phase of essential hypertension—the subclinical, silent phase.

Concepts about the nature of hypertension in children are changing. Early reports held that hypertension in childhood is secondary, with essential hypertension occurring only rarely.[5] More recent studies, including our own observations, indicate that hypertension in children often does not show an underlying cause and that children ranking high in blood pressure among their peers are likely to continue this high ranking. Studies of young adults in the United States Navy[6] and adolescents from Evans County, who were followed for many years, indicate that high levels of blood pressure in adolescence are closely related to hypertension in adulthood.[7] These observations contribute to the concept that essential hypertension begins in childhood.

In the general population, blood pressure levels rise with age during childhood until an adult stature is reached (18 to 20 years). Blood pressure then levels off, but in later years systolic pressure increases in an exponential manner.

Bogalusa heart study

As part of a comprehensive program to assess cardiovascular risk factor variables in children, the Bogalusa Heart Study was begun as a prospective investigation of the distributions, interrelationships, and course-over-time of risk factor variables in children.[8] Particular attention is given to methods for obtaining reproducible blood pressure levels and their changes over time. With an interest in studying relationships between genetic and environmental factors of the development of cardiovascular disease, a dietary study was incorporated into the program.[9]

Our studies are being conducted in a semirural community, Bogalusa, Louisiana, with a biracial population of approximately 22,000, with 5,000 children, one third of whom are black. Selected anthropometric measurements, serum lipid, and lipoprotein and blood pressure levels are being obtained using trained observers, registered and licensed nurses, and following specified protocols. Both the mercury sphygmomanometer and an automatic blood pressure recorder are being used to

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document indirect blood pressure measurements. The first, fourth, and fifth Korotkoff phases are recorded. Additional observations include dietary studies, smoking behavior, certain personality traits, and type A-B behavior.

Levels of blood pressure in children

Figure 1 provides the selected percentiles of blood pressure levels observed on children from 6 months to 17 years of age. In these observations, slightly higher blood pressures were obtained in black children, particularly at school age, and the 95th percentile. Little differences in levels are seen between boys and girls until adolescence, when levels become higher in boys. In childhood, body mass and height are strong correlates of blood pressure levels.[10] Since children vary considerably in height and weight at a given age, we explored the relationship of age, weight, and height to blood pressure. Usually blood pressure levels are provided relative to age. As we note from our cross-sectional studies, systolic blood pressure levels show an increment of 1.2 to 1.7 mm Hg per year, and diastolic, fourth-phase blood pressure levels show an increment of approximately 1 mm Hg. We also observe that after adjusting for the effects of height and weight on blood pressure levels, age appears to have little relationship. For example, Figure 2 shows the close relationship of blood pres-

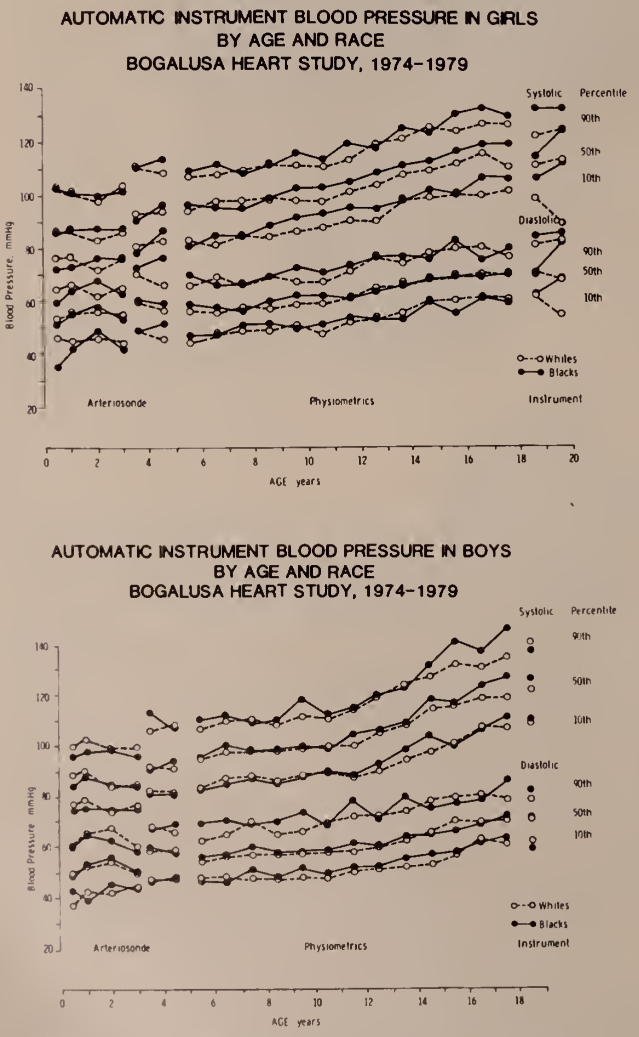


FIGURE 1. Blood pressure level of infants, children, and young adults, age 6 months to 17 years, as recorded by automatic instrument. Since recording levels of infants requires augmentation by an instrument, for continuity, levels are shown as obtained by the automatic instrument.

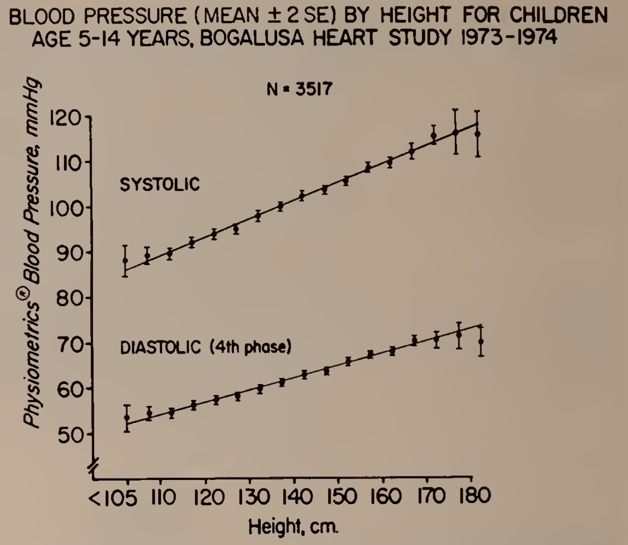


FIGURE 2. Indirect blood pressure measurements related to the height of children. (From A. W. Voors et al, *Pediatr Clin North Am* 25(1):21, 1978, with permission.)

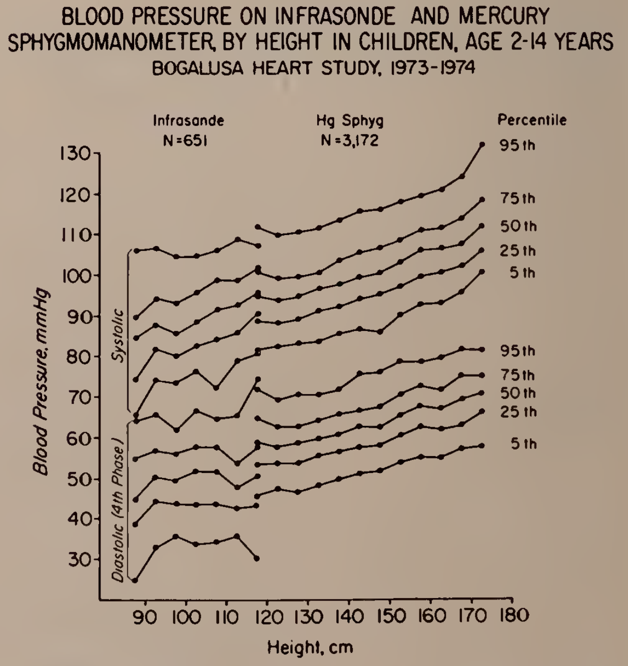
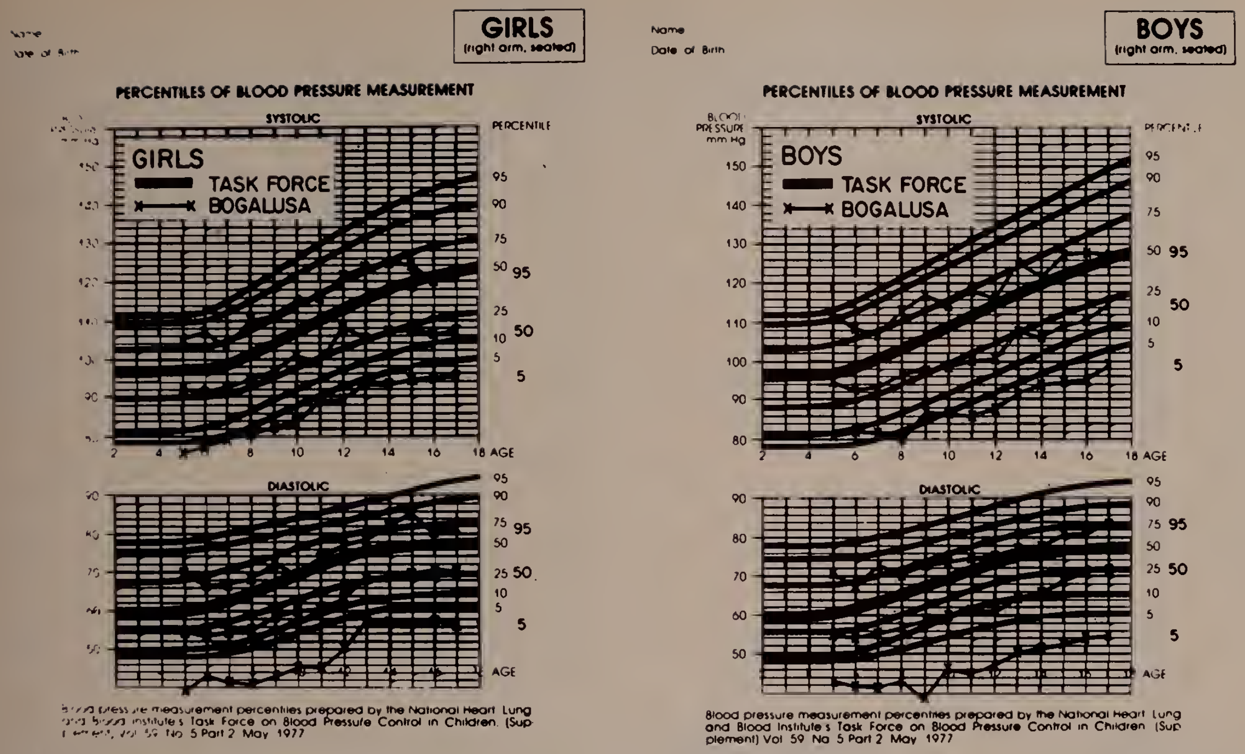


FIGURE 3. Selected percentiles of indirect blood pressure of children related to their height, age 2½ to 14 years. (From A. W. Voors et al, *Pract Cardiol* 3:29, May 1977, with permission.)



Blood pressure measurement percentiles prepared by the National Heart Lung and Blood Institute's Task Force on Blood Pressure Control in Children. (Supplement) Vol 59 No 5 Part 2 May 1977

Blood pressure measurement percentiles prepared by the National Heart Lung and Blood Institute's Task Force on Blood Pressure Control in Children (Supplement) Vol 59 No 5 Part 2 May 1977

FIGURE 4. Comparison of selected percentiles of indirect blood pressure recorded in Bogalusa with the NIH Task Force Report.[11]

sure levels and the height of the child. Similarly, a linear relationship is observed with the log of weight. Since weight is more variable than height as a reference standard, we feel blood pressure levels for a growing child should be related to height, as shown in Figure 3.

A major problem still exists in the method of obtaining blood pressure. For example, Figure 4 shows a comparison of selected percentiles obtained from our studies related to those published as the NIH Task Force Report.[11] Considerable differences are noted, and we believe that the Task Force values are too high for general recommendations in studying children. We prefer to measure blood pressures under relaxed conditions, which are more reproducible. Such levels can be obtained in an unhurried manner by a nurse in a physician's office. Resting levels are of particular importance in obtaining consistent levels in serial examinations of blood pressures of children, especially when considering treatment.

Definition of hypertension

Another major problem concerns the definition of hypertension in children. At this time, it is virtually impossible to arrive at a precise or even clinically satisfactory definition of hypertension in youth. By what criteria should hypertension be defined? Should an arbitrary level based on the experience in adulthood be used? As shown in Figure 5, a level of 130/85 mm Hg has been suggested for children below age 10,[1,2] while others suggest specific percentiles like the 95th percentile. In our population study, these criteria would designate only 1% to 2% of the children as hypertensive. Such cut points and percentiles or standard deviations are certainly arbitrary. Perhaps most useful are percentile levels as found in the general population. However, as noted above, it is extremely important that the use of percentiles requires comparable methodology. We feel that a child under relaxed conditions with blood pressure levels that track with serial measurements at or above the 90th percentile stands a pretty good chance later in life of becoming an adult with hypertension. This is especially true if the individual has a positive family history and his high percentile persists over time. Our studies note tracking just as high in five-year-olds as in the older school-age children, so that persistence at elevated levels is important.

Intervention on high levels of blood pressure in a general population of children

Eventually, decisions have to be made as to when to begin intervention—preventive or therapeutic measures. Unfortunately, no set rules or guidelines can be established now. The observation on tracking and predictability of basal blood pressure suggests that essential hypertension has its origin in youth and likely already is existing in a significant number of children who are presumed to be healthy.

In an effort to investigate approaches to inter-

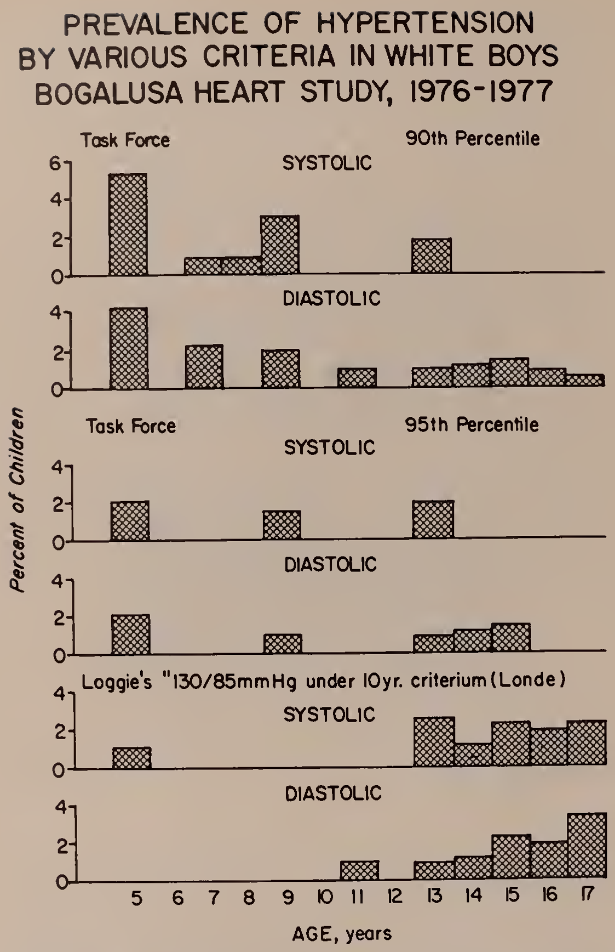


FIGURE 5. Percent of white boys in Bogalusa Heart Study estimated to be high, based on various criteria—NIH Task Force 90th percentile, 95th percentile, and a cut-point of 130/85.[12]

vention on early hypertension, we undertook a program to develop a model of intervention,[13] an attempt to prevent early essential hypertension in a total population of children. Since the studies in Bogalusa are descriptive of the early natural history of coronary artery disease and essential hypertension and we do not want to tamper with the base population, we selected the neighboring rural community, Franklinton, Louisiana, some 20 miles from Bogalusa. Franklinton has a population of about 9,000, half of whom are black. The program was developed largely as a feasibility study and a first approximation of how we might treat children who we project to have a high risk of developing adult essential hypertension.

Several major questions were posed for the study: Can we lower or modulate levels of blood pressure by usual clinical measures? Can we alter sodium intake and perhaps reduce the weight of the overweight children?

The study was designed in three phases. The first phase included screening all of the children in the community and noting distribution and percentiles of blood pressure levels for that population. Essentially, these were found to be slightly higher, 1 to 2 mm Hg, but similar to those found earlier in Bogalusa. The second phase included performing serial examinations on a selected sample of children at or above the 90th percentile. These children were reexamined on three separate occasions. An additional group in the midrange of blood pressure levels was selected as a comparison group. From the second phase, the group of children persisting at the 90th percentile and at the midrange were selected. The third phase was comprised of the treatment phase on one half of the 100 selected children persisting in the high range. This consisted of both primary and secondary treatment, including drugs at low-dosage levels.

Participation in the study was excellent, with cooperation at all levels. In our observations, after six months following initiation of treatment, children have responded with blood pressure levels reading in the midrange level. This type of study involves cooperation of a large number of people within the community—physicians, parents, school staff, school lunch personnel, grocery stores, and restaurants. One of the most difficult things we observed is resistance to change of life-style and dietary habits.

This beginning model of intervention should provide others with an opportunity to improve this approach and eventually to develop methods useful for the physician's care of a single child or for a community-wide program. These studies are exciting and may provide our future approach to preventing hypertension in the general population.

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Acknowledgment. The Bogalusa Heart Study is a joint effort of many people. A special thanks is given to the children of Bogalusa and Franklinton and to their parents, without whose cooperation this study would not have been possible.

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Weight lifting poses danger to teens, AAP says

Teenagers could injure themselves through weight lifting, but weight training (a physical conditioning exercise) is reasonably safe for young adults, according to a new statement from the American Academy of Pediatrics (AAP).

The difference between these two methods of exercise is outlined in a statement written by the Academy's Committee on Sports Medicine.

In weight training, the athlete repetitively lifts weights which are lighter than his or her maximum capability. The exercise is an effective means of improving athletic performance in virtually all sports when done properly and, because it uses lighter weights, can be endorsed for teenagers, the Academy says.

In contrast, weight lifting is a competitive sport in which the athlete trys to lift the maximum weight of which he or she is capable and can only be done one time without an interval for rest.

Young people who lift weights "are extremely competitive and want to outdo their peers; therefore, they are prone to attempt lifts beyond their ability," says the Academy. Preadolescents should not participate in weight lifting, and teenagers who do so should be properly supervised.

The AAP points out that, according to the Consumer Product Safety Commission, 32,512 weight-lifting injuries required visits to hospital emergency rooms in 1979. Half of these injuries occurred to 10- to 19-year-olds, and the majority happened at home.

Injuries suffered by teenagers who lift weights include minor sprains and strains, fractures of longer bones, shoulder, low back and knee injuries, and "weight lifter's blackout," caused by a temporary decrease in blood reaching the brain.

A temporary but significant increase in blood pressure can also occur with weight training, making both activities dangerous to teenagers with poor cardiovascular systems or high blood pressure, the Academy says.

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INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning.)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in: 1) bronchial asthma; 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE: Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure. Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e.*, that of supporting the strength of myocardial contractions). In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect. The effects of propranolol and digitalis are additive in depressing AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure. In rare instances, this has been observed during propranolol therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over.

> IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy. Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications.

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure. Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. This is another reason for withdrawing propranolol slowly. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli. For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence. However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, *e.g.*, isoproterenol or levarterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in restarting and maintaining the heart beat has also been reported.

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e.g.*, CHRONIC BRONCHITIS, EMPHYSEMA), propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA. Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia. This is especially important to keep in mind in patients with labile diabetes. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established. Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit. Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers: Thiazides appear in breast milk. If the use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered. The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity. Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (e.g., increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content.

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular:* bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type; thrombocytopenic purpura.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous: reversible alopecia. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

Hydrochlorothiazide: *Gastrointestinal:* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis.

Central Nervous System: dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular: orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions.

Other: hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

HOW SUPPLIED: —Each hexagonal-shaped, off-white, scored INDERIDE 40/25 tablet is embossed with an "I" and imprinted with "INDERIDE 40/25," contains 40 mg propranolol hydrochloride (INDERAL®) and 25 mg hydrochlorothiazide, in bottles of 100 (NDC 0046-0484-81) and 1,000 (NDC 0046-0484-91). Also in unit dose package of 100 (NDC 0046-0484-99).

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The Impacted Third Molar

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Physicians, as well as dentists, are often confronted with patients who appear with subjective symptoms related to the oral cavity and/or the oral pharynx. The symptoms may be localized or referred. However, on physical examination, one may not be able to determine their etiology. The cardinal signs of inflammation—rubor, calor, dolor, and tumor—may not always be present, either singularly or in combination. Therefore, it may be difficult to explain the patient's complaint.

The physician must be cognizant of the impacted third molar as the etiology of many referred symptoms, such as sore throat, lymphadenopathy, sinus pain, pericoronal infections, and Vincent's infection. Impacted teeth have been described by some authors as the etiologic factor in reflex pain, neuralgias, nervous disorders, neuritis, tinnitus, and muscle spasms of the head and neck.

Utilizing an adequate light source, inspection that includes palpation and percussion will aid the physician in his or her attempt to rule out the impacted third molar as the etiology of these pervasive symptoms. While these symptoms are more common in the second and third decades, no patient who has not had these unerupted teeth removed is immune to problems, and the impacted third molar should be suspect. Developing pathology may be insidious and without symptomatology. Subjective symptoms that cause the patient to seek the services of the physician or dentist may only occur when inflammation is present. This may be long after there has been extensive bone or tooth pathology (Figs 1,2).

The removal of an impacted tooth is a common surgical procedure for the oral surgeon. Removal, however, is not without problems and should not be undertaken by the untrained surgeon. Removal of impacted teeth requires training, clinical judgment, and experience if problems are to be avoided. As with any surgical procedure, there may exist a difference of opinion as to why, where, and how impacted teeth should be removed. Each opinion, however, should be based on sound surgical and physiologic principles.

With the advent of consumerism, the oral surgeon must discuss in detail and in lay terminology the doctrine of informed consent prior to removal of the impacted third molar. Alternate treatment plans, complications, and prognosis must be noted on the patient's record to prevent a possible future legal problem.

Complete bony impactions can be retained when they are free from symptoms and are radiographically negative, provided they are periodically examined. Dentigerous cyst formation around impacted teeth is not infrequent; when formed, these cysts will grow extensively (Figs 1,2). Some of them may be potential ameloblastomas.

FIGURE 1. Preoperative panographic x-ray revealing a lytic lesion of ascending ramus and body of mandible.

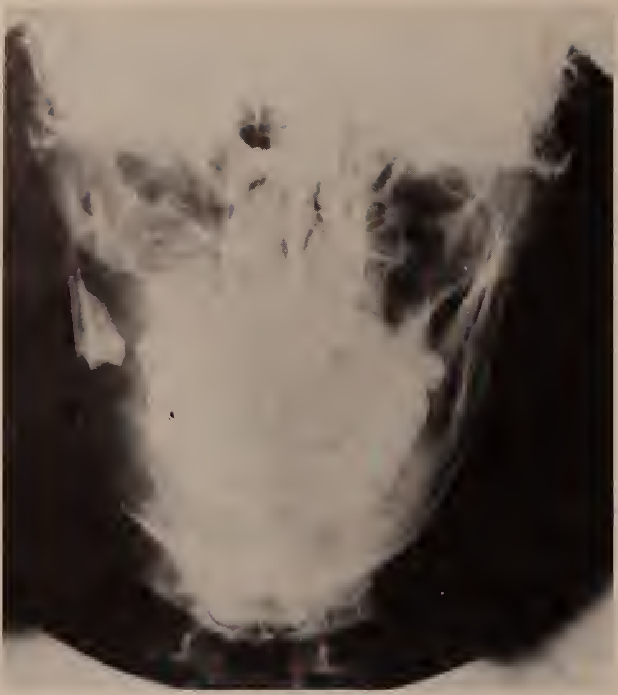

FIGURE 2. Preoperative posteroanterior x-ray revealing lytic lesion of mandible.

There may be a difference of opinion among oral surgeons as to when impacted teeth should be removed. Removal of the asymptomatic tooth is an elective surgical procedure. It can be done by whatever operative technique and anesthesia the surgeon prefers. The vast majority of these cases are treated on an ambulatory basis, whether surgery is performed under local anesthesia, local anesthesia with intravenous or inhalation sedation, or general anesthesia. There are patients who, for medical, surgical, or management reasons, must be hospitalized. The oral surgeon, in conjunction with the physician, can utilize the hospital's facilities to better care for the patient.

Summary

Impacted teeth may be the etiology of localized or referred symptoms in or around the oral cavity, oral pharynx, or head and neck. There may be no localizing signs or symptoms in the third molar region, although development of pathology may be insidious and extensive. When taking a history, if the patient denies removal of the third molar and the tooth is not clinically evident, a consultation with the oral surgeon may be in order to rule out the impacted tooth as the etiology of the chief complaint.

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Advice for canker sore sufferers

People who suffer from canker sores (known medically as aphthous stomatitis) should be careful not to abrade the sensitive mucous membrane lining the mouth, according to investigators at the National Institute of Dental Research (NIDR), whose work is reported in the February 12 issue of *The Journal of the American Medical Association.*

In their study of patients who are susceptible to canker sores, Dr. David Wray and his NIDR colleagues found that the painful oral ulcers can be triggered by mechanical injury to the mucosal tissue inside the mouth.

To avoid such injury, they advise care in the use of hardbristled toothbrushes for people who are prone to develop canker sores.

These people also should avoid hard, sharp foods and objects that can cut or scrape oral tissue, they said.

Dr. Wray and colleagues at the Western Infirmary in Glasgow, Scotland also have reported that nutritional deficiencies are associated with the formation of canker sores in some people, and that correction of these deficiencies resulted in the sores clearing up in many instances.

They found deficiencies of iron or of folic acid or of vitamin B_{12} alone or in combination in patients with recurrent canker sores. Of the 39 patients who were followed up for at least six months to assess their response to vitamin or iron replacement therapy, 23 showed a remission of ulcers, 11 improved, and five were not helped.

In still other studies Dr. Wray and investigators at the New York Blood Center found that recurrent aphthous stomatitis has a tendency to occur in families.

Electrocardiograms of the Month

Montefiore Hospital and Medical Center
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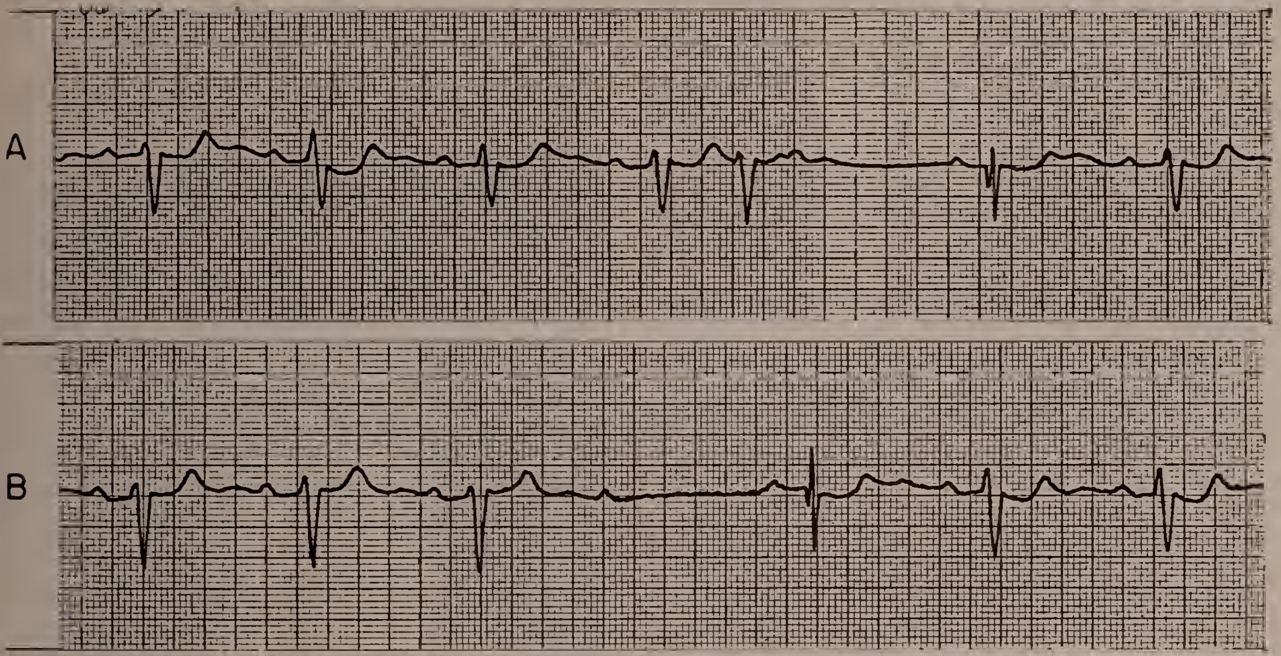
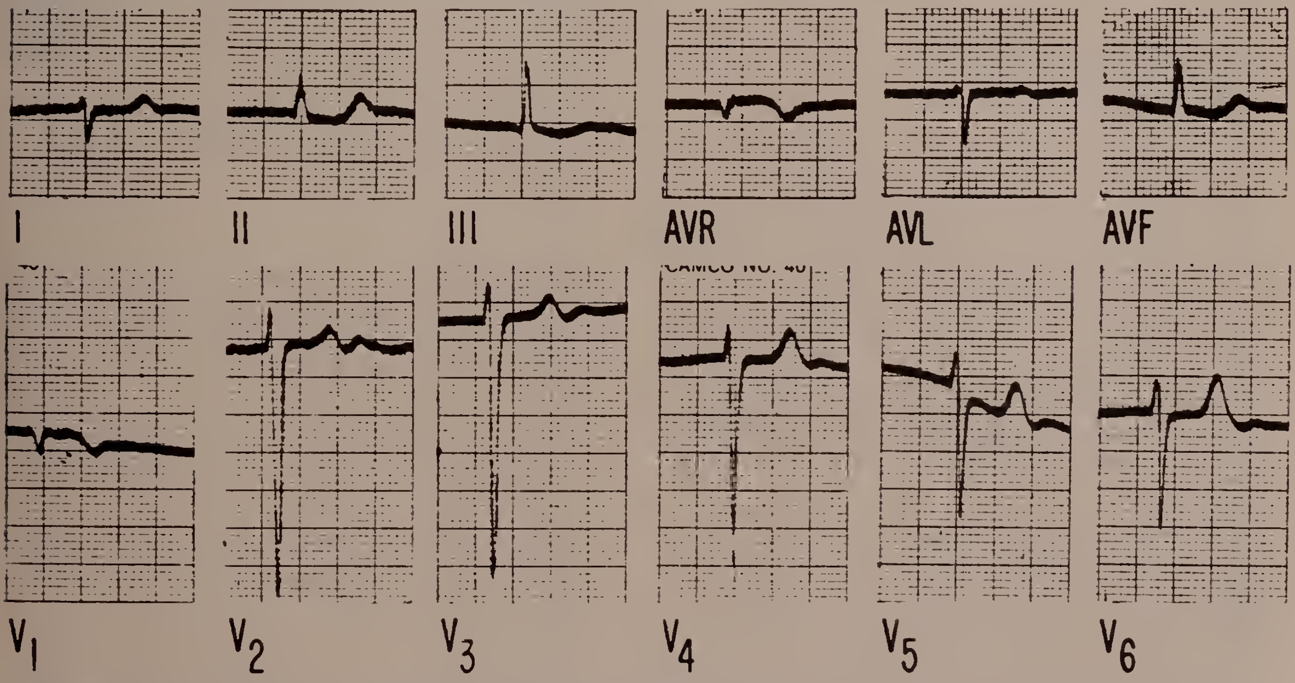


QUESTION 347. Two representative strips from a Holter monitor recording. The patient was a 78-year-old female with a history of syncope. What is the interpretation?



QUESTION 348. Patient has a history of rheumatic heart disease for many years with recent onset of congestive heart failure. She has been in atrial fibrillation and was receiving digoxin. What is the interpretation of this tracing?

Electrocardiograms of the Month

ELUCIDATION

Answer 347. Strip A shows sinus bradycardia with a rate of 53/min. The PR interval is 0.28 sec, the QRS 0.12 sec. QRS 5 is premature and similar to the other ventricular complexes. A P wave follows the QRS and is on time, indicating that the sinus rhythm is not interrupted by the premature depolarization. QRS 5 is a junctional premature depolarization. The P wave following it is blocked because the distal conduction tissue is refractory.

Beat 6 is preceded by a long pause. It is only 0.09 sec in duration and has a different configuration than the other QRS complexes. The intraventricular conduction defect is rate dependent.

In strip B, the rhythm is sinus bradycardia at a rate of 53/min. The PR interval is 0.28 sec. The fourth P wave is not followed by a QRS. The interval between QRS 3 and 4 is 2.2 sec. In strip A, the interval between beats 4 and 6, including premature beat 5, is also 2.2 sec. QRS 4, after the pause, shows improved conduction.

The mechanism for the blocked P wave in strip A and B is the same. In strip A, a junctional premature depolarization causes the following P wave to be blocked. In strip B, the junctional premature depolarization is concealed. It does not depolarize the ventricle and no premature QRS appears. However, A-V conduction is blocked, causing the nonconducted P wave.

Answer 348. No P waves are seen; the patient is in atrial fibrillation. The mean electrical axis in the frontal plane is markedly to the right at +115°. Deep S waves are present in V_2 to V_6. There is little change in the height of the R wave in these leads. Prominent U waves are present in V_2 and V_3.

The right axis deviation suggests right ventricular hypertrophy. In the absence of a tall R wave in V_1, this diagnosis cannot be substantiated. The deep S waves in the V leads suggest left ventricular hypertrophy. Although the R waves fail to increase in V_2 to V_6, the R/S ratio does increase as the S waves get progressively smaller. These findings are due to clockwise rotation of the heart and not to myocardial infarction. The apparent ST depression in V_5 is due to baseline artifact.

This patient had mitral stenosis and insufficiency with biventricular hypertrophy. The electrocardiogram is compatible with these diagnoses but not specific.

New theory about cause of atherosclerosis

A reversal of blood flow at certain points in human arteries has been offered by several investigators as an explanation of how and why atherosclerosis begins, according to a report in the Medical News section of the May 28 *Journal of the American Medical Association.*

British physician Christopher P. L. Wood, M.B., used an advanced ultrasonic scanner at Bowman Gray School of Medicine, Winston-Salem, N.C., to reveal an area of reversed blood flow at the carotid bifurcation, the point in the neck where the common carotid artery divides into the external and internal carotid arteries. Blood flowing up through the carotid arteries provides nourishment to the brain.

Wood's findings demonstrated for the first time in the living body the reverse flow phenomenon noted by another investigator, Frank LoGerfo, M.D., at Boston University School of Medicine, in studies using Plexiglas models of the carotid arteries. Blood flow divides just beyond the carotid bifurcation, these researchers found, with some of the blood continuing in a straight line up the internal and external carotids and the rest curling back toward the common carotid to go in the opposite direction.

The suspicion that flow reversal contributes to atherosclerosis is based on indirect evidence, Wood points out. "This region of disturbed flow is precisely where atherosclerosis starts in the carotid artery." He has also demonstrated the reversed flow near the bifurcation of the femoral artery in the leg, another site of atherosclerosis. Further support comes from cadaver studies by Christopher Zarins, M.D., at the University of Chicago, showing atherosclerotic deposits in the carotid artery walls at the bifurcation, with little or no deposits found beyond this area.

The reversed layer of blood moves very slowly, according to LoGerfo. "Under the right conditions you can get an area of virtual stagnation" where blood platelets might collect and damage the artery walls, initiating the atherosclerotic process, he speculates.

In an alternate explanation, Colin Gerald Caro, M.B., B.Ch., of Imperial College, London, argues that the artery walls become damaged because the nearly stagnant blood at the bifurcation is depleted of nutrients.

Wood, plans a three- to four-year prospective study using repeated ultrasonic examinations to look for a relationship between the blood flow reversal phenomenon and the onset of atherosclerosis in man.

Radiologic Problem of the Month

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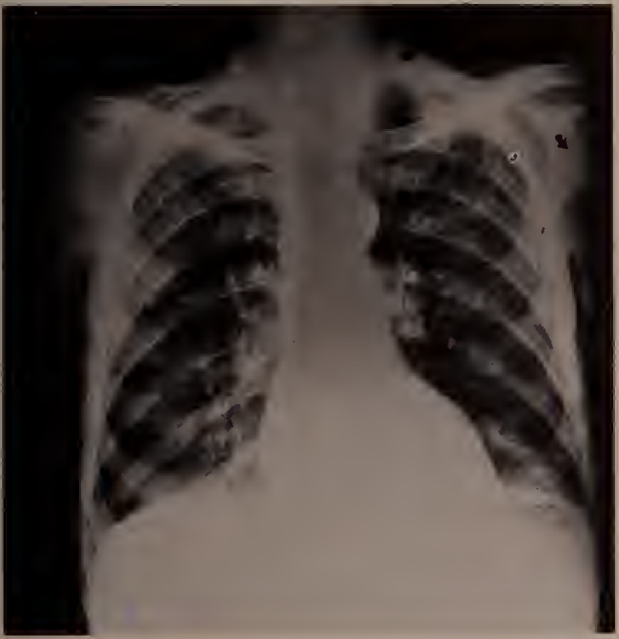
Bibasal Infiltrates in the Lungs



A 54-year-old man was admitted for a complaint of exertional dyspnea of 3 months' duration.

Elucidation

The posteroanterior view of the chest reveals increased reticular markings in both lower zones (Fig). The domes of the diaphragm are fuzzy and ill-defined. No hilar adenopathy is noted and the cardiovascular silhouette is within normal limits. Small calcific densities are noted in the soft tissues of the left side of the neck and overlying both shoulders (arrows). The combination of soft-tissue calcifications and bibasal interstitial type of infiltrates should suggest the diagnosis of progressive systemic sclerosis (PSS). The term PSS was used by Goetz in 1945 to indicate that scleroderma is a generalized disease and belongs to the group of collagen disorders.[1] Characteristic changes occur in the skin (scleroderma), synovium, and certain internal organs including the gastrointestinal tract, heart, lung, and kidney. Although the disorder may appear to be confined to the integument in most instances, a progressive involvement of vital organs leads to death. The combination of calcinosis and scleroderma is referred to as Thibierge-Weissenbach syndrome.[1] Incomplete expressions of this entity exist and periods of spontaneous remission and exacerbation are observed. PSS is twice as common in women as in men and presents itself usually in the fourth and fifth decades of life.[1] The clinical manifestations reflect the system involved. Dysphagia, dyspnea, Raynaud's phenomenon, and abdominal distension are some of the common symptoms.

Pathologically, the sequelae of events include edema followed by proliferation of connective tissue, sclerosis of collagen bundles, and atrophy, irrespective of the organ involved. In the lung, diffuse interstitial fibrosis is observed and electron microscopy reveals thickening of basement membranes of alveoli, small arteries, and veins.[2]

Radiologically, the lungs may not show any gross findings in early stages. As the disease progresses, gradual loss of volume of the lungs is observed followed by increased reticular markings at the bases. These progress to a reticulonodular pattern gradually creeping up to the upper lobes. Small cysts measuring up to 1 cm in diameter may be identified at the periphery which may lead to spontaneous pneumothorax by rupturing into the pleural cavity. Minor degrees of pleural thickening may be present but gross effusion is extremely rare.[1–3] Since the esophagus is also involved, in advanced cases, the patient may have aspiration pneumonia. Other thoracic manifestations include cardiomegaly, erosion of superior margins of ribs, and soft-tissue calcifications.

In the differential diagnosis of bibasal infiltrates of lung, chronic bronchiectasis, chronic aspiration pneumonia, other collagen disorders including rheumatoid arthritis, lymphangitic carcinomatosis, inhalational disorders, eg, pneumoconiosis, histiocytosis, and finally idiopathic pulmonary fibrosis (Hamman-Rich syndrome) should be considered. Occasionally, overlap of other collagen disorders such as systemic lupus erythematosis and rheumatoid arthritis may occur.[2] Proper history, scleroderma, radiologic identification of soft-tissue calcification, and investigation of the gastrointestinal tract, specifically the esophagus for motility changes, would aid in confirming the diagnosis of PSS. This patient developed dysphagia with esophageal involvement, and skin biopsy showed typical changes of scleroderma.

Diagnosis

Progressive systemic sclerosis (diffuse scleroderma)

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Link between cigarette smoking and respiratory tract illness in young adults documented

Young smokers who have not yet developed chronic bronchitis were found in a Boston study to be more susceptible to lower respiratory tract illness and coughs of longer duration than nonsmokers, according to this week's *Journal of the American Medical Association.*

The investigators, led by Mark D. Aronson, M.D., of Beth Israel Hospital in Boston, also found that cigarette smoking nearly doubled the risk of developing an acute respiratory tract illness in young women at least 16 years old.

The 506 smokers in the study of 867 men and women, who were seen by physicians at two health maintenance organizations and in two hospital-based practices, had a greater likelihood of having a lower respiratory tract illness (characterized by phlegm from the chest or chest pain) and a cough lasting an average of nine days than did those who did not smoke.

Abnormal breathing sounds — particularly wheezing — (determined by listening to the chest with a stethoscope) also were more common among the smokers.

Smoking, the *JAMA* authors conclude, seems to make an important contribution to the more than 100 million days of bed disability produced each year by acute respiratory tract illness. This knowledge, they say, may serve to stimulate employers to create antismoking programs and to discourage more young people from starting to smoke.

Toxic Shock Syndrome in the Male

A clinical reminder

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Toxic shock syndrome (TSS) was described by Todd et al in 1978,[1] although an illness that may have been identical was reported over 50 years ago.[2] Shortly after the 1978 report, clusters of cases in menstruating women began to be noted throughout the country.[3] Within two years, publicity in the medical and lay press had made TSS widely known.

Most recent reports of TSS have dealt primarily with its association with tampon use.[4-6] As a result, physicians may not be alert to the possibility of the disease in males. We wish to report two cases illustrating the spectrum of TSS in the male.

Case reports

Case No. 1. This patient had a two-day history of headache and fever. On the morning of admission, he began having profuse watery diarrhea, with more severe headache and delirium.

Initial examination revealed a lethargic, disoriented, febrile 13-year-old boy with orthostatic hypotension. Marked conjunctival injection was present, with a purulent exudate on the eyelids. An erythematous, macular eruption was present on the face, trunk, and buttocks. No other significant findings were evident.

Significant laboratory results included the following: white blood cell count 13,600/mm^3 (5% metamyelocytes, 30% band neutrophils, 62% segmented neutrophils, 3% lymphocytes); normal hemoglobin, hematocrit, and platelet count; urea nitrogen, 28 mg/dL; sodium, 129 mEq/L; potassium, 3.4 mEq/L; chloride, 99 mEq/L; bicarbonate, 17 mEq/L; minimal liver dysfunction with bilirubin of 2.6 mg/dL (0.6 mg/dL direct reacting); urine specific gravity 1.039 with 3+ protein, 6–10 white blood cells and 1–3 red blood cells per high-powered field; acellular spinal fluid with normal glucose and protein; and negative stool leukocytes and urine darkfield examinations.

Intravenous fluids were begun. After cultures of blood, urine, spinal fluid, stool, and nasopharyngeal secretions were obtained, treatment with ampicillin and kanamycin was started.

Fever and watery diarrhea continued for the first two hospital days. By the third day, the rash had progressed to a confluent erythroderma. Large volumes of intravenous fluids were continued. All cultures were negative, except for a heavy growth of a coagulase-positive, beta-hemolytic *Staphylococcus aureus* from the nasopharynx. Nafcillin was added to the antibiotic regimen.

By the fifth hospital day, the rash was fading and the diarrhea had stopped. Parenteral fluids and antibiotics were discontinued, and the patient was discharged on the sixth hospital day.

One week following discharge, marked desquamation was evident. Five weeks following discharge, he was completely well. Final bacterial and viral culture reports were negative. Paired sera showed no diagnostic rises in titers for the common exanthematous viruses or evidence of leptospirosis.

Case No. 2. This patient had a three-day history of increasing inflammation surrounding a blister on his right foot, which was being treated with oral erythromycin. On the evening of admission, he suddenly became febrile and delirious and developed shaking chills and muscular weakness.

The admission examination revealed an agitated 14-year-old boy who was febrile and had postural changes. An abscess was present on the sole of the right foot and a faint, diffuse erythema was found on the face. Marked abdominal tenderness was detected, but there were no other findings.

Significant laboratory findings included the following: white blood cell count 6,300/mm^3 (83% segmented neutrophils, 3% band neutrophils, 6% lymphocytes, 8% monocytes), with normal hematocrit and hemoglobin; normal liver function studies; microscopic hematuria with otherwise normal urinalysis; *S aureus* was grown from the abscess, but multiple blood cultures were negative.

He was treated with large volumes of intravenous fluids and with intravenous ampicillin and gentamicin. Within 24 hours, he was clinically improved, with normal blood pressure and decreased abdominal pain. Oral fluids were begun. He was discharged shortly afterward, receiving oral dicloxacillin. On reexamination one week later, he was completely well and his blood count and urinalysis were normal.

Comment

Toxic shock syndrome (TSS) is an acute, severe illness with a mortality rate that may approach 10% to 15%. Commonly accepted epidemiologic criteria for the diagnosis of TSS include fever, rash, desquamation, shock, and involvement of three or more organ systems (gastrointestinal, musculoskeletal, mucous membrane, renal, hepatic, hematologic, central nervous). Most cases are associated with focal staphylococcal infection (vaginitis, empyema, abscess, etc), but systemic infection (i.e., septicemia) is not a feature. Presumably, the syndrome is caused by a staphylococcal toxin. A possibly causative toxin has been isolated from many strains of *Staphylococcus* isolated from patients with TSS.[7]

The original description of TSS by Todd et al included cases in seven children, of which three were boys.[1] One of these boys had *S aureus* isolated from an abscess, while another grew the organism from empyema drainage and a nasopharyngeal culture. The third boy (who was Case No. 1 in this report) had the organism in the nasopharynx.

Shortly after the initial report, numerous cases throughout the country were identified. The syndrome received wide national attention, and a link was made with changing patterns of tampon use.[8] By 1980, a few reports of TSS gave more than passing reference to its occurrence in patients other than menstruating women. Todd has critically reviewed the evolution of the syndrome and the role of the media in the developments between 1978 and 1980.[8]

With the emphasis on a relationship between tampon use and TSS, the possibility of the disease striking males may be overlooked. While it is unlikely that the fully developed syndrome would be missed in a young tampon user, the diagnosis might be overlooked in a boy with pharyngitis. A recent case report, for example, described a young man with many features of TSS. An exhaustive differential diagnosis was provided, which did not mention TSS but did include a number of more esoteric possibilities.[9]

With the apparent decline in tampon-associated cases, TSS may again become an obscure, rare entity. We feel that it is, therefore, even more important to remind physicians to consider the disease in any patient with the sudden onset of fever, shock, diarrhea, rash, and evidence of multisystem illness. Although mild forms of TSS (such as case #2) certainly exist, these patients have a tendency to develop profound shock very rapidly. Thus, early identification and careful monitoring are essential. Vigorous support of the intravascular volume and cardiac output seem, at present, to be the mainstay of therapy.

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Arterial Thromboembolism

A complication after insertion of Mobin-Uddin vena cava filter

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This is a case report of aortoiliac thromboembolism after the insertion of Mobin-Uddin filter for pulmonary embolism. This occurred secondary to the penetration of the umbrella spokes into the lower abdominal aorta leading to intimal damage and embolism to the right iliofemoral and left popliteal arteries. The complication was treated successfully by removal of Mobin-Uddin filter, inferior vena cava (IVC) plication, and right iliofemoral embolectomy. Other complications reported in association with this device are discussed.

The transabdominal technics of inferior vena cava interruption in the selective management of patients with pulmonary embolism have been associated with significant morbidity and mortality.[1,2] Simplicity of interruption, effectiveness, and safety should be an ultimate objective of caval interruption. Intraluminal caval devices were developed to facilitate the treatment of critically ill patients in whom IVC interruption was considered to reduce the operative morbidity and mortality and protect the patient from recurrent pulmonary embolization.

Since the introduction of the Mobin-Uddin filter in 1968, this device has undergone extensive clinical trials and is accepted as a useful modality of treatment.[3,4] The use of this device, however, is not entirely devoid of complications, and several papers have appeared in the literature reporting these problems.

This clinical case deals with an aortic penetration with distal embolization following the insertion of the Mobin-Uddin filter. A search of the literature indicates that this is the first reported case of such a complication.

Case report

A 32-year-old woman transferred to Brookdale Hospital Medical Center on November 15, 1979 from another institution with the diagnosis of an intracranial aneurysm. Craniotomy and clipping of the anterior communicating artery aneurysm was performed on November 19. The postoperative course was relatively uneventful until December 6, when she complained of mild calf tenderness and was diagnosed to have deep thrombophlebitis which was treated with heparin. Four days later, she had an episode of hypotension and shortness of breath. Venogram of the lower extremities, pulmonary angiography, and cardiac catheterization confirmed the diagnosis of deep venous thrombosis with massive pulmonary embolism and acute cor pulmonale.

A 28-mm Mobin-Uddin filter was inserted in the infrarenal vena cava and the patient was maintained on anticoagulation therapy. Twelve days later, she complained of severe pain over the right lower extremity. The examination revealed absent femoral and distal pulses of the right lower extremity and weak left posterior tibial pulse. Angiogram showed an occlusion of the right common iliac, superficial femoral, and partial occlusion of the left popliteal arteries (see Figure).

Patient was operated on December 26, 1979; the spokes of the Mobin-Uddin filter had penetrated the IVC and abdominal aorta creating a nidus for thrombus and embolization to the lower extremities. Removal of the Mobin-Uddin filter, inferior vena cava plication, and right iliofemoral embolectomy were performed successfully. The patient did well postoperatively and was discharged on January 29, 1980 on a regimen of systemic anticoagulation; she was last seen in March 1981 in good general condition.

Comment

The ideal objectives of surgical management of pulmonary embolism are the effective entrapment of emboli and lower operative morbidity and mortality rates. The selection of an abdominal versus a transvenous insertion will depend on the general condition of the patient, operative risk, and surgeon's experience with each approach. The transvenous procedures require a cutdown under local anesthesia which induces minimal operative trauma and avoids the hazard of general anesthesia. For these reasons, these procedures are attractive for the high-risk patient with associated cardiopulmonary disease.

The transvenous devices that are currently in use are Mobin-Uddin filter (MUF), Kim-Ray Greenfield filter (KGF), and the Hunter balloon (HB). The surgical approach for insertion is essentially the same with minor variations. Once the intraluminal device is in the IVC, the fixation of the MUF and the KGF depends on penetration of the caval wall by metal struts as opposed to the HB, which relies on distention against the vein wall for fixation.[3,5,6] The overall incidence of complications for transvenous devices is probably underestimated, and there is significant variation among different authors.[7–9] Migration or displacement and retroperitoneal bleeding has occurred with MUF and KGF but not with the HB.[10] Breakage of the intracaval devices has been reported only on one occasion and this occurred two years after implantation of MUF.[11] Penetration beyond the caval wall and injury to ureter and duodenum is a rare complication encountered with MUF; however, visceral injuries have not occurred with the KGF despite proved caval penetration.[4,12,13]

The MUF consists of six spokes extending approximately 2 mm beyond the silastic body that penetrates through the IVC, which has a thickness of approximately up to 1.5 mm,[14] and it is this extraluminal extension of the spokes that leads to the injury of paracaval structures.

In this clinical report, thromboembolism was secondary to the penetration by the spokes of the MUF through the IVC into the aorta with distal embolization and this occurred despite adequate anticoagulation therapy.

Although there is no doubt that the insertion of transvenous devices is helpful in the management of critically ill patients in whom IVC interruption is indicated, physicians involved in this procedure should be aware of the advantages and complications that occur with these devices.

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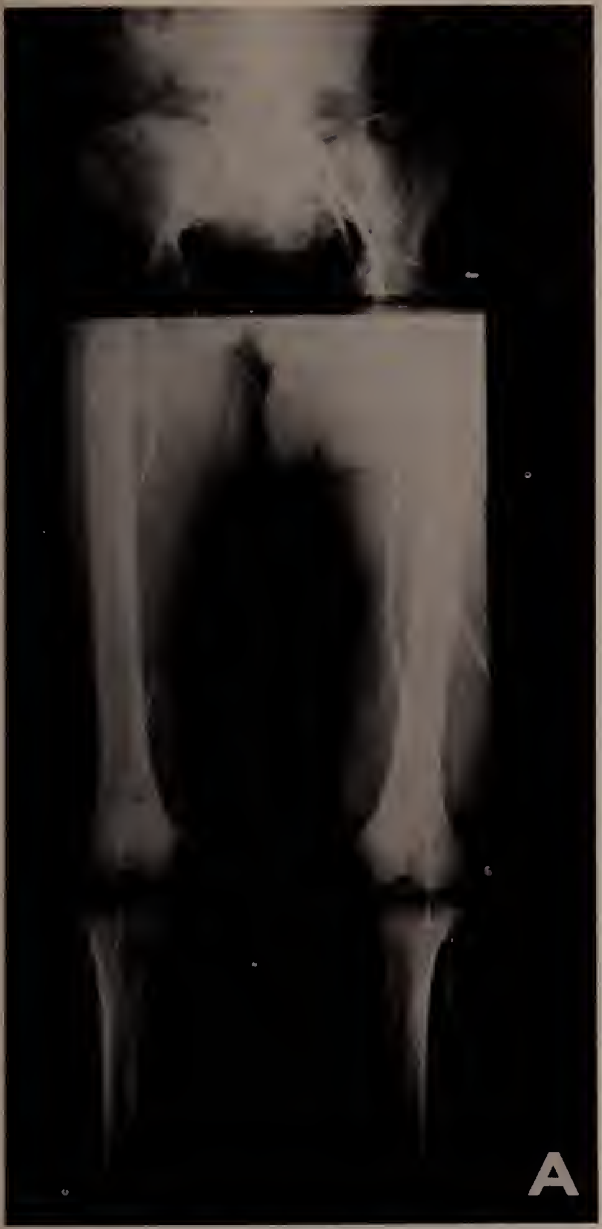

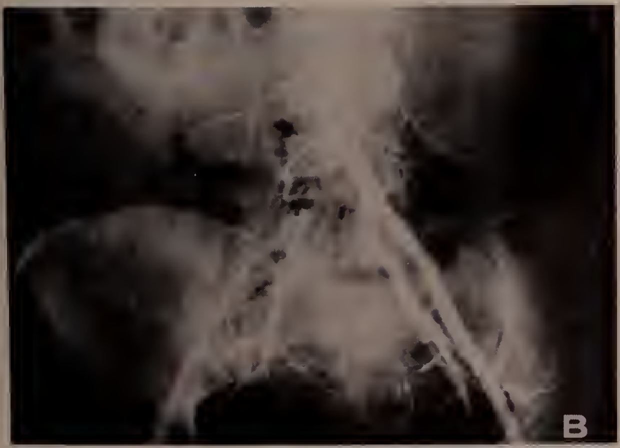

(A) Femoral angiogram showing occlusion of right common iliac, superficial femoral and partial occlusion of left popliteal arteries. (B) Mobin-Uddin filter and filling defect of distal abdominal aorta.

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Mitral Valve Obstruction in a Case of Bacterial Endocarditis due to *Corynebacterium hofmanii*

Echocardiographic diagnosis

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Mitral valvular incompetence is a common complication of bacterial endocarditis but occlusion of the valve by vegetations is rare. The first two cases reported by Roberts et al in 1967[1] and a subsequent case[2] were diagnosed at autopsy. More recently two patients in whom the antemortem diagnosis was established by echocardiography were treated successfully by surgery.[3,4] The bacterial agents responsible for the endocarditis in these prior cases were commonplace organisms (staphylococci, streptococci, and Candida). We recently observed a patient with mitral valve obstruction secondary to indolent accretions caused by *Corynebacterium hofmanii.* Cross-sectional and standard M-mode echocardiography were utilized to make the diagnosis ante mortem and confirmation was obtained at autopsy.

Case report

A 46-year-old Hispanic male with a long history of heroin addiction was admitted to the New York Veterans Administration Medical Center on April 16, 1981 with a two-week history of chills, fever, diaphoresis, increasing lethargy, dyspnea, and cough productive of green sputum. He had no history of heart disease. Immediately after admission his respirations ceased; then, following successful resuscitation, resumed at a rate of 35 per minute. A junctional rhythm at the rate of 45 beats per minute was observed at that time and his blood pressure following the arrest period was 100/60 mm Hg. His temperature was 98.0°F. The patient was found to have jugular venous distension and a hepatojugular reflux. Bilateral wheezes and rhonchi were audible on examination of the lungs. The apex beat was palpable 2 cm lateral to the midclavicular line in the fifth intercostal space. A grade 3/6 holosystolic murmur was heard at the apex and radiated to the lower left sternal border. There was a pericardial friction rub. The liver margin was palpable four fingerbreadths below the right costal margin.

Laboratory data. The white blood cell count was 16,200 cells/mm^3 with 87% mature polymorphonuclear leukocytes, 8% band cells, and 5% lymphocytes. The hematocrit was 16%. The serum sodium was 132 mEq/L, chloride 98 mEq/L, potassium 5.9 mEq/L, bicarbonate 6.2 mEq/L, and serum pH 6.95. Blood urea nitrogen and creatinine were both elevated to 37 mg/dL and 1.9 mg/dL, respectively. The electrocardiogram revealed normal sinus rhythm and poor R wave progression over the precordial leads. Intracardiac pressures were as follows: right atrial mean 18 mm Hg, right ventricle 60/18 mm Hg, and the pulmonary artery 60/26 mm Hg. The chest x-ray film showed pulmonary congestion.

Echocardiography revealed decreased motion of the anterior leaflet of the mitral valve (Figs 1, 2) and a mass of echoes directly posterior to it. The posterior leaflet could not be identified. Left ventricular wall thickness was increased to 16 mm. Cross-sectional echocardiogram revealed a large mass of echoes in the vicinity of the mitral valve, occluding the inlet from the left atrium, protruding deep into the left ventricular chamber and infiltrating the posterior wall (Fig 2). Short-axis view of gross specimen later confirmed that this bulky mass of thrombus or vegetations obstructed the mitral orifice (Fig 3). A pericardial effusion was also observed. The left atrium, right atrium, and right ventricle were dilated.

Bacteriologic data. All six blood specimens yielded gram-positive bacilli which grew on chocolate agar and were catalase-positive and motility-negative. They demonstrated no carbohydrate-fermenting ability on cystine tryptic agar and were identified as *Corynebacterium hofmanii.* Antimicrobial tests for sensitivity yielded the following results: sensitive to penicillin, erythromycin, tetracycline, chloramphenicol, ampicillin, gentamicin sulfate, trimethoprim-sulfamethoxasole, and vancomycin; resistant to clindamycin, oxacillin, and cephalothin sodium.

Hospital course. The patient was found to be anuric. Embolization to the kidneys was suspected and disseminated intravascular coagulation was

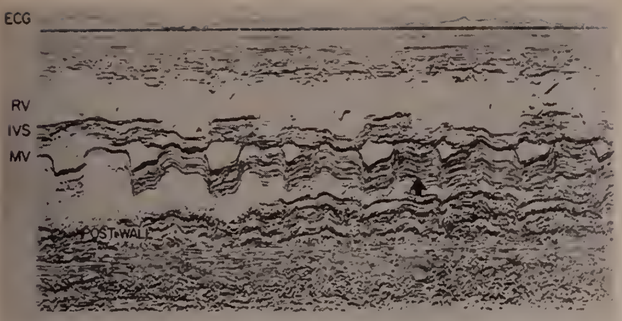

FIGURE 1. Echocardiogram showing dense vegetations of mitral valve (arrow). Only anterior leaflet is identifiable. Posterior wall of ventricle is penetrated by vegetations. RV = right ventricle, IVS = intraventricular septum, MV = mitral valve.

diagnosed on the basis of an elevation of the fibrin split products and a decrease in the fibrinogen level to less than 40 mg/100 cc. Treatment was instituted with fresh frozen plasma, intravenous nafcillin sodium (2 g in 14 hours), and gentamicin 120 mg (one dose) as well as 300 μg/minute of dopamine and 200 μg/minute of nitroprusside. Bicarbonate was given to stabilize the acidosis at a pH of 7.3. Surgery was considered but deferred because of the severe acidosis and renal failure. The patient developed atrioventricular dissociation. A transvenous pacemaker was inserted but the stimulus failed to provoke cardiac contraction and the blood pressure became unobtainable. He died 13 hours after admission.

At autopsy, the weight of the heart was 460 g. The ventricles and both atria were dilated and the left ventricular wall was hypertrophied. An irregular area of endocardial opacity and slight roughening in the posterolateral wall of the left atrium, approximately 2 cm in greatest diameter, was interpreted as a MacCallum's patch. Two irregular patches of hyaline, pearly gray-white endocardial thickening, about 1 and 2 cm in greatest diameter, were found more medially and cephalad on the posterior wall of the left atrium. The mitral valve was markedly and symmetrically thickened and opaque and its commissures were fused. The chordae tendineae to the mitral valve were fused, shortened, and markedly thickened. These anatomic findings were interpreted as representing rheumatic heart disease with an indeterminate degree of mitral stenosis. The actual diameter of the valve orifice could not be measured prior to opening the left ventricle because it was completely obstructed by two large vegetations

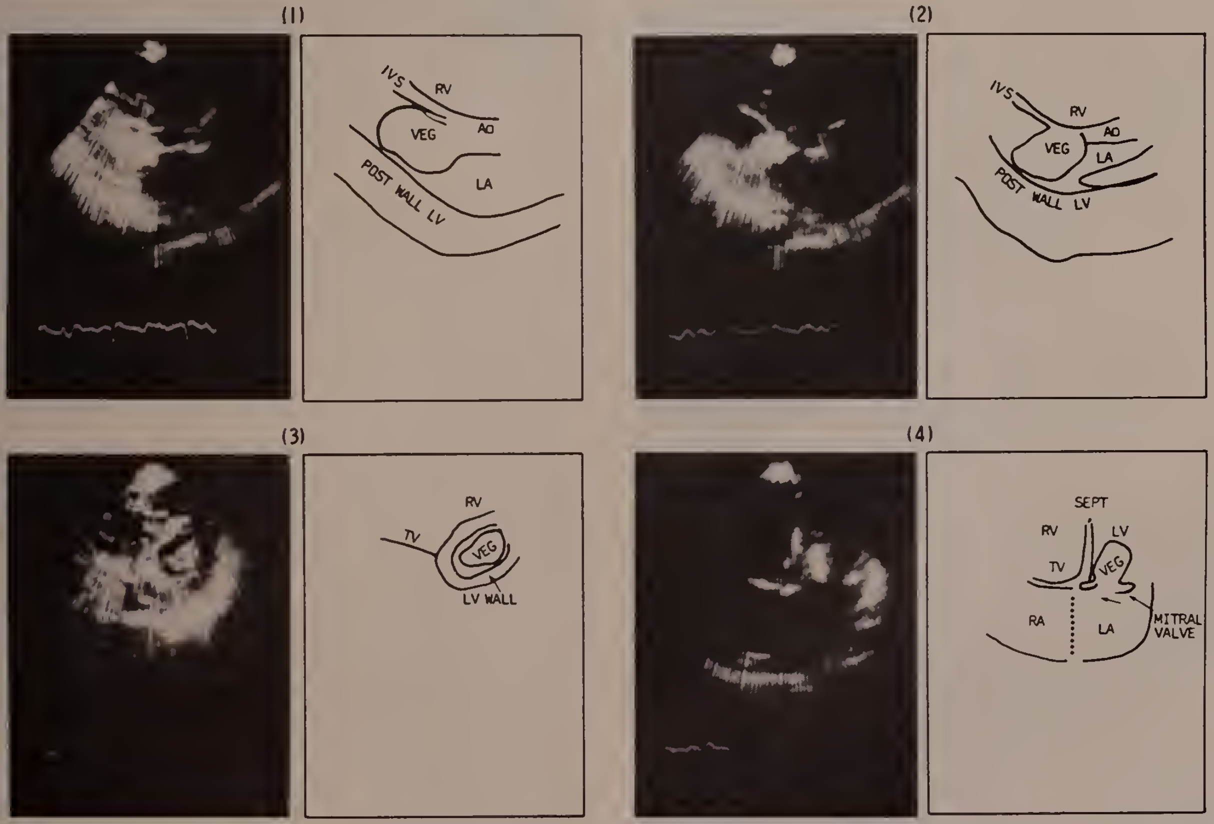

FIGURE 2. Cross-sectional echocardiograms and representative drawings of (1) long axis view in diastole of vegetation extending into ventricular cavity, (2) long-axis view in systole demonstrating obstruction of mitral valve orifice by vegetation, (3) short-axis view of left ventricle immediately below mitral valve demonstrating bulky vegetation occupying large area of ventricular cavity, and (4) four-chamber view with vegetation in mitral orifice extending into ventricular cavity. Veg = vegetation, AO = aorta, RV = right ventricle, LA = left atrium, IVS = intraventricular septum, post wall LV = posterior wall of left ventricule, TV = tricuspid valve.

measuring 3 × 3.5 cm and 1.5 × 2.0 cm on the atrial aspect of the valve (Figs 4, 5). (The orifice admitted only a 2-mm probe.) The larger vegetation had eroded deeply into the thick fibrous posterior leaflet and the wall of the left ventricle. Diphtheroid bacilli grew from cultures taken from the valve. The lungs, liver, and spleen showed chronic passive congestion; acute infarcts were found in both kidneys and the spleen.

Microscopic examinations revealed severe hyaline fibrosis of the mitral valve leaflets and vascularization which included, in at least three places, small muscular arteries. Sections of the vegetations demonstrated fibrin, platelets, polymorphonuclear leukocytes, and bacterial colonies. At some points at the juncture between the vegetations and the valve there was granulation tissue on a base of cellular connective tissue, indicating ongoing and recently completed organization. However, in many areas the vegetation abutted directly on sparsely cellular hyalinized scar tissue of the valve. In those areas where the vegetation invaded the myocardium there was granulation tissue and edematous, cellular, recently formed connective tissue, but no hyalinized connective tissue.

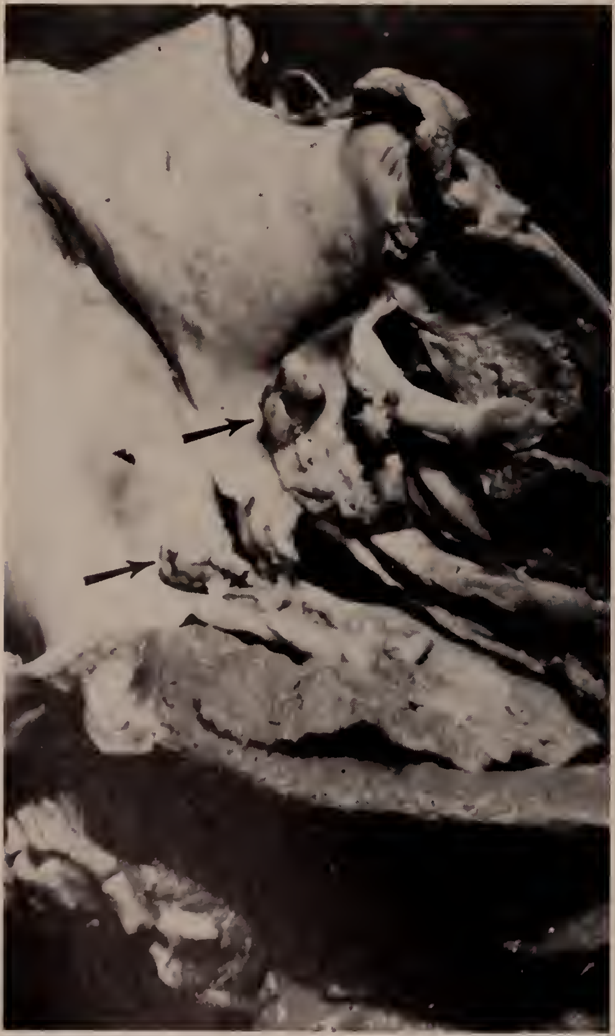

FIGURE 3. Gross specimen of heart opened to reveal bulky vegetations on both leaflets (arrows). Left atrium on top left and thick-walled left ventricle below right.

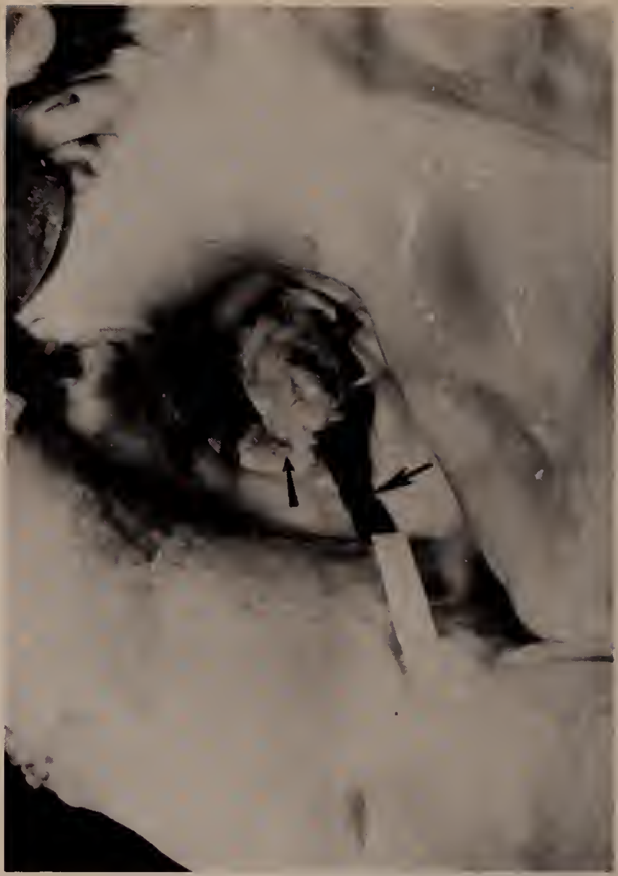

FIGURE 4. Gross specimen of bulky vegetation (thin arrow) protruding from left atrium toward left ventricle. Thick arrow points to area from which microscopic sections were removed.

Comment

The corynebacteria are gram-positive facultative anaerobic, club-shaped bacilli which are often interpreted as contaminants. This is frequently correct because they inhabit the normal skin and mucous membranes. However, they can produce serious, even fatal invasive infections[5] such as suppurative lymphadenitis, osteomyelitis, meningitis, hepatic abscess, and endocarditis. In the cases reported by Kaplan and Weinstein[5] the infections occurred either in a compromised host or in subjects with rheumatic or congenital heart disease.

In a comprehensive review of the literature, Van Scoy et al[6] observed that, of 67 cases of corynebacterial endocarditis, 37 had prosthetic valves, 28 did not, and in 2 cases the information was not listed. The mortality in these cases was high, both in the prosthetic group (50%) and in those with native valvular disease (48%). However, the first eight nonprosthetic patients died in the preantibiotic era.

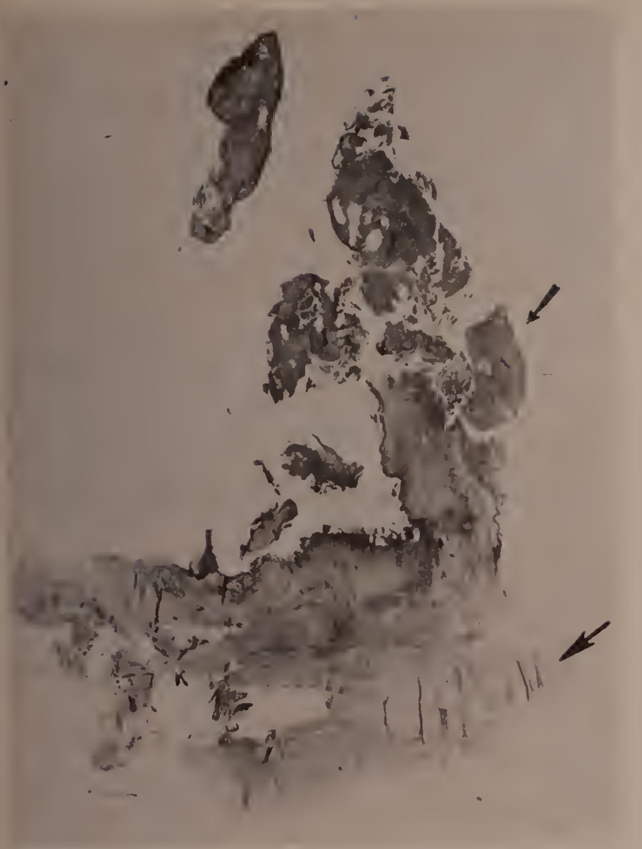

FIGURE 5. Microscopic section of mitral valve. Large vegetation (thin arrow) and mitral valve (thick arrow) with organization at base of vegetation.

Subsequent to the introduction of antibiotics, mortality in the nonprosthetic cases declined to 26%.[6]

In the present case, the patient was a heroin addict who presented in the terminal phase of his illness without prior therapy and with a deformed valve exhibiting the classic stigmata of healed rheumatic endocarditis. The scarred mitral valve appeared anatomically to be stenotic; however, the degree of preexisting mitral stenosis could not be evaluated at autopsy because both the free edge of the valve and whatever orifice remained by the time of death had been replaced by vegetation. The opening did not permit passage of anything larger than a fine probe.

The occurrence of diphtheroid endocarditis, even in drug addicts, is rare; of 85 episodes of endocarditis only two were due to diphtheroids.[7] Most of the others were due to streptococci or *Staphylococcus aureus*. In the drug abusers with rheumatic heart disease the left-sided valves were most frequently affected, while in those with no underlying disease the tricuspid valve (rarely damaged prior to the endocarditis) was frequently involved.[8,9] In a review of 344 cases of endocarditis in drug addicts, streptococci were first and staphylococci second in incidence. The mitral valve was affected in 40%, but the most common valve involved was the tricuspid. Half the patients such as ours sustained systemic embolization.[9]

The usual hemodynamic consequence of bacterial endocarditis is the development of valvular insufficiency. It is rare to find obstruction of the valve as in the present case. In one of the few previously reported cases, the valve was occluded by a bulky mass secondary to a Candida infection.[1] The organism in our patient was *Corynebacterium*, which has been reported in one other instance to produce large vegetations which also obstructed the valve orifice.[10] The granulation tissue and recently formed connective tissue of the vegetation-valve interface are hallmarks of subacute infection, despite the duration of only two weeks reported by history. (It should be noted that the clinical history, provided by the patient's friends, was considered to be of dubious reliability.)

The advent of echocardiography has enhanced the ability to detect vegetations of endocarditis, as indicated by several authors.[11–14] The sensitivity of M-mode echocardiography in establishing the diagnosis, however, may be as low as 34%.[13] Two-dimensional echocardiography has been found to improve the detection and delineation of such masses. However, there has been no previous report of occlusion of the conduit between the left atrium and ventricle diagnosed by this method.

The patient was evaluated for emergency surgery but it was deferred because of his impaired renal function and the presence of a coagulopathy and anemia. There are two cases in the literature in which the diagnosis was made by M-mode techniques and the patients were successfully treated by surgery.[3,4] With the development of two-dimensional echocardiography, earlier diagnosis and successful surgical therapy may become feasible in the future.

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Toxic Shock Syndrome

The discovery of a new disease represents only the beginning of a process to explain what causes it, to find out who is susceptible to it and to learn how to combat it. So it is not at all unusual that the final word on toxic shock syndrome has yet to be written four years after the condition was first described. But medical investigators are uncovering more and more clues to this baffling disease.

The latest piece of the puzzle comes from physicians at Riverside Methodist Hospital in Columbus, Ohio, whose finding adds to the hypothesis that packing of body cavities with sterile gauze (as is done after certain surgical procedures) predisposes to the development of toxic shock syndrome.

Writing in the May 7 *Journal of the American Medical Association*, Stephanie W. Thomas, MD, who now is at Case Western Reserve University in Cleveland, reports on the first known case of a woman who developed the syndrome after having had plastic surgery on her nose.

The operation, known as rhinoplasty or more familiarly as "a nose job," went smoothly, and the woman's nose was packed with sterile gauze, which is routine. About 12 hours afterwards, though, she came down with many of the symptoms of toxic shock syndrome.

Laboratory tests confirmed the presence of *Staphylococcus aureus*, the bacteria associated with many previously diagnosed cases of toxic shock. In this instance, an abundance of staph bacteria grew from cultures taken from the woman's nose.

With treatment, the woman went on to recover, although she experienced peeling of the skin on her hands, which typically happens about a week to ten days after the first symptoms of toxic shock emerge.

Thomas points out the obvious analogy between her patient's postoperative state (with nasal packing) and a woman who uses vaginal tampons during menstruation. (The overwhelming number of cases of toxic shock have occurred in previously healthy, young, menstruating woman, according to an accompanying *JAMA* Medical News section story.)

Hereditary Hemorrhagic Telangiectasia With No Skin or Mucous Membrane Lesions

Autopsy report

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Hereditary hemorrhagic telangiectasia (Rendu-Osler-Weber syndrome) is a rare disorder transmitted by autosomal dominant inheritance. It is characterized by dilation of capillaries and venules forming cutaneous or submucosal telangiectasias which are friable and tend to hemorrhage spontaneously or with minimal trauma.

Case report

A 74-year-old woman had complained of weakness and dizziness for several weeks. She denied any history of epistaxis, gingival bleeding, or melena. She had had a tendency to easy bruisability throughout her life.

A daughter is under treatment for anemia with iron and vitamin B_{12} supplementation for unknown reasons.

Physical examination. Examination disclosed an obese, 250-lb female in no distress. Blood pressure was 190/100; pulse, 80/min and regular; and respiration, 18/min. Petechiae were seen on the soft palate. Heart and lungs were within normal limits. There were no cutaneous lesions noted.

Laboratory data. Laboratory studies included the following values: hemoglobin, 8.8 g/dL; hematocrit, 27%; WBC count, 4,200 μL; mean corpuscular volume, 76 cu μ; mean corpuscular hemoglobin, 25 pg; mean corpuscular hemoglobin concentration, 33 g/dL; bilirubin, 5 mg/dL; prothrombin time, 12.1 seconds, control, 11.1 seconds; partial thromboplastin time, 30 seconds, control, 30 seconds; iron, 40 μg/dL; total iron-binding capacity, 515 μg/dL; B_{12}, 310 pg/mL; folate, 5.7 m μg/mL; cholesterol esterifying activity, 2; blood type, A positive; direct and indirect Coombs' test findings, negative.

Fecal occult blood was negative and serum protein electrophoresis was within normal limits. Bone marrow biopsy specimen showed normal cellularity with mild erythroid hyperplasia and no evidence of lymphoma. The liver was normal. Scanning disclosed diminished accumulation at the upper pole of spleen, suggestive of benign cyst or neoplasm. A 72-hour gallium scan of thorax and abdomen was normal. Intravenous urogram showed bilateral renal masses which were read as possible cysts, tumor, or xanthogranulomatous pyelonephritis. Gastrointestinal series and small-bowel follow-through showed mucosal filling defects interpreted as possible small-bowel lymphosarcoma, metastatic disease, or multiple polypoid lesions averaging 1 cm in size. Sigmoidoscopy to 15 cm revealed normal mucosa.

At laparotomy, multiple nodularities and telangiectatic vessels involving the jejunum were seen, subsequently described as multiple submucosal phlebectasias of the small intestine, by pathologist. One month later the patient died.

Autopsy revealed multiple hemorrhagic telangiectasias involving the esophagus and gastrointestinal tract.

Comment

Hereditary hemorrhagic telangiectasia usually occurs in childhood, most commonly in Jewish and Anglo-Saxon people and rarely in blacks.[1]

The outstanding features of the syndrome are multiple small telangiectatic lesions of the skin and mucous membranes, the tendency of the lesions to bleed, and relative frequency of pulmonary arteriovenous fistulas. Ninety percent of affected individuals have recurrent epistaxis from telangiectasias of the nasal mucosa. Skin, buccal mucosa, and viscera are also frequently involved[2]; melena and hematemesis are the next most common presentations.[3] This is followed by hemoptysis, neurologic symptoms, and, in up to 30% of cases, pulmonary arteriovenous fistulas.[2] These arteriovenous fistulas are most frequent in elderly patients and may result in significant intrapulmonary right-to-left shunts.

Gastrointestinal bleeding occurs most frequently after the fourth decade. Often there is a history of severe hemorrhage following minor surgical or dental procedures, postpartum bleeding, or menorrhagia.

The most typical lesion (90%) is 1 × 3 mm telangiectasia of Kiesselbach's triangle, followed by lesions of the lips, face, tongue (60%), and hands in decreasing frequency.[4] The patients develop iron deficiency anemia from chronic blood loss, but occasionally life-threatening hemorrhages occur. Test results of hemostasis and bleeding are usually normal. One report showed an associated decrease in platelet adhesion of the von Willebrand's type, concomitantly with this entity.[5]

Treatment with local cauterization or surgical excision has been useful but not particularly valuable for gastrointestinal bleeding, since hemorrhage often recurs from another site.[5] The bleeding vessels have weak walls because of a failure of development of muscle and connective tissue.[6] Estrogens have been of some benefit, since they cause an increase in the thickness and moisture of the buccal mucosa.[3] Also, vitamin C, cortisone, iron supplementation, and replacement transfusions have been used, but these provide no permanent relief of hemorrhagic tendency.

Inheritance of this entity is presumed to be autosomal dominant, but in the study by Garland and Anning of 264 families with this disease, typical lesions could not be observed in each generation in all the families.[5] This was attributed to late appearance of typical lesions or limited distribution of lesions, or variable penetrance of the gene. In 20% of patients, family history was normal or uncertain.[3]

Summary

Hereditary hemorrhagic telangiectasia is an autosomal dominant disease appearing mostly in the young, with recurrent epistasis. Approximately 300 families with the disease have been described in the literature. In our case, multiple phlebectasias were found at autopsy involving the gastrointestinal tract, the esophagus, kidney, ovaries, uterus, and cerebellar white matter.

The microscopic features of the angiomatosis strongly suggest Rendu-Osler-Weber syndrome. However, late clinical onset of symptoms and lack of demonstrable hereditary association are atypical.

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First implantation of remote controlled insulin pump reported

A remotely programmable insulin pump has been successfully implanted for the first time in an insulin-dependent diabetic man, according to a report in the April 2 *Journal of the American Medical Association.* The device has been functioning well for over a year.

Physicians from the University of New Mexico School of Medicine in Albuquerque, led by endocrinologist David S. Schade, MD, associate professor of medicine, implanted the pump in January 1981 in a then 41-year old man who has had diabetes since the age of five years.

With use of the implanted pump, the patient's blood sugar levels (which fluctuate with food intake and exercise) were controlled better than they were when he was giving himself daily injections of insulin during a preimplant evaluation.

The insulin pump consists of a silicone rubber insulin reservoir (implanted in the abdomen just below the skin so that it can be refilled by injection) and the sealed pump itself, which is controlled by a palm-size, push button unit permitting the recipient to program and measure the rate and quantity of insulin delivered by the pump. The insulin is continuously pumped into the abdomen and absorbed into the bloodstream by capillaries.

In an editorial accompanying Scade's report, three Mayo Clinic endrocrinologists — F. John Service, MD, Robert A. Rizza, MD, and John E. Gerich, MD, — emphasize the experimental nature of insulin infusion devices. The benefit of an implanted pump over one which is worn on the outside of the body, they say, may be largely cosmetic. The risks, which include reservoir leakage and pump malfunction, have yet to be fully assessed.

Cytapheresis Practice

Recommendations of New York Cytapheresis Task Force

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The Greater New York area contains some 17 million people served by 262 hospitals. Apheresis technology has made an impact on blood banking in the area; approximately 20 apheresis services are operating, of which 16 are located in hospitals. The activity of local services is quite variable, some performing procedures infrequently, others performing over 100 per month.

In November, 1978, the Council of Hospital Blood Bank Directors of Greater New York and the Greater New York Blood Program set up a task force to consider problems that might arise from the dissemination of this technology. The task force was composed of physician members nominated by both parent groups; they felt that there was a need for education of the blood banking and clinician community as to the indications for the use of cytapheresis products. There was also a need for standards of practice of cytapheresis to insure donor safety and product quality. It was felt that these standards should be more detailed than those currently cited in the *Standards for Blood Banks and Transfusion Services* (9th edition, 1978) of the American Association of Blood Banks. Task force subcommittees developed the recommendations that follow on these matters. These recommendations were submitted to the hospital blood bank directors of the region for guidance and also to the blood bank advisory committee of the City of New York Department of Health as source material for eventual use. Task force members will update the recommendations as apheresis practice evolves.

Since there are still many unresolved questions about long- and short-term hazards of apheresis on donors, the task force also set up the complication registry, the procedures of which will be outlined here.

Guidelines for use of single-donor products

The following constitutes the recommended guidelines for use of cytapheresis products as proposed by the Cytapheresis Task Force. The task force offers these guidelines as informational and suggests that clinicians planning to administer these products use them after consulting their blood bank.

Definitions. (1) "Batched" platelets are platelets for transfusion prepared from randomly selected units of whole blood. Each unit contains approximately 6 to 7 $\times 10^{10}$ platelets in 45 ± 5 ml. of plasma. The usual prophylactic dose is 3 to 5 units per square meter of BSA (body surface area), but may be more or less, depending on the patient's condition. (2) "Single-donor platelets" are platelets for transfusion prepared in therapeutic quantities from a single donor. Usually the number of platelets is equivalent to 6 units of batched platelets.

Single donor platelets. Single-donor HLA (human leukocytic antigen)-matched platelets are recommended for prophylactic or therapeutic use in the following situations: (1) patients refractory to batched platelets, and (2) marrow-transplant candidates.

Patients refractory to batched platelets should receive HLA-matched single-donor platelets, since anti-HLA antibodies are frequently the cause of the refractory state. HLA-matched platelets may be obtained from typed family members or from unrelated donors listed in files maintained for this purpose. Refractoriness to platelet transfusion may be defined as an increment per unit of less than 7,000 platelets per cubic millimeter per square meter of BSA measured at one hour and/or 2,500 platelets per cubic millimeter per square meter of BSA measured at 12 to 18 hours posttransfusion after two consecutive transfusions of fresh platelets. Failure to achieve the expected increment may also be due to fever, infection, splenomegaly, and consumptive processes. In these latter cases, single-donor HLA-matched platelets are not more likely to be effective than are unmatched or batched platelets.

Candidates for marrow transplantation should be transfused conservatively, but should receive HLA-matched platelets. While awaiting HLA typing, nonmatched single-donor platelets may be given. Prior to transplantation, single-donor products from blood relatives other than the patient's offspring are to be avoided. The offspring donors may be used unless they are considered to be potential marrow donors.

Although empirical evidence regarding their benefit is lacking, single-donor platelets, not necessarily HLA matched, may be indicated in patients for whom long-term platelet therapy is contemplated. These patients should be HLA typed early in their course.

In general, patients with counts of less than 20,000 platelets per cubic millimeter may receive platelet transfusions prophylactically; they are not usually required more than two to three times per week. Patients should be treated therapeutically as necessary to stop serious bleeding. If patients are receiving single-donor platelets, the number of donors for each patient should be restricted to the minimum number possible.

ABO-compatible platelets should be given when available. If platelets from an Rh_0-positive donor are transfused to an Rh_0-negative recipient, the use of Rh_0 immune globulin should be strongly considered but must be weighed against the hazard of giving intramuscular injections to thrombocytopenic recipients.

If destined for either marrow-transplant recipients, patients with immunodeficiencies or heavily immunosuppressed patients, the platelets and other blood products may be irradiated to diminish the possibility of graft versus host disease.

Single-donor platelets should be administered through a platelet, cryoprecipitate, or standard blood filter as soon as possible after production, and at least within 24 hours if prepared in an open system.

Most complications seen after transfusion of red cells may be seen after transfusion of these products.

Single donor granulocytes. Prophylactic use of single-donor granulocytes is discouraged unless the recipient is enrolled in a controlled-study protocol.

Therapeutic use of single-donor granulocytes is indicated in infected neutropenic patients suffering from a potentially reversible bone-marrow abnormality. These patients are generally leukemia or lymphoma patients. The following criteria should be met:

1. Fever with temperature of more than 38.3° C. (101° F.) for 48 hours despite treatment with appropriate broad-spectrum or organism-specific antibiotics.
2. Less than 500 PMNs (polymorphonuclear neutrophilic leukocytes) in peripheral blood.
3. Evidence of bacterial infection with appropriate cultures taken. Patients with systemic fungal infections and fevers of unknown origin may also be considered for single-donor granulocyte transfusion if they fulfill the other criteria.

Single-donor granulocytes are transfused daily for a minimum course of five days unless marrow recovery is evident. Patients with documented infection should be treated until their infection clears, or for 48 hours after becoming afebrile with negative cultures. Patients without documented infection should be treated similarly if their fever lyses; if there is no response, they should be treated for 10 to 14 days and reevaluated. A numerical increase of PMNs in peripheral blood is rarely seen and is not an index of therapeutic effectiveness.

Granulocytes for transfusion should be ABO compatible. If granulocytes from an Rh_0-positive donor are transfused to an Rh_0-negative recipient, the use of Rh_o immunoglobulin should be strongly considered, but must be weighed against the hazard of giving intramuscular injections to thrombocytopenic recipients. Bone-marrow transplant candidates should receive HLA-matched granulocytes from unrelated donors prior to transplantation. It is desirable in all cases to keep the number of donors to a minimum to avoid sensitization.

If destined for either marrow-transplant recipients, patients with immunodeficiencies, or heavily immunosuppressed patients, the granulocytes and other blood products may be irradiated to diminish the possibility of graft versus host disease.

Single-donor granulocytes should be administered through a standard blood filter as soon as possible after production, and at least within 24 hours if prepared in an open system.

Most complications seen after red blood-cell transfusion may be seen after transfusion of these products.

Donor selection and safety recommendations

The following standards should be observed by services performing cytapheresis. It is understood that any criterion may be waived if the physician-in-charge feels the donor's safety will not be compromised. In such cases, it is recommended that waivers be made in writing and any additional risks be explained to the prospective donor. Written informed consent should be obtained before performing any procedure.

Donor selection criteria. Prospective donors should meet the standard criteria for whole-blood donations. The interview should be conducted by qualified personnel. Particular attention should be paid to obtaining and/or ascertaining the following:

1. History of bleeding diathesis. In all cases, if heparin is to be used, an appropriate screening test of the intrinsic coagulation pathway should be performed.

2. If heparin is to be used, a history of active peptic ulcer disease or menstruation the day of the procedure.
3. If HES (hydroxyethyl starch) is used, symptoms of fluid retention and/or congestive heart failure.
4. If steroids are to be used, a history of diabetes mellitus, active peptic ulcer diseasse, or other disease entities known to be contraindications to systemic steroids.
5. If filtration leukapheresis is contemplated, history of chronic pulmonary disease.
6. A history of hypersensitivity to any of the agents to be employed in this procedure.
7. For plateletpheresis, aspirin ingestion within 72 hours preceding the procedure, since aspirin irreversibly alters platelet function. Other nonsteroidal anti-inflammatory drugs (ibuprofen, naproxen, fenoprofen calcium, indomethacin, tolmetin sodium, and sulindac) may reversibly alter platelet function for a few hours. It is recommended that potential platelet donors be deferred for one day after their use.
8. For discontinuous-flow centrifugation, a whole-blood donation or equivalent loss of red cells within eight weeks preceding the donation.
9. Low donor weight, such that the extracorporeal volume will exceed 15 percent of the donor's estimated blood volume.
10. A platelet count or estimate below 150,000 in a specimen drawn at the start of the procedure.
11. Abnormal white blood-cell count and/or peripheral smear examination in a specimen drawn at the start of the procedure.

Any of these situations should be brought to the attention of the physician-in-charge as soon as they are known so that he may make a decision regarding the suitability of the donor. In most cases, this will be before the start of the procedure.

Laboratory monitoring. Blood for routine laboratory work should be drawn prior to the onset of the procedure. The hemoglobin or hematocrit result should be available before the procedure is initiated. If the donor is to be heparinized, a screening test of the intrinsic coagulation pathway should also be completed before the procedure is begun to facilitate subsequent monitoring of heparin effects. The other tests, such as the white blood-cell count, peripheral smear, and platelet count or estimate should be completed as soon as possible. The plasma or serum protein should be followed if repeat donations are anticipated. An examination for hemolysis should be done during the procedure.

Frequency of donation. The frequency of apheresis donations should be such that:

1. The red blood-cell count loss is less than 200 ml. per 56 days, and less than 1,000 ml. per year.
2. The plasma loss, exclusive of anticoagulant, is less than 600 ml. per session and less than 1,200 ml. per week.
3. Between successive leukapheresis procedures involving the use of HES, 48 hours elapse; and between filtration leukapheresis procedures, 24 hours elapse.
4. Attention should be paid to the possibility of adrenal suppression if corticosteroids are administered.
5. Where HES is used, it should be noted that this drug persists in the body for long periods of time; the cumulative effects are unknown. The package insert should be consulted regarding safety of administration.

Records. A formal quality-control program should be in operation. In addition to monitoring product quality, the program should provide for measuring the volumes of all products. The average donor red blood-cell loss for each type of procedure should be known. Lot numbers of disposables and solutions should be recorded.

Donors should be instructed to report untoward adverse reactions both during procedures and after leaving the facilities. Records of donor reactions must be kept. It is recommended that adverse reactions should be reported to a central file to be established at the New York Blood Center.

Staffing. Staff members should perform procedures under the supervision of a qualified and licensed physician. They should be proficient in performing the procedures and have a knowledge of the complications and their management. Emergency care equipment and personnel trained to respond to emergencies should be available in all apheresis centers.

Manuals. Manuals must be on the premises detailing the mechanics of the procedure and the management of complications. The staff should be familiar with them.

Equipment. Cell separators should be subject to a regular program of preventive maintenance checks. The results of these should be logged.

Cytapheresis quality control recommendations

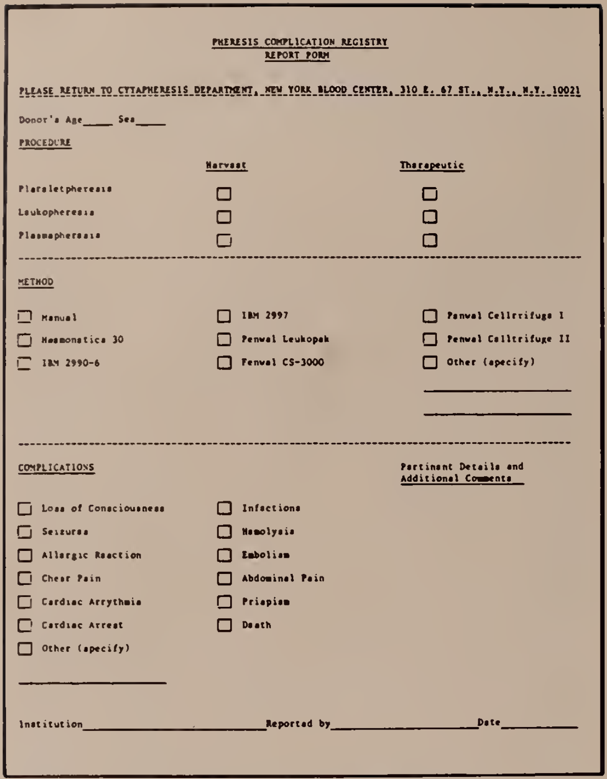
Cytapheresis departments should have formal quality-control programs. Records should be kept of quality-control results and corrective actions.

Cytapheresis products should test out negative for irregular antibodies active at 37° C. unless donor/recipient compatibility has been previously established. Hepatitis B surface antigen test results should be negative by a third generation test; serologic test results for syphilis should be negative.

For both platelet and leukapheresis, it is recommended that four procedures of each type be examined quantitatively (see following) each week if that many procedures are done.

Single donor platelets. It is suggested that each cytapheresis program should produce platelet-pheresis products with a mean yield of at least 3.5×10^{11} platelets. Any routinely prepared product with a yield less than 2.5×10^{11} should be brought to the attention of the physician-in-charge or his designee.

The platelet/volume ratio should be at least the same for apheresis platelets as for routine "batch"



PHERESIS COMPLICATION REGISTRY
REPORT FORM

PLEASE RETURN TO CYTAPHERESIS DEPARTMENT, NEW YORK BLOOD CENTER, 310 E. 67 ST., N.Y., N.Y. 10021

Donor's Age____ Sex____

PROCEDURE

	Harvest	Therapeutic
Plateletpheresis	☐	☐
Leukopheresis	☐	☐
Plasmapheresis	☐	☐

METHOD

☐ Manual
☐ Haemonetics 30
☐ IBM 2990-6
☐ IBM 2997
☐ Fenwal Leukopak
☐ Fenwal CS-3000
☐ Fenwal Celltrifuge I
☐ Fenwal Celltrifuge II
☐ Other (specify)
____
____

COMPLICATIONS

☐ Loss of Consciousness
☐ Seizures
☐ Allergic Reaction
☐ Chest Pain
☐ Cardiac Arrythmia
☐ Cardiac Arrest
☐ Other (specify)
____
☐ Infections
☐ Hemolysis
☐ Embolism
☐ Abdominal Pain
☐ Priapism
☐ Death

Pertinent Details and Additional Comments

Institution____________ Reported by____________ Date________

FIGURE 1. Complication registry report form.

platelets prepared for storage at 22° C. This will be 65 cc. of plasma volume per 10^{11} platelets.

Single donor granulocytes. It is recommended that services producing single-donor granulocytes by centrifugation produce concentrates with a mean granulocyte yield of at least 1×10^{10}. Products with yields less than 0.6×10^{10} should be brought to the attention of the physician-in-charge or his designee. Products prepared by filtration should have a mean yield of 2×10^{10}. Filtration concentrates with a mean yield of less than 1×10^{10} should be brought to the attention of the physician-in-charge or his designee. These recommendations are minimums based on yields achievable with equipment currently in wide-spread use.

Apheresis complication registry

1. The Cytapheresis Complication Registry will be kept in the New York Blood Center. It will collect data on hazards to donors and patients undergoing apheresis. Although the major focus of concern is on the healthy donor, complications suffered by patients undergoing therapeutic procedures are clearly of interest even to facilities that perform only harvest procedures.
2. A Complication Report Form is attached (Fig. 1).
3. Complications reported will be examined as they are received. In cases in which additional information would be of interest, blood center personnel will follow up reports by phone.
4. On a quarterly basis, a bulletin of complications will be mailed to all members of the task force and to all participating services. No participant will be mentioned by name.
5. Any complications suggesting immediately important problems (such as contaminated lots of solutions) will be reported immediately to the members and participants and to all facilities with known apheresis departments in the area. It will still be the responsibility of the reporting institution to notify the appropriate public health authorities.

Summary

The Council of Hospital Blood Bank Directors of Greater New York and the Greater New York Blood Program formed a joint cytapheresis task force to develop informational and advisory material on cytapheresis for the Greater New York metropolitan area. Formation of such a task force is proposed as a basis for regional practices. The task force has also developed a complication registry system, to which local transfusion services contribute, and which facilitates dissemination of information.

Addendum

Prior to publication, guidelines for the collection of platelets by mechanical apheresis were issued by the Food and Drug Administration.

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Contraceptive of Choice For Disabled (Handicapped) Person

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In the last several years, concrete measures have been taken to assure disabled persons of nondiscrimination and equal opportunity in their day-to-day lives. A resolution of the United Nations General Assembly has proclaimed 1981 as the International Year of Disabled Person, with the keynote theme "full participation and equality." Among the guiding principles of the United Nation's plan is the concept of mobilization. One of the most obvious implications of this principle relates to the decision about allowing disabled people the enjoyment of sexual expression and access to family planning, and medical and counseling services.

Furthermore, recent advances in medical and surgical specialties have made it possible for increasing numbers of disabled persons to actively participate in out-of-institution activities and in the option of planned parenthood. The major goal of this article is to identify the disabled person and to establish guidelines for provision of contraceptive methods for those who seek such services.

Definition of disabled person "handicapped"

The law[1] defines a handicapped person as any person having:

1. A physical or mental impairment substantially limiting major life activities (walking, hearing, seeing, etc.).
2. A history of, or who had been misclassified as having, a physical or mental impairment.
3. A handicap (such as disfiguring scar, for instance) that does not severely limit major life acativities but, as a result of other people's attitudes toward such an impairment, is considered handicapped.

Medical classifications of disabilities for provision of contraception

Obviously, this article is not intended to cover all chronic or acute physical and mental conditions causing certain disabilities. However, for the sake of clarity, the following classifications are designed as a guide for identification of disability, a brief description of the disease or condition, and the indicated method of contraception:

I. Mobility impairment
  - Spinal cord injury (SCI)
  - Multiple sclerosis (MS)
  - Poliomyelitis
  - Scoliosis
  - Arthritis
  - Cardiovascular accident (CVA)
  - Cerebral palsy (CP)
  - Muscular diseases
  - Amputations
  - Short stature
  - Neurologic disorders
  - Orthopedic disorders
  - Massive obesity

II. Blindness and visual impairment

III. Deafness—hearing impairment

IV. Deaf-blind combination

V. Mental impairment (mental retardation, mental illness)

VI. Chemical dependency (drug abuse) and alcoholism

VII. Speech and language disorders

VIII. Disabling birth defects (chemical, physical) such as:
  - Sickle cell anemia
  - Cystic fibrosis
  - Muscular dystrophy
  - Hemophilia
  - Albinism
  - Down's syndrome
  - Congenital rubella
  - Congenital syphilis
  - Diabetes mellitus
  - Wilson's disease
  - Cretinism
  - Dwarfism, etc.

IX. Disabilities and disorders
  - Learning disabilities, such as: disorders of listening, thinking, talking, reading, writing, spelling, etc.
  - Associated disorders: immaturity, memory deficiency, overactivity, coordination problems

X. Ostomies, such as: ileostomy, colostomy, ureterostomy

XI. Major chronic diseases, such as: cardiopulmonary, renal, liver, blood, venereal, brain, neurologic, thromboembolic, cancer (breast, genitalia, larynx), epilepsy, hypertension

XII. Other disabling disorders, such as: burn injury, facial burn injury, facial disfigurement, narcolepsy, leprosy (Hansen's disease), ataxia, congenital arthrogryposis (crooked joint disorder)

General rules for provision of contraceptive services for the disabled

The physician's office or the clinic facility must have easy access for the disabled person. Section 504 of the Rehabilitation Act of 1973 should be complied with. Physical changes may be necessary in the entrance, stairs, elevators, doors, corridors, public telephone, water fountains, restrooms, etc. In larger facilities a teletypewriter (TTY) is necessary to serve the hearing-impaired consumer. Other instruments necessary would be a telephone amplifier, cassette tape recorder to replace written fact sheets for visually impaired persons, hydraulic pelvic examination tables, with a special wheelchair and lift, audible as well as visual warning signs, and visual family-planning equipment for the mentally retarded.

Communication with the disabled person

Depending on the type of disability, there is a variety of ways to communicate with the disabled person. At times, it is best to ask the disabled person how she or he wishes to communicate. For example, the methods used by hearing-impaired persons are speech reading, lip reading, writing, sign language, or the use of interpreters. The disabled person should be treated in a manner similar to other people; their general intelligence and autonomy should not be underestimated.

In communicating with the mentally retarded, an opportunity should be given them to demonstrate their abilities so that oversimplification of facts could be avoided.

Sexuality in disabled person

With a few exceptions, sexuality is not affected by certain disabilities.[2] However, the current level of sexual interest or activities may be altered by the disease or trauma. Sexual counseling must become a part of contraceptive provision to the disabled person. It is imperative to explore other sexual alternatives, such as different positions at the time of intercourse, oral or anal sex, mutual masturbation, etc. Genetic counseling should be provided when indicated. Orgasm may not be possible for some physically disabled people. In some instances, penile-vaginal intercourse may not be possible. Despite some of these difficulties, these disabled persons define themselves as sexually fulfilled according to their own criteria.

Informed consent

To provide contraceptive services to the disabled persons, the validity of the informed consent process may be difficult. When in doubt, another staff person or specific agency handling such a disability should be consulted for a second opinion and for its verification. Prior to obtaining consent for any procedure or providing family-planning services, appropriate information should be supplied to the disabled persons. It may be necessary to use braille, tapes, interpreters, diagrams, models, and reading materials at an appropriate level to explain fully the nature and consequences of certain treatments, procedures, and their alternatives. For consumers who are mentally retarded or emotionally disabled, this process is particularly important. Documentation of the process to assure informed consent is both legal and ethical and must be mandatory.

Obtaining medical history

In addition to a routine history and physical examination of the disabled person, the following areas have to be covered:

The type, duration, stability of the disability
List of the medications that patient is taking
Problems with drugs or alcohol abuse
Emotional problems
Loss of sensation or paralysis
Any other medical problems related to the disability that have not been discussed

Contraceptive method of choice for the disabled person

The contraceptive method prescribed must be safe, effective, simple to use, and acceptable by the disabled person. Unfortunately, some of the most effective methods of contraception may be contraindicated or not available or acceptable for use in this group of consumers. For example, oral contraceptives are contraindicated when there are circulatory problems, immobility of extremities, history of CVA, or serious organic disease. The injectables, which seem to be the method of choice for the mentally retarded or for those with psychiatric impairment, are not approved by the Federal Drug Administration (FDA) for contraception.

In the mobility-impaired group (spinal cord injury, and so forth) due to the lack of sensation, the intrauterine contraceptive device (IUD) may be contraindicated because ectopic pregnancy, pelvic inflammatory disease, and other problems may remain undetected.

Because of lack of dexterity, deforming arthritis, short arms, etc., the use of barrier methods may not be possible.

The cervical cap, an excellent alternative for some of these consumers, requires FDA approval and frequent visits to the physician's office or to the center.

Sterilization may not be the consumer's choice, or the procedure itself may require special court permission (for example, in the mentally retarded or psychiatric patients).

Because of medical contraindications or other circumstances, the sterilization procedure cannot be performed in an outpatient setup or even in a hospital. Therefore, the selection of contraceptive method of choice for the disabled person requires specific attention to the following factors:

Type of disability and its extent
Other medical conditions
Reproductive functions
Drugs presently in use
Consultation with treating physicians or institutions
Sexual attitude, sexual partner
Consumer and partner's preference
Physical and laboratory findings

Because of variable characteristics of certain disabilities, rigid contraceptive guidelines cannot be adopted. After thorough evaluation of the individual consumer and review of the facts, final decisions can be made. This particular approach should be used specifically for sterilization counseling.

In the next section of this article, the most common disabilities and indicated method of contraception for the noninstitutionalized consumer will be discussed.

Mobility impairment

Affected by various neuromusculoskeletal diseases, these individuals' reproductive functions may remain unaltered, requiring an effective and safe method of contraception. Some of the most common mobility impairments will be discussed briefly.

Spinal cord injury (SCI). The major cause of this disability is trauma, and it occurs mostly in the young age group. The most common sign is motor sensory paralysis. The degree of sensory loss or voluntary movements is dependent on the extent of the lesion. Other symptoms may be loss of voluntary bladder and bowel control, cystitis, sexual dysfunction, spasticity, decubitus ulcers, blood circulatory problems, and compromised respiratory function if injury is above the sixth thoracic vertebra.

With the SCI men, 80% to 90% have erections, 10% to 20% can ejaculate, and 3% to 5% are fertile.[3] Women with SCI partners need contraception. Spastic paraplegics can have erections more than can flaccid paraplegics.

In SCI women, menstruation and fertility remain unaffected. Transection of sensory and motor pathways affects sensation of orgasm. Coitus in some positions may be difficult because of spasticity. There is an increased risk of urine and bladder incontinence during masturbation and coitus.

Contraception of choice. Because of relative circulatory stasis and predisposing thrombophlebitis, the use of oral contraceptives is contraindicated. There is a relative contraindication for the use of the IUD, because IUD complications, such as ectopic pregnancy or pelvic inflammatory disease, may go undetected.

Lack of manual dexterity may cause the use of the diaphragm to be impossible. However, a properly fitted diaphragm can be inserted and later removed by the patient's partner.

The use of foam and condom should be encouraged. Partners' motivation and willingness should be questioned and documented.

Cervical cap, even though not yet FDA-approved, seems to be an excellent choice. This method requires periodic referral of the patient for removal and reinsertion. Sterilization counseling should be a part of the initial interview.

Multiple sclerosis. This disease causes progressive destruction of the myelin cover of the brain and spinal cord. Onset is between the ages of 19 and 30; six out of ten cases are women. Symptoms are: slurred speech, blurred or double vision, vertigo, muscle weakness, numbness, loss of balance, and paralysis.

Orgasm may be difficult, and coitus in certain positions is difficult and could cause urinary incontinence.

Menstruation and fertility remain unaffected. Pregnancy may exacerbate symptoms of multiple sclerosis.

Multiple sclerosis is not a contraindication for the use of oral contraceptives unless lack of mobility or paralysis exists. If lack of pelvic sensation is present, the use of the IUD is relatively contraindicated. Barrier methods should be encouraged. Recent data show that pregnancy and the use of oral contraceptives have no substantial influence on the overall prognosis of this disease.[4]

Poliomyelitis. Poliomyelitis remains the leading cause of atraumatic paraplegia. The sensory nerves are unaffected, and the extent of muscular paralysis or weakness is variable.

Sexual response is unaffected. Coitus in certain positions may be difficult. Menstruation and fertility are not affected. Back deformity may cause problems in pregnancy and delivery. Chronic respiratory insufficiencies may affect fetal development. IUDs and oral contraceptives are not contraindicated because of poliomyelitis. Barrier methods may be used. Pelvic deformity may cause difficulty in diaphragm fitting and insertion.

Scoliosis. Even though scoliosis is a skeletal disease, the patient's respiratory capacity may be affected. Genetic counseling is indicated. Fertility is unaffected, coitus may be difficult in some positions. Scoliosis is not a contraindication to the use of oral contraceptives or IUDs. Diaphragm fitting or insertion may be difficult due to pelvic deformity. Other barrier methods can be used.

Arthritis. Arthritis is the country's number one crippling disease. Different types of arthritis occur in mild, moderate, or devastating forms at all ages from infancy on. Arthritis causes incapacitating disabilities in 3.5 million people in this country at any time. The term "arthritis" is now broadly applied to nearly 100 different conditions that cause pain and deformity in joints and connective tissue throughout the body. The five most widespread kinds of arthritis are: rheumatoid, osteoarthritis, ankylosing spondylitis, rheumatoid fever, and gouty arthritis.

Menstruation and fertility are not affected, nor is pregnancy. However, because of deformities of the pelvis, obstetric delivery may be complicated. Sexual response is unaffeacted unless there is severe pain or fatigue. Coitus may become difficult or painful in certain positions.

Arthritis is not a contraindication for the use of oral contraceptives unless there are major circulatory problems. An IUD may be inserted if there are no other contraindications. Barrier methods may be difficult to use because of hand deformities. A cervical cap, which can be retained for a longer period of time, is a good alternative even though it may require more frequent visits to the office.

Cardiovascular accidents (CVA). The most common aftereffect of a stroke is multiple paralysis, loss of sensation, and problems with talking, understanding, writing, reading, estimation of size, position, distance, etc. There may also be a change of behavioral style, vision, or memory of the afflicted person. CVA may happen at any age. In the United States, there are 600,000 new cases annually, 70% of whom survive and become self-sufficient.[3] Menstruation and fertility are not affected. Pregnancy and delivery are associated with higher risk, morbidity, and mortality. Coitus may become difficult or impossible, and orgasm requires more concentration. Lack of libido after CVA disappears in a few months.

Oral contraceptives are contraindicated. IUDs can be inserted if pelvic sensation is present. The use of barrier methods needs special instructions and/or partner participation. Cervical cap is recommended. Depending on the causal disease, sterilization may be medically indicated.

Cerebral palsy (CP). CP is the general term applied to a group of permanently disabling symptoms resulting from damage to the developing brain that may occur before, during, or after birth and which result in loss or impairment of control over voluntary muscles. The incidence of CP is approximately 4 per 100,000 population. Major types are spastic, athetoid, or ataxic. CP may be caused by anoxia, prematurity, Rh incompatibility, inherited enzyme deficiency, trauma, toxic materials, and severe childhood diseases. Menstruation and fertility are unaffected. Muscle spasms complicate delivery, and sexual arousal could increase spasm. Coitus may become difficult or painful in certain positions. CP is not a contraindication for oral contraceptives unless there are circulary problems. The IUD is not contraindicated, but insertion may become difficult. The use of barrier methods may not be possible at all. Cervical cap fitted by the health provider for long-term retention is the barrier method of choice. Sterilization counseling should be stressed.

Muscular diseases. Most forms are hereditary and mostly affect the male population. The main characteristics of these chronic diseases are progressive wasting of the skeletal or voluntary muscles. Sensation is unimpaired. Genetic counseling is necessary.

Menstruation, fertility, and pregnancy are not affected, nor is sexual response. Back and hip deformities may make coitus and obstetric delivery difficult.

Myopathies are not contraindications to the use of oral contraceptives, providing that circulatory problems are not present. The IUD and barrier methods can be recommended. When involvement of upper extremities makes the insertion of the diaphragm or the use of the condom difficult, a cervical cap may be fitted by the clinician.

Short stature. The height of these individuals (including dwarfs) is usually under 4 ft 10 in. Genetic counseling and determination of the type of dwarfism is necessary. The most frequent cause of dwarfism is achondroplasia which is a primary bone disorder.

Menstruation and fertility remain unaffected. Pregnancy and delivery are complicated by prematurity, respiratory insufficiency, and surgical intervention. Sexual response is unaffected. Coitus may be difficult in some positions.

Oral contraceptives, IUDs, and barrier methods can be used. Short arms may cause difficulty in the use of the diaphragm or condom. In such cases, a cervical cap can be fitted by the clinician for longer retention.

Neurologic disorders. This group of neurologic diseases has various causes involving cranial and peripheral nerves, and the spinal cord. There may be difficulty in swallowing, speaking, sensation, motion, etc. Some of the better known diseases in this category are amyotrophic lateral sclerosis, congenital hypotonia, and Guillain-Barré disease.

Menstruation and fertility are unaffected. Depending on the type of disease, pregnancy may become complicated. Coitus may be difficult in certain positions, but sexual response is unaffected.

Lack of mobility of the lower extremities and circulatory disorders (when present) contraindicate the use of oral contraceptives. Lack of pelvic sensation may cause IUD complications to go undetected. The use of barrier methods by patient or partner should be encouraged. Genetic and sterilization counseling is indicated.

Orthopedic disorders. This group of disorders comprises all functional and anatomic abnormalities of the musculoskeletal system manifested at birth or developing thereafter.

Some of these conditions are: congenital dislocation of hip, birth injuries, club foot, scoliosis, torticollis, femoral neck necrosis, osteoporosis, Paget's disease of the bone, trauma causing dislocation and fractures, and the aching back (the most common American disorder).

Menstruation, fertility, and sexual response are unaffected. Pregnancy and delivery may be complicated because of anatomic and functional disorders.

Oral contraceptives can be used providing there are no circulatory problems or lack of mobility of lower extremities. The IUD and barrier methods can be used.

Obesity. Obesity is present when the consumer's weight is 20% above the average for a given height. Extreme obesity can be a vocational handicap and also tends to increase feelings of loneliness, anxiety, self-pity, or self-hatred. The cause of obesity can be exogenous or due to lack of exercise, or to familial, genetic, or endocrinologic factors.

Depending on the causative factor, menstruation, fertility, and sexual response may be affected. Pregnancy and delivery may become complicated, especially if diabetes and hypertension exist. When both partners are extremely obese, coitus may become very difficult. Obesity is a relative contraindication to the use of oral contraceptives, particularly with coexisting hypertension or diabetes.

IUDs may be used, although feeling the string of the IUD may not be possible by the very obese patient. Pelvic examination may be very difficult or inconclusive. Proper evaluation of uterine size or position and adnexal contents may not be possible. Barrier methods are recommended. However, fitting the diaphragm, or its insertion and removal by the very obese individual, may become a problem. Fitting a cervical cap has the same problem unless it can be left in place over longer periods of time. The attitude of the partner is important. Sterilization can be technically difficult to perform.

Blindness and visual impairment

There are different degrees of this disability. The degree could be from visual impairment to legally blind or totally blind. Some individuals may have only color difficulty, which is a hereditary trait. Visual impairment can be caused by myopia, hyperopia, astigmatism, or strabismus. Blindness can be caused by psychologic conditions, diseases, or accidents. Hemorrhage or insufficient blood supply in the brain can reduce vision. Some of the diseases causing blindness are cataract, glaucoma, hypertension, diabetes, neurosyphilis, stroke, macular degeneration, congenital rubella, etc.

Menstruation, fertility, sexual response, and pregnancy are unaffected unless there is systemic-causing disease. Occasionally genetic counseling may be indicated. Oral contraceptives can be prescribed unless there are contraindications because of a systemic disease. The IUD and barrier methods can be used.

Deafness—hearing impairment

Hearing disorders are one of the most common physical impairments in the United States, although total deafness is rare. Hard-of-hearing persons can understand speech with the use of hearing aids. The prelingually deaf are those who have never heard, or were so young when hearing loss occurred that sound has little meaning for them. Others who become deaf later in life from disease or trauma are referred to as adventitiously deaf.

Major causes of congenital deafness are maternal rubella, and are of a genetic (recessive) nature. Major causes of acquired deafness are conductive (otitis media-otosclerosis) and nerve deafness caused by rubella, meningitis, diphtheria toxins, trauma, etc.

Fertility, menstruation, sexual response, and pregnancy remain unaffected. Genetic counseling may be needed. There are no special disability-related contraindications for contraceptive methods of choice.

Deaf-blind combination

The number of deaf-blind persons is relatively small. For the congenitally deaf it is difficult to understand language. For the congenitally blind it is not simple to master the physical and social environment. The combination of the two defects leaves the child physically and socially isolated from the environment. Deaf-blind adults may have received adequate training to enable them to move about a familiar environment. The communication system to be used is a machine (Tellatouch) with an alphabetically arranged typewriter keyboard in front and a braille cell with tiny pins in back, so that communication is accomplished by having the sighted person press down on a key; this causes the appropriate braille symbol to be pushed against the fingers of the deaf-blind person. Contraceptive counseling choice is the same as for the deaf and the blind, previously discussed.

Mental impairment

Mental retardation. Mental retardation refers to significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior, and manifested during the developmental period. An estimated 3% of the population in the United States is believed to be mentally retarded.[3] The range of this possible retardation varies into four different levels: mild, moderate, severe, and profound.

About 260 causes of retardation have been identified. Generally, there are three causes—environmental, organic defects, and genetic diseases. When the consumer is identified as mentally retarded, more time for counseling is necessary. It should also be determined if he or she has a court-appointed guardian who is authorized to make medical decisions.

Menstruation, sexual response, fertility, and pregnancy remain unaffected, depending on the etiology. Genetic counseling may be necessary.

Oral contraceptives and IUDs are not contraindicated. Instructions for these methods, as well as those for the diaphragm, foam and condom, and fertility-awareness method (natural family planning), may be hard to comprehend. Each client should be individualized and carefully assessed as to their understanding of the choice and use of the contraceptive method. When the FDA approves, injectables such as progestational agents (Depo-provera) may be the contraceptive of choice. Sterilization requires special court proceedings and permission.

Mental illness. The term mental illness or mental abnormality covers the following disorders: (1) psychoneurotic, (2) psychophysiologic autonomic and visceral, (3) psychotic, and (4) personality

There are more than 21 million people in the United States suffering from mental or emotional disorders requiring psychiatric or psychologic treatment. Because of significant changes in rehabilitation and treatment of people with mental disorders, their exposure to unprotected coitus and pregnancy has increased. Due to psychologic disorders or medication, menstruation, the level of sexual response, and fertility may be affected. Pregnancy may become a high risk because of teratogenicity of drugs or a mother's psychologic attitude. Genetic counseling may be indicated. When prescribing oral contraceptives, the following factors should be considered: (1) patient may not remember to take the pill daily, (2) psychotropic drugs may decrease the absorption of steroids, and (3) steroids may increase depression in some patients.

As IUD may be contraindicated in a patient who is unable to report complications. Comprehension of the use of barrier methods or fertility-awareness method (natural family planning) may not be possible for some patients. When the FDA approves, an injectable progestational agent is the ideal method of choice.

Sterilization requires special court proceedings and permission.

Chemical dependency (drug abuse) and alcoholism

The number of narcotic addicts in the United States (with or without medical sanctions) may be 500,000 to 2 million persons in the general adult population. It is now thought that three out of every ten persons who use alcohol regularly will probably develop some form of drinking problem. Statistical data show that some 36 million Americans can be regarded as problem drinkers. In addition to alcohol, the following basic category of drugs can cause dependency: opium, morphine, heroin meperidine hydrochloride (Demerol), codeine, methadone, barbiturates, meprobamate, diazepam (Valium), chlordiazepoxide hydrochloride (Librium), marijuana, glue, volatile solvents, cocaine, amphetamines, LSD, caffeine, nicotine, mescaline, dimethyltryptamine (DMT), etc.

Menstruation, fertility, and sexual response may be affected by alcohol and drug abuse. Pregnancy may become high risk because of poor nutrition, concomitant diseases, or teratogenicity of these chemicals.

Oral contraceptives may not be advisable because of forgetting to take the pill daily or because of a decrease in the absorption of the steroids due to the use of other chemicals and other systemic diseases. The IUD can be inserted if the patient is judged able to report possible complications. The use of barrier and fertility-awareness methods depends on motivation, and on degree and type of drug dependency. Sterilization requires a special process, informed consent, and permission.

Speech and language disorders

In this group of disabilities, there exists a defective speech or language ability that may interpose a barrier between the person and others, generating feelings of self-consciousness and inadequacy.

The incidence of speech disorders in patients over the age of 14 is estimated at 4% to 5% of the population. The cause of this disorder could be organic, such as deafness, cleft lip or palate, aphasia, and cerebral palsy; or functional, such as emotional tension, parental pressure, anxiety, unconscious conflict, and selective inattention. Some of these patients may need speech therapy, psychotherapy, or physical therapy.

Menstruation, fertility, and sexual response may or may not be affected, depending on the causative factors. If other disabilities, such as deafness, cerebral palsy, mental retardation, etc., are present, related guidelines should be used. Depending on the cause of speech and language disorders, the contraceptive method of choice varies. When no organic causes are present, there are no specific disability-related contraindications for any contraceptive method. The physician may need the assistance of the patient's therapist, or a close friend or relative to improve communication.

Disabling birth defects (chemical-physical)

The birth defect is either inherited or environmental, or is a combination of these two factors. At any one time, an estimated 15 million US residents have one or more birth defects. Some examples of inherited diseases are sickle cell anemia, cystic fibrosis, muscular dystrophy, hemophilia, and Down's syndrome. Some examples of environmental causes of birth defects are cases of maternal diseases, such as rubella or syphilis. Examples of structural-development birth defects are missing toes or fingers, club foot, hip dislocation, cleft lip, or cleft palate. Examples of metabolic birth defects are diabetes mellitus and Wilson's disease.

Depending on the type of defect, menstrual disorders, fertility problems, or sexual dysfunctions may be present. Each case has to be individualized, and proper medical history and consultation should be obtained. In certain cases in which medical problems are present (such as sickle cell anemia, diabetes mellitus, etc.), extensive counseling is necessary. In cases in which no medical problems are present (such as club foot, cleft palate, etc.), there are no specific disability-related contraindications to the use of a contraceptive method. However, in other cases in which major medical problems are present, the use of oral contraceptives and IUDs may be contraindicated. Barrier methods and sterilization should be encouraged. Patients with Wilson's disease cannot have copper-bearing IUDs. Patients with mental retardation need special counseling and, when indicated, genetic counseling should be advised.

Learning disabilities

This is an ambiguous term used to classify a diverse group of individuals who exhibit disorders in one or more of the basic psychologic processes involved in understanding or using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. Other behaviors often found in conjunction with such disabilities are hyperactivity, coordination problems, perseveration (difficulty in switching from one topic to another), immaturity, poor attention, or short attention span.

It should be noted that more counseling may be needed for some of these patients. Furthermore, some of these individuals may be receiving chemotherapy such as methylphenidate hydrochloride (Ritalin), thioridazine (Mellaril), and phenytoin sodium (Dilantin), in an attempt to alter the individual's capacity to handle different stimuli. There should be no change in the patient's menstruation, fertility, and sexual functions unless there is an underlying medical problem or they are affected by continuous chemotherapy. There are no specific disability-related contraindications to the use of different methods of contraception in this category. However, it should be clearly ascertained if certain disabilities in this category (such as problems with following direction or poor attention span) would interfere with the proper use of oral contraceptives or diaphragms.

Ostomies

There may be close to 1 million ostomates in the United States and Canada. Each year, approximately 90,000 new ostomy surgeries are performed. The type of ostomies performed are ileostomy, colostomy, ureterostomy. With proper management and controlled technique, the ostomy presents a minimal handicap to the patient. Even though the average ostomate is not disabled, patients with multiple ostomies may have considerably more difficulty adjusting. Menstruation, fertility, and sexual response are usually unaffected. Psychosexual counseling may become necessary to evaluate, for instance, the effect of the ostomy operation and the patient's relationship with the sexual partner.

Resection of the small bowel decreases the absorption of steroids; in such cases, the oral contraceptives may not be effective. Other medical conditions, such as kidney function and electrolyte imbalance, should be considered when oral contraceptives are prescribed. Other methods of contraception and sterilization can be recommended depending on the individual patient's medical condition.

Major chronic diseases

This group of disabilities includes various serious medical conditions involving one or more of the patient's systems, such as cardiopulmonary, peripheral vascular, genitourinary, blood, lymphatic, etc. Other conditions that can cause temporary or permanent disability are metabolic, endocrinologic, thromboembolic, and venereal. Diseases such as epilepsy, hypertension, parkinsonism, and treated malignant conditions (breast, genitalia, and larynx) can cause specific disabilities. These are related to the patient's medical conditions, psychologic effect of the disease (such as postmastectomy, vulvectomy, laryngectomy, etc.), or both.

Detailed psychosexual and medical history-taking is necessary. Cardiopulmonary dysfunction or general malaise due to a serious disease causes extreme exhaustion, shortness of breath, etc. At the time of coitus, the degree of such disability should be ascertained. The list of medications the patient is taking, the duration and severity of the disease, the effect of present illness on reproductive functions, and the level of the patient's sexual activity should be recorded.

Many of these disorders directly affect a patient's menstrual pattern, fertility potential, and sexual response. Pregnancy may be disabling, very risky, or absolutely contraindicated in certain cases. These conditions may change as the disease progresses or regresses.

Oral contraceptives may be absolutely or relatively contraindicated in some cases. The standard list of contraindications for the use of oral contraceptives should be used. IUDs may be contraindicated in patients with blood diseases (anemia, bleeding tendency, etc.) or in those who receive anticoagulants. Barrier methods may not be ideal in patients whose medical condition may deteriorate rapidly should the method fail. For the same reason, the fertility-awareness method cannot be relied on. The use of barrier methods backed by early abortion will be indicated in some cases. Female sterilization in patients with poor medical histories requires hospitalization and medical clearance for surgery. At times, the surgery itself may be contraindicated. Vasectomy under local anesthesia is an ideal method for the patient's partner.

Other disabling disorders

Consumers with this group of handicaps do not necessarily have any surgical or medical conditions limiting major life activities. However, as a result of other people's attitudes toward such an impairment (disfiguring scar or trauma), she or he is considered handicapped.

For example, 2 million Americans experience burn injury each year; of these, 300,000 are seriously burned and disfigured. The frightening circumstances of such traumatic injuries may cause permanent disability. Likely reactions are depression, regression, management problems, denial, and withdrawal.

Facial disfigurement is probably one of the most intolerable handicaps. Every year, 52 million Americans suffer injury. Because the face is exposed and unprotected, incidences of facial damage may be very high. Furthermore, one child in 700 is born with cleft lip or palate. Diseases that cause craniofacial abnormalities are hydrocephalus, cretinism, acromegaly, Down's syndrome, etc; other disabling disorders in this category are ataxia, Hansen's disease, and narcolepsy.

In most of these disabilities, menstruation and fertility are not affected unless there is an associated disease of other systems. In some instances, because of facial disfigurement or skeletal abnormalities, sexual response may be severely affected, requiring extensive psychosexual counseling. Genetic work-up is indicated in dwarfism and ataxia.

When there are no medical contraindications, oral contraceptives and IUDs can be prescribed. Barrier methods, fertility-awareness method, and sterilization are advised depending on the individual patient. Dwarfed women frequently require a cesarean section. Depending on their particular type of inheritance and genetic study, sterilization should be strongly advised.

Summary

Because of recent advances in medical and surgical specialties and due to other favorable circumstances, increasing numbers of disabled (handicapped) persons actively participate in out-of-institution activities, sexual expression, the option of planned parenthood, and related counseling-medical services. More than one out of ten individuals in the US population are considered disabled. Over 475,000 Americans are legally blind and 330,000 are totally deaf. Approximately 2,800,000 young people are mentally retarded. About 1,750,000 mental patients require hospital care and treatment in the course of one year.

For the provision of contraception for these people, a new medical classification of disabilities has been outlined, and the condition and its incidence and causes have been discussed. The effect of disability on menstruation, fertility, and sexual function is briefly explored. And, finally, the contraceptive of choice for each group of these disabilities has been presented.

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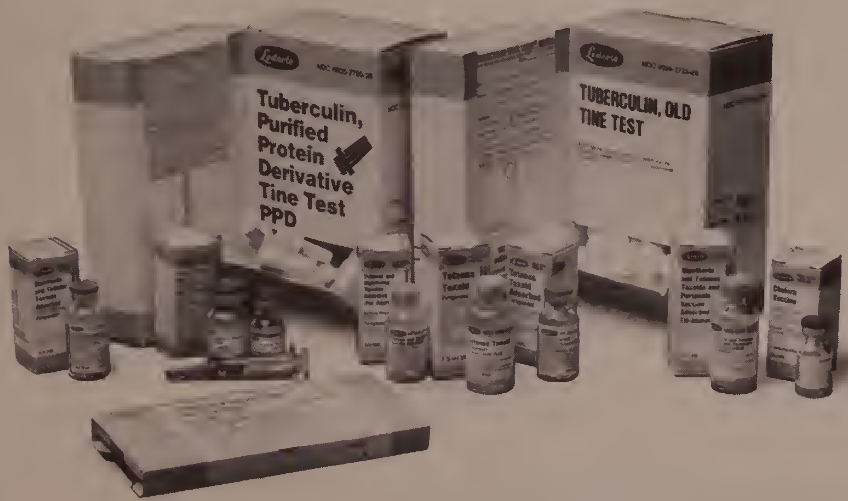
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Cross-Country Medical Liability Rates Chart

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This chart-study was suggested by the Medical Society of the State of New York's administration in response to the medical liability crisis that erupted in April 1981.

Letters requesting rate data were sent to each state medical society. After a period of several weeks, follow-up letters were sent to states that had not responded. This chart is, therefore, reflective of the responding states supplying information that was current as of October 1981. For each state, ranges or averages were computed, based on the data provided by their respective state medical society. Differences in territory within a specific state are noted, as well as specifics on claims made vs. claim occurrence policies.

A claims-made policy covers only those claims which are reported during the policy period that arise from incidents which occur on or after the inception date of the physician's policy. This means that a physician has to purchase additional coverage for a time when he is not practicing medicine (eg, retirement) to insure he is covered for claims resulting from incidents which occurred during the time his claims-made policy was in effect, but which were filed after the policy dates.

In contrast, a claims occurrence policy covers the physician for claims made from incidents arising during the policy period and for claims made from incidents arising during the policy period, but filed after that period. Therefore, under an occurrence policy, a physician would be covered, for example, during retirement for claims made involving an incident that occurred during the time he practiced medicine.

Claims-made rates start off generally lower than occurrence rates and grow progressively higher for the first several years of a physician's coverage. However, they level off at the "mature" year. To be as consistent as possible and compare claims-made policies with occurrence policies fairly, we used the "mature" year wherever the information was available to us.

Those states not appearing on the chart did not respond to the letters sent.

Please note that any increase in premiums since October 1981 are *not* reflected in this chart for any state.

Cross Country Medical Liability Rates Chart

State	No. of Classes	$100,000–$300,000		$1 Million	
		Lowest Class	Highest Class	Lowest Class	Highest Class
Alabama C O	7	NA	NA	1,329	9,084
	7	NA	NA	1,546	10,723
Arkansas	NA	NA	NA	520	3,973
Arizona	8	1,220	6,630	2,090	9,720
Colorado	6	700	8,243	980	11,538
Connecticut O Fairfield County	8	NA	NA	1,968–2,096	16,765–29,769
Connecticut O New Haven	8	NA	NA	1,968–2,029	16,765–27,390
Connecticut O Hartford	8	NA	NA	1,677–1,968	16,765–23,817
Connecticut O Remaining counties	8	NA	NA	1,593–1,968	16,765–22,625
Delaware	7	1,672	13,201	NA	NA
Georgia	8	889	9,214	1,467	15,664
Illinois C T—1	7	1,572	12,272	2,832	24,224
Illinois C T—2	7	1,260	9,280	2,204	18,248
Indiana	7	659	5,271	NA	NA
Kansas	7	1,020	8,008	NA	NA
Kentucky	6	752	4,957–6,514	1,232	8,129–11,074
Maine	7	358	3,105	654	5,754
Maryland C T—1	7	359	7,863	582	12,895
Maryland C T—2&3	7	415	9,082	672	14,894
Massachusetts C	7	550	4,495	803	6,743
Massachusetts O	7	596	4,770	870	7,155
Michigan O T—1	9	1,558	16,424	2,399	25,293
Michigan O T—2	9	935	9,855	1,440	15,177
Mississippi C	6	1,333	8,778	2,200	14,484
Missouri	7	784	5,409	1,262	8,707
Montana O	7	NA	NA	1,528	11,993
New Jersey C	7	418	10,009	NA	NA
New Jersey O	7	444	10,641	762	17,409
New Mexico	5	759	4,918	NA	NA
New York O T—03	10	1,884	24,854	2,732	36,275
New York O T—02	10	1,643	21,692	2,385	31,658
New York O T—01A	10	1,470	19,386	2,132	28,295
New York O T—01	10	1,446	19,856	2,091	28,975
New York O T—00	10	853	1,228	11,700	17,068
North Carolina 95%—C	7	774	6,113	1,277	10,392
North Dakota C	7	716	5,613	1,180	9,542
Oklahoma O	7	349	2,031	NA	NA
Oregon C	9	892	8,044	1,428–2,067	12,260–19,950
Pennsylvania C T—1*	5	460	3,284	NA	NA
Pennsylvania C T—2	5	316	2,252	NA	NA
Pennsylvania C T—3	5	304	2,176	NA	NA
Pennsylvania C T—4	5	292	2,084	NA	NA
Pennsylvania O T—1	5	1,704	12,168	NA	NA
Pennsylvania O T—2	5	1,168	8,340	NA	NA
Pennsylvania O T—3	5	1,128	8,056	NA	NA
Pennsylvania O T—4	5	1,080	7,712	NA	NA
South Carolina	7	525	3,604	NA	NA
South Dakota C	7	1,049	8,299	NA	NA
Tennessee	7	747	5,638	1,347	10,389
Texas T—1	7	1,123	7,375	1,665	12,561
Texas T—2	7	748	4,915	1,149	8,812
Texas T—3	7	936	6,145	1,407	10,687
Utah	7	639	5,534	875	7,578
Vermont	7	847	5,924	NA	NA
Washington	8	1,350	7,725	2,100	16,625
West Virginia	7	1,483	13,353	2,254	17,912
Wisconsin	8	391	3,192	NA	NA

Key:
C = Claims made
O = Occurrence
NA = Not available
T = Territory
* = Shows first year rates
Wherever applicable claims made shows the figure for the "mature" year.

William Heberden, M.D., and the End of Theriac

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William Heberden, M.D. (1710–1801), a British physician who died over 180 years ago, is still well remembered for his lucid and clinically accurate descriptions of angina pectoris and of the nodular enlargements of the distal interphalangeal joints of the fingers which occur with degenerative joint disease. Even today, these "little hard knobs about the size of a small pea" are usually referred to as Heberden's nodes.[1]

Much less well remembered, although probably of equal or even greater value, are Heberden's personal efforts toward the elimination of the ancient medicine theriac and its cousin mithridate from their position of exalted reputation and clinical respectability. These medicines, archetypical galenics, were in almost continuous use from antiquity until Heberden's time. Heberden accelerated their passage from respectability, and with it the remaining vestiges of Galen's enormous influence on medicine, an influence that had endured from the second to the eighteenth century.[2–4]

Despite its once supreme importance to physicians and their patients, today only those interested in medical or pharmaceutic history are apt to recognize the word theriac. A modern facsimile edition of the first *London Pharmacopoeia* includes a concise summary of the early history of the redoubtable medicine by George Urdang, a pharmaceutic historian.[5]

> Theriac or treacle, from theriakos, of wild or venomous beast, is the designation for an electuary used originally against snakebites, then generally against all kinds of poisoning, and finally as a kind of universal remedy against every possible disease. Nicander of Colophon is said to have been the first to have recommended theriac in B.C. second century. The highest reputation, however, was gained by the formula originated presumably by King Mithridates VI of Pontus in Asia Minor (B.C. 132–63) and the two modifications thereof, the authors of which were the Greek physicians, Damocrates and Andromachus, both of them living in Rome in the first century. It was Andromachus who added the flesh of vipers to the ingredients.

A concern that theriac should be properly prepared was a strong impetus to the issuance of the first *London Pharmacopoeia* of 1618. The preface to the first edition (there were two versions, in May and December) refers to theriac as "especially precious" and discusses the problems associated with its preparation.

> In order to cure, the first requirement is to secure the most wholesome medicine. Moreover, it is advisable, in the interest of your health, that no one should establish a new apothecary shop, unless he has endowed the same with salutary remedies and has given care to truth, in order that the medicaments may be prepared honestly and without adulteration, to your benefit, reliably and without error. Furthermore, it is experience that takes precedence over theory . . . . Accordingly, we do not only instruct, but we impose and enforce one and only one law and one method of compounding, from which we would allow no deviation whatsoever, not even that of a finger's breadth, so to speak. We do this in order that physicians as well as pharmacists being, as it were, strung on the same thread, may work in harmony and proceed on a cooperative basis, the former in a more secure mode of prescription, and the latter in a more accurate compounding of preparations . . . .
>
> There exists until now another, perhaps even more dangerous, plague which our book will counteract, namely the very noxious fraud or deceit of those people who are allowed to sell most filthy concoctions, and even mud, under the name and title of medicaments for the sake of profit and instigated by sordid avarice, yea even adulterate most of those medicaments which we esteem especially previous, such as Theriac or Mithridates or Alkermes, and others, these products becoming in this wise not remedies but poisons, not useful but destructive to the patient. Such criminal murderers must be subdued by this our censor office—if need be by the lash or even by the fork. Perhaps, however, if can be accomplished according to English custom through the aid of a book of remedies, which may at the same time help the poor patients whose life and health we have endeavored to serve with this, so to speak, sacred code.

The preface is thought to have been written by Sir Theodore de Mayerne, M.D., physician to King James I.[6]

In 1618, *Theriaca Andromachi* contained 64 ingredients, animal, vegetable, and mineral, including opium and troches of viper. These were all mixed together in old wine and honey *secundum artem* (according to the apothecaries' art). This astonishing mixture persisted more or less unchanged, particularly with respect to its most significant ingredients, opium and dried viper, for another century.

In an essay entitled *Anti-theriaca: An Essay on Mithridatium and Theriaca*, Heberden traced the history of theriac from the time of King Mithridates, referring to theriac as a "plausible imposture" from earliest times, since King Mithridates' own recipe had in fact been found by Pompey to consist of only "one or two trifling receipts." Furthermore, Heberden argued, since the poisons known to the ancients were in fact mainly relatively harmless vegetable substances, why should their alleged antidotes have any more validity than the so-called poisons themselves?

"Would it not be as strange to make use of them, as of the charms and amulets which are delivered to us as preservatives from witchcraft, and evil eye, or the power of any malicious Demons?" he asked.

Heberden bolstered his speculative arguments with some discussion of the dangers of carelessly prepared narcotic mixtures, a discussion that sounds strangely modern as well as evocative of the 1618 preface quoted earlier with which Heberden may have been familiar.

> But its use may be of ill consequence, not only in the hands of the vulgar, but even of a skillful Physician; for Opium or any powerful drug, mixed up into an electuary with so many other things is against all rules of pharmacy; the prescriber lies too much at the mercy of the person who mixes the ingredients whether what he gives for an ordinary dose shall not contain a dangerous or fatal quantity of opium: and indeed it is hardly to be expected in such a multiplicity of ingredients that the usual dose will contain a just proportion of all of them, and of course the Physician will be greatly in the dark whenever he prescribes it. There are not wanting instances of such ill effects from the *Mithridatium* and *Theriaca* as much have been owing to the patient's having more than his share of Opium. It is very probable that this was long ago experienced, which gave occasion to the commendations bestowed upon Old *Theriaca*, for Galen tells us that the use of keeping it for some time is to mitigate the strength of the Opium: (which however, keeping will not do to any purpose). Another reason has been since found out; namely, that age resolves the several parts into one uniform mass: upon these two accounts the practice of preferring such as has been laid up till it is thirty or forty years old, prevails to this day. This surely lies extremely open to censure; for would it not have been better to have put less Opium in it at first? Did it enter there, only that it might go out again? Besides, together with the strength of the Opium, the virtues of the Aromatics will exhale and leave the mass, if not quite spiritless and unactive, at least much altered from what it was at first.
>
> Lastly, this *farrago* is very apt to ferment, which fermentation, while it lasts, is said to exalt the power of the Opium to a degree of strength three or four times as great as it had before, and a common dose may by those means be so much stronger than was intended, which is a danger not commonly thought of nor easily avoided, and cannot be balanced by any real virtues belonging to these medicines.

Heberden, an esteemed member of the august College of Physicians of London finished his essay by suggesting:

> Among the many eminent services, which the authority of this learned and judicious Body hath done to the practice of Physic, it might not be the least that it had driven out this medley of discordant Simples; which, perhaps, has no better title to the name of *Mithridates* than as it so well resembles the numerous, undisciplined forces of a barbarous King, made up of a dissonant crowd collected from different countries, mighty in appearance, but in reality an ineffective multitude, that only hinder one another.

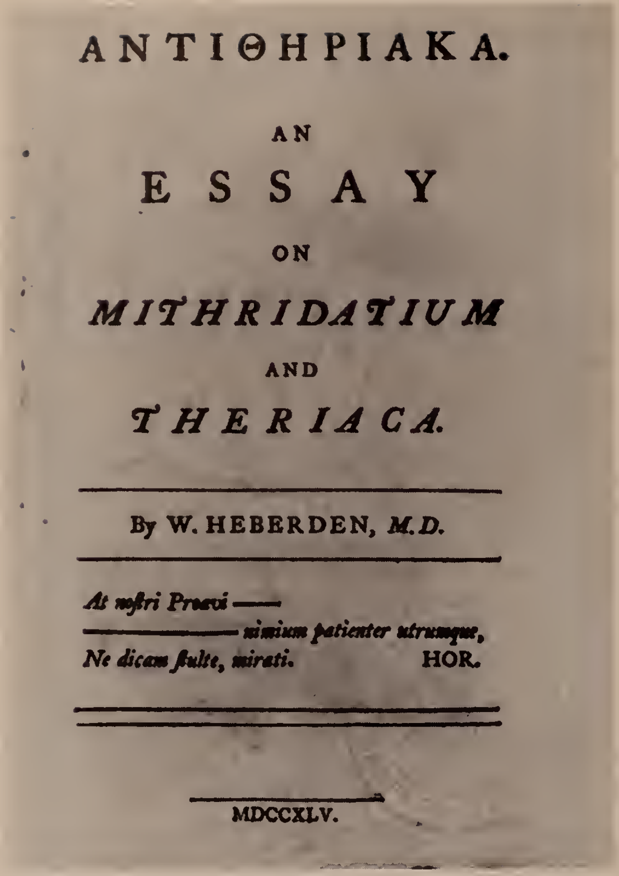
During the earliest years of his long and distinguished medical career, Heberden served as Linacre lecturer in physic at his alma mater, St. Johns College of Cambridge University, from which he received his medical degree in 1739.[7] Although his lectures on materia medica have not survived as such, it is likely that his academic responsibilities, along with his own classical inclinations, were the stimulus to his abiding interest in poisons, actual and alleged, and their remedies, actual and alleged. His 19-page *An Essay on Mithridatium and Theriaca*, which he published in 1745, may have been one of his Cambridge lectures.

Although Heberden's essay was a cogent as well as critical diatribe, theriac and its several forms remained ensconced in the *London Pharmacopoeia* published the next year, the fifth edition of 1746, as it had been in every edition since the first in 1618.[8] But neither theriac nor mithridate appeared in the next issue of the *London Pharmacopoeia* in 1788; after this time their position as respectable medicaments essentially disappeared from Western medicine, and their continued use was limited to mountebanks and other quacks. In all probability, the American expression "snake oil," still used to refer to any quack medicament but particularly to one enthusiastically espoused by its purveyors, derives from *theriac* in which vipers were a vital ingredient from before the time of Andromachus.

Pliny included a recipe for *theriaci*, or viper lozenges, in his *Natural History*, published in the first century A.D.

Although he faithfully reported everything he knew, Pliny[9] could not restrain himself from an editorial comment on the "elaborate mixture called *theriace*." He scoffed at the fact that "the Mithridatic antidote is composed of 54 ingredients, no two of them having the same weight," and said, "Which of the Gods in the name of Truth fixed these absurd proportions? . . . It is plainly a showy parade of the art and a colossal boast of science . . ." .[9] Despite other occasional skeptical statements, theriac and its various varieties, some simpler, some more complex, were important medicines from ancient times until Heberden's day.

Heberden's essay against theriac is now a relatively



ANTIΘΗΡΙΑΚΑ.

AN

ESSAY

ON

MITHRIDATIUM

AND

THERIACA.

By W. HEBERDEN, *M.D.*

At noſtri Proavi ——

—————— nimium patienter utrumque,

Ne dicam ſtulte, mirati. HOR.

MDCCXLV.

Heberden's essay against theriac.

inaccessible publication (see Figure). The copy that I have studied, a microfilm from the collection of the National Library of Medicine, indicates no printer, suggesting that Heberden had had it privately printed. Such personal publishing ventures were not unusual in the eighteenth century; in 1759 Heberden also underwrote the printing of a pamphlet about smallpox inoculation which he coauthored with Benjamin Franklin, then counselor-at-large of the American Colonies in London.[10]

Heberden's three Gulstonian lectures "Concerning Some Observations on the History, Nature, and Cure of Poisons," which were read at the London College of Physicians in August 1749, dealt with theriac in a less vitriolic but still emphatic fashion[11]:

> I cannot conclude without observing the great danger that would arise from using Mithridatium and Venice treacle as antidotes to narcotic poisons; for the opium that is in them, will conspire with the poison to destroy the patient; and this, I am afraid, has sometimes been done through ignorant advisers [sic], who were carried away by the general reputation of these compositions, without any regard to the nature of their ingredients, and their necessary effects.

Several manuscript copies of these lectures are in existence, but no typescript has yet been produced. I hope to do so from a photocopy of the original manuscript, in Heberden's own hand, which is in the library of the College of Physicians in London.

The possibility of an evolution of Galen's ideas was not taken seriously before the end of the eighteenth century; up until then Galen's works were still being taught at leading British schools of medicine.[9] But, as Galen stated on more than one occasion, the two legs of medicine are "reason and experience." [12]

Heberden's monograph was an important push toward the evolution of modern, post-galenic pharmacy as we know it. Although Galen himself said, "Nothing stands in our way of our becoming better than those before us," and "the best sect . . . is the continuous endeavor to find out what is true and to discern what is true and false by others. . . ."; these may have been among his few pronouncements that did not become established doctrine. Most of his authoritative, often egocentric, pronouncements indicated an absolute certainty of the medical practices and medicaments he recommended, a certainty that probably went far toward making disagreement with any of them tantamount to medical heresy. After Heberden's time, the centuries'-old arguments about theriac (such as its best version and which of its numerous ingredients were indispensible, and for which substitutions could be safely made) diminished but seemed not to have disappeared.

Demirhan,[13] a Turk, recently reported that the Turkish word for addict, *Tiryaki*, derives from *Tiryak*, the word for theriac. Tiryak is still sold in Turkey, but none of the numerous preparations analyzed by Demirhan contained more than 10 ingredients, all of them spices and herbs, and none contained even a trace of opium.

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Acknowledgment. Numerous persons and institutions helped in this study of Heberden and theriac, including: Helen St. Clair, Edith Ross, and June Swafford of the Wilmington Medical Center; Christine Ruggere of the Library of the College of Physicians of Philadelphia; and the staff of the History of Medicine Division of the National Library of Medicine. Ward Briggs, Jr., Ph.D. and Rhoda Schall, M.S., translated Greek and Latin phrases encountered in Heberden's manuscript and elsewhere. The author acknowledges their aid with thanks, and also the financial support of the Departments of Family Practice and Medicine of the Wilmington Medical Center.

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Marijuana and tobacco smoking together are hazardous

Young Americans are smoking a dangerous combination: marijuana and tobacco.

Those who smoke them both run an especially high risk of lung cancer, according to a physician-scientist speaking at the Annual Meeting of the American Lung Association and the American Thoracic Society here this week.

In a 1980 survey of 18 to 25 age group, 35.4% smoke marijuana; 42.6% smoke tobacco.

Donald P. Tashkin, MD, of Los Angeles said that marijuana smoke contains not only the same respiratory irritants that are found in tobacco but also delta-9-tetrahyrocannibinol (THC) (the principal active ingredient in marijuana responsible for the "high"), at least 60 other THC-related compounds not found in tobacco and 50% more cancer-producing hydrocarbons than are found in tobacco smoke.

"It's reasonable to think that marijuana smoke is more irritating to respiratory tissues than tobacco, which is a known cause of lung cancer." Dr. Tashkin said, "The combination of deeply inhaled marijuana smoke and tobacco smoke has been found particularly to provoke microscopic changes including abnormalities that are associated with the development of lung cancer and chronic obstructive pulmonary disease.

Dr. Tashkin said that a recent study of people who smoke hashish (a potent form of marijuana) and tobacco as well had shown much greater changes in the trachea from irritants than had been seen among users of either hashish or tobacco alone.

"A recent Hawaiian study showed that very young people (under the age of 10) are experimenting with marijuana," Dr. Tashkin said. He noted that there is more experimentation with marijuana among young people, but regular use has declined. "I think we are getting the message to young people that there are health hazards in marijuana," the physician said.

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[1] *Promoting Health/Preventing Disease Objectives for the Nation* U S Department of Health and Human Services, November 1980.

*An *in vitro* simulation of gastric ulcer acid level conditions based on standard laboratory methodology Data on file. Ayerst Laboratories. Acid-neutralizing capacity of RIOPAN and RIOPAN PLUS = 13.5 mEq/5 ml or tablet.

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Serendipity in our files

. . . originally published in the New York State Journal of Medicine, March 1901; 1:50.

The Word "Disease."—A member of the Association, with the signature Iatros, inquired if it would not be advisable to substitute for "disease" a more significant word. The query was referred to another member, who, signing his answer Medicus, said:

"While it is acknowledged that 'disease' does not convey the idea that modern physicians conceive of those abnormal conditions of which *dis*-ease is but a symptom, the time is not yet ripe to discard this word, which, throughout the medical world, is accepted to signify some disordered bodily function or some alteration of structure, and has been so understood for a score of centuries by civilized nations, each, in its own tongue, using an equivalent term.

"That the word 'disease' has been used in differing senses is shown in the works of ancient and even modern writers. One example would seem sufficient. In Chauser's 'Troilus and Creseide,' the following occurs:

And therewithall Creseide anon he kist,
Of whiche certain she felt no disease,

meaning that she felt no *dis*-ease, no lack of ease from the osculation, and surely no disinclination to be kissed.

"In the old French is the word *desaise*, and in the new, *malaise*, signifying literally *no case* in the one and *ill ease* in the other case. It is true that the itch-mite gives *dis*-ease, even pain, in the skin, and that disorder of a function often causes much *dis*-ease and distress; nevertheless the itch continues to be called a skin disease, and a disordered function a functional disease.

"The original use of the word 'disease' was due probably to the fact that early beginners of the study of human ailments looked at their phenomena and sought not to discover their essence; hence the faulty symptomatic basis of medical nomenclature. It may be more than a century before we are rid of the ill-effects, on medical literature, of this symptomatic basis of nosonymy, and not until then need we hope for a realization of the ideal of Iatros, who, in the meantime, may take his choice among those convenient synonyms of 'disease,' such as affection, ailment, complaint, distemper, illness, infirmity, sickness, etc.

"The improvement in terminology should keep pace with medical advancement, but this improvement is likely to be much slower than students of the science of physic and practisers of the art of healing have a right to expect, owing to an obstinate adherence to mouldy, inexact terms which, in many minds, long usage seems to sanction."

. . . The preceding short article elicited the following correspondence that can be found in the New York State Journal of Medicine, 1901; 70, 92, 118.

THE WORD "DISEASE."

To the Editor of the New York State Journal of Medicine:

Sir: Allow me to add a few remarks to the paragraph under this heading, in your issue for March, 1901. Why *Iatros* finds fault with the harmless word "disease," a useful synonym of sickness, illness, infirmity, I cannot understand, but, since he calls himself *Iatros*, I wish to ask him to direct his attention to a number of Greek words which are not appreciated as they should be, to ugly hybrids which have no right to existence, to words which furnish conclusive evidence that the one who uses them is wanting in regard to general education, and, finally, to words which are entirely unscientific.

Here are a few words which a man who calls himself *Iatros* may well consider: "Nosology" and "pathology" are to be distinguished, and "pathology" should not be employed when in reality "nosology" is indicated. "Asthenia" in the oldest ancient Greek, and even until the present day in the Greek language means "sickness." It does not mean "weakness." The word "neurasthenia" will not be permissible when we shall have made a little more progress and do not need to resort to a word where conceptions are wanting. "Atonia" means relaxation, and nothing else. It is hardly necessary to tell *Iatros* that "adynamia" means "weakness." No language is strong enough to condemn the word "technique" as it is used by some in place of "technic," or as the incomprehensible English genius will have it, "technics."

"Technique" means "technical." Let us drown the term "nervous dyspepsia" in the bottom of the sea, where it is deepest. Such a condition as nervous dyspepsia does not exist.

Then as to the word "terminology," in the concluding paragraph of the communication. *Kalos* in the oldest ancient Greek meant "beautiful," but since the Greeks understood that all that is beautiful is good, the word first was used as a synonym of good, and now it means good altogether. Hybrids are not beautiful, and, therefore, they are not good. A man who calls himself *Iatros* will agree with me that "terminology," therefore, is not a good word. Let us use one of the pure words, of which several exist, in its place.

"ALLOS IATROS."

New York, March 14, 1901.

THE ADJECTIVE MEDICAL

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: I wish to express my satisfaction with the answer of *Medicus* to the query relating to the word "disease," as published in the March number of the JOURNAL, and to call attention to the fact that in his answer such expressions as "medical world," "medical nomenclature," "medical literature," "the science of physic," "the art of healing," "physicians," etc., are used. Doubtless these terms are proper, in the present state of our knowledge, but their definition, or, at least, their explanation, would be of interest to the reader. Will *Medicus* give his views thereon?

"IATROS,"

New York, March 9, 1901.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: In reply to the letter of *Iatros*, which you have courteously submitted to me, prior to its publication, I beg to express myself as follows:

"Define your terms" has long been one of the outcries of philosophers, but this is easier said than done. Our language is so full of arbitrary terms that only a few, comparatively, can be defined to the satisfaction of critics. In endeavoring to comply with the request of *Iatros*, some reasons will be offered for the present use of the terms in question, without, however, undertaking their definition.

"Medical world" may not be a strictly correct term, but the adjective gives it the merit of brevity, and it is used in the sense of a congregation of healers of human ailments. Medical nomenclature" is not defensible, for, properly, it should be applied to the names of healers, or to the names of medicinal agents, but not to the names of human ailments. Therefore, the "nomenclature of diseases" should have been used instead of "medical nomenclature." "Medical literature" is correct, since it relates to the writings of healers. Until the science of physic shall have taken many more of the longest strides in its advancement, the first and third terms in question will continue to be used. In those early times, when only wounds or other external ailments required special ministration, the minister was designated, probably, by some term equivalent to "healer," for he endeavored to make the sufferer hail, or whole. The Greeks styled him *Iatros*, "healer," the Latins, *Medicus*, also meaning "healer."

Medicine clearly implies the art of healing. The physician may, or may not, practise the art of healing. He may confine himself to the study of the laws of health and of the nature of human ailments, and teach the science of physic, but leave to others the practise of the art of healing.

"MEDICUS."

New York, March 15, 1901.

"PRACTITIONER."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: Allow me to call attention to the words "practiser" and "practician," which, instead of "practitioner," *Medicus* used in his replies to my queries published in the March and April numbers of the JOURNAL, and to ask if the introduction of such words is warranted, in view of the fact that "practitioner" has been so long in general speech, in the essays of able men, in the textbooks, and "in the titles of medical societies and magazines? If, however, *Medicus* should give satisfactory reasons for these innovations, I, for one, would gladly accept the proposed terms.

"IATROS."

New York, April 15, 1901.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: In answer to the above letter of *Iatros*, referred to me by you, I have the honor to say that it is delightful to be engaged in argument with an antagonist like *Iatros*, who is so temperate, so considerate, and so keenly appreciative of the amenities of disputation, and whose well-known erudition entitles him to traverse any expression that, at first sight, may seem unwarranted or untimely. However, as will be shown below, "practiser" is not an innovation; on the contrary, the real innovation is "practitioner," whose construction does not appear to be in accord with the canons of word-building. Could "practitioner" have been legitimately coined, the "practitioner" would have been said to practition medicine, law, or something else; but there being no such infinitive as to practition, the introduction of the substantive was not happy.

"Practitioner" occurs in Captain John Smith's works, which appeared during the first quarter of the seventeenth century, and also in Minsheu's *Guide Into the Tongues*, 1627. No less a writer than Jonathan Swift afterward used the word. It is not very clear how it crept into the language, but it is well known that those men who kept drugs and performed minor operations in a place which they named "the surgery," styled themselves "general practitioners." The term seems to have been accepted by the profession in England without question and without remembering that the good word "practician" had been in use long before, and that the redundant *er* had been suffixed and at length rejected. It is, however, possible that the expression arose from the wrong enunciation of "practicianer" into "practitioner." "Physician" was then commonly spelled "physitian," or even "physition." The advocates of "practicianer" or of "practitioner," to be consistent, should countenance "physicianer," "physitioner," "diagnosticianer," "diagnostitioner," "obstetricianer," "obstetritioner," "electricianer," "electritioner," "statisticianer," "statistitioner," etc.

"Practiser," designating one who practises something, requires qualification—as a medical, a legal practiser, or a practiser of medicine or of law. However, good writers often regard the substantive as sufficient by itself, the context suggesting the right qualification. The following references may serve as evidence that "practiser" is not an innovation, since it was used more than two centuries before "practitioner" was invented. The verb "to practise" appears in the writings of John Wyclif, during the second half of the fourteenth century.

"Practiser," in the form of the times, is set down in Piers Plowman:

"*Till he was parfit practisoure if any peril felle.*" Chaucer's "Prologue to the Canterbury Tales" contains the word with *k* instead of *c*, and without the final *e*:

"*He was a parfit praktisour.*"

"Practiser" occurs in Raleigh's "History of the World." Ben Jonson has "Detractors and practicers against them," using the *c*.

In Shakespeare's "All's Well That Ends Well," 2. I., the *King* says to *Helena*, who offers to cure his infirmity:

"*Sweet practiser, thy physic I will try.*" In his "Othello," I. 2., the noun is repeated:

"*A practiser of arts inhibited and out of warrant*," In the first part of "Henry VI.," 3. 2., the word "practisants" is used for accomplices in a plot:

"*Here entered Pucelle and her practisants.*"

That great master of language used the verb in many differing significations, as, "Sirs, I will practise on this drunken man," meaning I will play a trick upon him. "My uncle practises more harm to me"; that is, meditates more harm. "You have practised upon the easy-yielding spirit of this woman," etc., etc. In the noun, sometimes he substitutes *c* for the *s*.

Beaumont and Fletcher and other writers of their time used "practise," "practiser," "practice," practicer." In the King James Bible the *s* is invariably used in "practise."

Space permitting, many more examples could be taken from other sources to show that "practiser" is no innovation, that it is rightly coined, and that of the two forms of spelling the *s* is the preferred both in the noun and the verb.

Although "practiser" is now so much used by eminent authors, some writers may prefer "practician," as others do "physician," since "practician" is more euphonious and shorter than "practitioner."

"MEDICUS."

New York, April 19, 1901.

TO "DIAGNOSE."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: Forty-five years ago "to diagnose" was declared, by a high authority, incorrectly coined and unfit to take the place of to diagnosticate. In the past few years, "to diagnose" was again taken up for discussion with no lack of advocacy for this mode of expressing to discriminate or to distinguish. I am decidedly in favor of to diagnosticate, but would like to hear from *Medicus* on this subject.

"IATROS."

New York, May 15, 1901.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: The correctness of the coinage of "to diagnose" seems to me more than doubtful. One of the pleas for the term is brevity. It is not by a short term in a sentence that brevity is attained in the expression of an idea, but by the use of the fewest well chosen words. "To diagnose" was not formed from the Greek infinitive *diagignoskein* or from the noun *diagnostikos*, and no satisfactory derivation of the term appears in authoritative works, such as the *Century Dictionary*, where it is set down as signifying to diagnosticate. Since it does mean to diagnosticate, assuredly it is superfluous, and will be so regarded by philologists, all of whom are agreed that only necessary words should be coined, otherwise language would soon be sorely encumbered with useless words.

The art of discrimination came to be expressed, by commentators of Galen, in the term *diagnostikos*, diagnostics, from which arose the adjective diagnostic, as in diagnostic signs, while the discriminator was designated *diagnostes*, diagnostician. Some writers, wishing to be brief, use diagnost for diagnostician. In the early part of the last century *diagnose* was used, by the French, as a feminine noun (*la diagnose*), to signify the knowledge acquired by the observation of diagnostic signs (*signes diagnostiques*), but made use of diagnostic (*le diagnostic*), as a masculine noun, and *diagnostique* as adjective.

The advocates of "to diagnose" would be inconsistent unless they should use diagnosian or diagnosist instead of diagnostician, and also unless they should use to prognose, prognosian or prognosist instead of to prognosticate, prognostic, prognostication, prognostician.

"MEDICUS."

New York, May 20, 1901.

"PRACTITIONER."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: The dispute of the two esteemed colleagues, *Iatros* and *Medicus*, about words like "Disease" and "Practitioner" seems to me *leeres Stroh dreschen.* As long as the gentlemen sign themselves *Iatros* and *Medicus*, they might as well help me to eradicate barbarisms which are a disgrace to our scientific medical literature, which every good and truly scientific *Medicus* or *Iatros* or *Practicus* should expose.

Some thirty years ago we had a funny man in almost every sanctum of our medical journals; it was the "per orem" man. He is an impossibility now, especially since one of our medical journals some time ago gave him the coup de grace, the *Gnadenstoss.* Another funny man, the "*technique*" man, has taken his place. Now let us turn him out also!

Allow me to take this opportunity to point out a ridiculous word which should be discarded, namely, "haemophilia." *Iatros* will agree with me that "haemorrhophilia" is the proper term.

In a very learned book, edited by prominent medical men and excellent philologists, I noticed the word "cephalogramm." It is sad enough that we *Iatroi* have to suffer in hearing the everyday corruption "telegram" of the word "telegraphema," but let us severely criticise such grammatical monstrosities in our scientific literature. We are beginning to dislike hybrids; allow me to mention two out of a great number which should be replaced by words of one language. "Ovariotomy" should be "oothectomy"; "conjuntivitis" should be "epipephyctis." Some words are given a meaning which, in reality, they do not possess: "idiotisy" means peculiarity of language, and not, as we have used it, congenital deficiency of the mental faculties. We *Iatroi* call such deficiency "ilithiotis."

I shall appreciate it if *Iatros* and *Medicus* will give me an opportunity to continue this exposition. Science should not teach anything which is unscientific, and this refers to our nomenclature, which forms part of our science

"O ALLOS IATROS."

New York, May 10, 1901.

Obituaries

Arthur M. Arkin, M.D., New York City
Died May 25, 1982; age 61.
New York Medical College, Flower & Fifth Avenue Hospitals, 1945. Membership: American Psychiatric Association; Academy of Medicine; Diplomate American Board of Psychiatry and Neurology; New York County Medical Society; Medical Society of the State of New York.

Grave Baker, M.D., New York City
Died April 12, 1982; age 82.
University of Toronto Faculty of Medicine, 1923. Membership: American Psychoanalytic Association; American Psychiatric Association; New York County Medical Society; Medical Society of the State of New York.

William W. Bellan, M.D., Hicksville
Died November 26, 1981; age 69.
Universite de Liege Facult de Medecine, 1939. Membership: American Academy of Family Practice; American Geriatrics Society; Nassau County Medical Society; Medical Society of the State of New York.

Orla Avery Bennett, M.D., McGraw
Died May 4, 1982; age 85.
State University of New York Upstate Medical Center, 1927. Membership: Cortland County Medical Society; Medical Society of the State of New York.

Joel V. Bolden, M.D., New York City
Died April 27, 1982; age 80.
New York University College of Medicine, 1929. Membership: New York County Medical Society; Medical Society of the State of New York.

Herman Bolker, M.D., Atlantic Beach
Died June 26, 1982; age 75.
State University of New York Downstate Medical Center, 1928. Membership: New York Pathological Society; New York State Society of Pathologists; Fellow of American College of Pathologists; Diplomate American Board of Pathology; Diplomate American Board of Pathology; Medical Society of the County of Kings; Medical Society of the State of New York.

Richard S. Bralove, M.D., New York City
Died May 15, 1982; age 61.
Temple University School of Medicine, 1950. Membership: American Psychiatric Association; Diplomate American Board of Psychiatry and Neurology; New York County Medical Society; Medical Society of the State of New York.

Nathaniel J. Breckir, M.D., New York City
Died June 15, 1982; age 76.
Georgetown University School of Medicine, 1931. Membership: New York County Medical Society; Medical Society of the State of New York.

Sheldon Howard Calem, M.D., New York City
Died January 7, 1982; age 49.
State University of New York Downstate Medical Center, 1957. Membership: New York Roentgen Society; Society of Nuclear Medicine; Radiological Society of North America, Inc.; Diplomate American Board of Radiology; Diplomate American Board of Nuclear Medicine; New York County Medical Society; Medical Society of the State of New York.

Leslie Frederick Clary, M.D., Fort Lauderdale, Florida
Died April 30, 1982; age 81.
Queens University Faculty of Medicine (Kingston), 1927. Membership: Suffolk County Medical Society; Medical Society of the State of New York.

Charles Joshua Cullen, M.D., Stone Ridge
Died May 12, 1982; age 65.
Hahnemann Medical College and Hospital of Philadelphia, 1943. Membership: Medical Society of the County of Ulster; Medical Society of the State of New York.

Helen Ollendorff Curth, M.D., Bronx
Died June 17, 1982; age 83.
Schlesische-Friedrich-Wilhelms-Univ Med Fakultat (Prussia), 1924. Membership: Academy of Medicine; New York State Dermatological Society; American Academy of Dermatology; Diplomate American Board of Dermatology; New York County Medical Society; Medical Society of the State of New York.

Gabriel R. De La Vega, M.D., New York City
Died April 20, 1982; age 65.
Universidad de la Habana Facultad de Medicina y Farmacia, 1943. Membership: American Psychiatric Association; American Psychoanalytic Association; New York County Medical Society; Medical Society of the State of New York.

Eva C. Dienst, M.D., New York City
Died April 8, 1982; age 84.
Friedrich-Wilhelms-Universitat Med Fakultat (Prussia), 1923. Membership: Academy of Medicine; New York

County Medical Society; Medical Society of the State of New York.

Vito Dilluvio, M.D., New York City
Died June 21, 1982; age 67.
New York Medical College, Flower & Fifth Avenue Hospitals, 1941. Membership: American Academy of Family Practice; American Geriatrics Society; New York County Medical Society; Medical Society of the State of New York.

Cyril Ellis Drysdale, M.D., Northport
Died May 21, 1982; age 80.
Dalhousie University Faculty of Medicine, 1926. Membership: American Academy of Family Practice: Suffolk County Medical Society; Medical Society of the State of New York.

Elisabeth Enczi, M.D., New York City
Died April 25, 1982; age 73.
Szegedi Tudomanyegyetem Orvostudomanyi Fakultas (Szeged), 1938. Membership: Academy of Psychoanalysis; New York County Medical Society; Medical Society of the State of New York.

Emanuel Z. Epstein, M.D., New York City
Died June 16, 1982; age 80.
Cornell University Medical College, 1926. Membership: Academy of Medicine; New York State Society of Internal Medicine; American Geriatrics Society; Fellow of American College of Physicians; Diplomate American Board of Internal Medicine; New York County Medical Society; Medical Society of the State of New York.

Rudolf B. Freund, M.D., Utica
Died June 14, 1982; age 86.
Schlesische-Friedrich-Wilhelms-Universitat Med Fakultat (Prussia), 1921. Membership: American Psychiatric Association; Medical Society of the County of Oneida; Medical Society of the State of New York.

Stanley Gilbert, M.D., Tuckahoe
Died May 11, 1981; age 65.
Universite de Geneve Faculte de Medecine, 1948. Membership: Diplomate American Board of Family Practice; Medical Society of the County of Westchester; Medical Society of the State of New York.

Albert Edward Held, M.D., Boca Raton, Florida
Died June 28, 1981; age 77.
McGill University Faculty of Medicine (Montreal), 1930. Membership: American Academy of Otolaryngology; Fellow of American College of Surgeons; Diplomate of American Board of Otolaryngology; Medical Society of the County of Kings; Medical Society of the State of New York.

John Stefan Hermann, M.D., New York City
Died May 18, 1982; age 50.
Columbia University College of Physicians & Surgeons, 1957. Membership: New York Society for Clinical Ophthalmology; Academy of Medicine; American Academy of Ophthalmology and Otolaryngology; Fellow of American College of Surgeons; Diplomate American Board of Ophthalmology; New York County Medical Society; Medical Society of the State of New York.

Helena N. Hirniak, M.D., Long Island City
Died June 8, 1982; age 78.
Uniwersytet Jagiellonski Wydzial Lekarski (Cracow), 1933. Membership: American Medical Women's Association; New York County Medical Society; Medical Society of the State of New York.

Hussein A. Ismail, M.D., Batavia
Died April 6, 1982; age 43.
Abrasia Faculty of Medicine, University of Ein Shams (Cairo), 1964. Membership: Medical Society of the County of Genesee; Medical Society of the State of New York.

Frank C. Johnson, M.D., Brooklyn
Died May 24, 1982; age 79.
Meharry Medical College, 1933. Membership: Medical Society of the County of Kings; Medical Society of the State of New York.

Caryl A. Koch, M.D., Orchard Park
Died April 28, 1982; age 83.
University of Buffalo School of Medicine, 1923. Membership: American Academy of Family Practice; Medical Society of the County of Erie; Medical Society of the State of New York.

Lawrence Loewinthan, M.D., New York City
Died February 15, 1982; age 74.
University of Buffalo School of Medicine, 1932. Membership: Fellow of American College of Obstetricians & Gynecologists; Fellow of American College of Surgeons; Diplomate American Board of Obstetrics & Gynecology; New York County Medical Society; Medical Society of the State of New York.

Irving Edward Marks, M.D., Fort Lee, New Jersey
Died May 30, 1982; age 84.
Dalhousie University Faculty of Medicine, 1926. Membership: New York County Medical Society; Medical Society of the State of New York.

Vincent P. Mazzola, M.D., Brooklyn
Died June 7, 1982; age 84.
State University of New York Downstate Medical Center, 1923. Membership: Academy of Medicine; New York Obstetrical Society; Fellow of American College of Obstetricians and Gynecologists; Fellow of American College of Surgeons; Fellow of International College of Surgeons; Diplomate American Board of Obstetrics and Gynecology; Medical Society of the County of Kings; Medical Society of the State of New York.

Morris William Molinoff, M.D., Brentwood
Died May 28, 1982; age 78.
New York Medical College, Flower & Fifth Avenue Hospitals, 1930. Membership: Fellow of International College of Surgeons; Suffolk County Medical Society; Medical Society of the State of New York.

William Alfred Oliver, M.D., Brooklyn
Died January 2, 1982; age 64.
St. Louis University School of Medicine, 1944. Membership: Medical Society of the County of Kings; Medical Society of the State of New York.

M. Virginia Palmer, M.D., Greenwich, Ct.
Died June 5, 1982; age 79.
Columbia University College of Physicians & Surgeons, 1932. Membership: Medical Society of the County of Westchester; Medical Society of the State of New York.

Joseph A. Panzarella, M.D., Rockville Center
Died April 14, 1982; age 76.
George Washington University School of Medicine, 1935. Membership: Diplomate American Board of Obstetrics and Gynecology; Nassau County Medical Society; Medical Society of the State of New York.

Chandra Keshave Pasi, M.D., Herkimer
Died June 6, 1982; age 52.
University of Punjab, 1957. Membership: Medical Society of the County of Oneida; Medical Society of the State of New York.

Moses Leo Pinco, M.D., San Diego
Died May 23, 1982; age 99.
State University of New York Downstate Medical Center, 1907. Membership: New York County Medical Society; Medical Society of the State of New York.

Edith Bramwell Reilly, M.D., New York City
Died November 9, 1981; age 51.
Columbia University College of Physicians & Surgeons, 1956. Membership: American Thoracic Society; American Occupational Medical Association; American Medical Women's Association; Fellow of American College of Physicians; Fellow of American College of Chest Physicians; Diplomate American Board of Internal Medicine; New York County Medical Society; Medical Society of the State of New York.

Irving Rubins, M.D., New York City
Died May 25, 1982; age 67.
Dalhousie University Faculty of Medicine, 1939. Membership: Academy of Medicine, American Psychiatric Association; American Psychoanalytic Association; American Geriatrics Society; New York County Medical Society; Medical Society of the State of New York.

Nelson G. Russell, M.D., Buffalo
Died May 15, 1982; age 74.
McGill University Faculty of Medicine (Montreal), 1934. Membership: Academy of Medicine; American Thoracic Society; American Clinical and Climatological Association; Fellow of American College of Physicians; Diplomate American Board of Internal Medicine; Medical Society of the County of Erie; Medical Society of the State of New York.

Doreen Esther Schecter, M.D., New York City
Died June 1, 1982; age 50.
State University of New York Downstate Medical Center, 1962. Membership: American Psychiatric Association; Academy of Psychoanalysis; New York County Medical Society; Medical Society of the State of New York.

Nathan Sobel, M.D., New York City
Died April 9, 1981; age 74.
Howard University College of Medicine, 1934. Membership: American Academy of Family Practice; American Geriatrics Society; American Academy of Compensation Medicine, Inc.; New York County Medical Society; Medical Society of the State of New York.

Cornelius T. Stepita, M.D., Jackson Heights
Died May 6, 1982; age 85.
Fordham University School of Medicine, 1919. Membership: Academy of Medicine; American Urological Association; Fellow of American College of Surgeons; Diplomate American Board of Urology; New York County Medical Society; Medical Society of the State of New York.

Max Weiner, M.D., North Miami Beach, Florida
Died March 30, 1982; age 79.
State University of New York Downstate Medical Center, 1926. Membership: Medical Society of the County of Queens; Medical Society of the State of New York.

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DIET AND CORONARY HEART DISEASE

Part I of three views on the diet–heart issue

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Arteriosclerosis, commonly described as hardening of the arteries, has been recorded for centuries. Atherosclerosis is a type of arteriosclerosis characterized by a deposition of fatty substances (primarily cholesterol and cholesterol esters) in the intima of the medium and larger arteries. Scarlike, fibrous tissue may build up around the deposit, forming a plaque which may become calcified. As the plaque protrudes into the lumen (opening) of the vessel, a progressive narrowing occurs until, in some cases, total obstruction or occlusion takes place. When the narrowing of coronary arteries is severe, the result is chest pain (angina pectoris); complete occlusion leads to myocardial infarction and often sudden death. Occlusion of one of the arteries to the brain causes a stroke; in arteries of the leg, claudication (pain and lameness) and gangrene; and occlusion of the renal arteries may cause hypertension and poor renal function.

This article will deal primarily with coronary atherosclerotic disease which is the major cause of death and disability in the United States, accounting for an estimated two-thirds of a million deaths each year.

Theories of Atherosclerosis

The pathogenesis of coronary atherosclerosis is complex, and multiple factors are involved. The accumulation of large amounts of lipids in the arteriosclerotic plaque has lead to the so-called "lipid hypothesis." The credibility of this hypothesis is based on the frequent occurrence of excessive amounts of cholesterol and lipids in lesions, the positive association between elevated serum lipids and atherogenesis in man and animals, and the association between specific diseases and genetic disorders of lipid metabolism. Another theory regards atherogenesis as a process involving the organization and degeneration of mural thrombi (arterial blood clots) into atherogenesis plaques. A more recent theory suggests that benign neoplastic changes in the smooth muscle cells of the arterial wall may initiate atherosclerotic plaques, but there is considerable evidence against this hypothesis. These theories are not mutually exclusive. It is not a case of one theory against another. Although the lipid hypothesis has several variants which propose specific mechanisms through which it may operate, it regards atherogenesis as a process intimately concerned with and due to abnormal lipid metabolism. There is a significant amount of supportive information relating to this theory.[1] It is important to emphasize two key points: (1) increasing levels of plasma cholesterol are closely associated with increasing rates of atherosclerosis, and (2) dietary fats increase cholesterol.

Evidence for the lipid hypothesis has come from epidemiological and animal studies. Epidemiological studies, both international and in the United States, have repeatedly shown high degrees of correlation between the intake of cholesterol and other lipids and the prevalence of coronary heart disease in various populations.[2] Almost without exception, animal studies show that experimentally induced hypercholesterolemia is followed by the accumulation of cholesterol in the large arteries and, under certain conditions, even more advanced manifestations of arteriosclerosis are produced.[3] Conversely, work in monkeys has revealed a causal relationship between dietary cholesterol or saturated fat, plasma cholesterol and regression of atherosclerosis. Finally, work on cultured cells has shown that certain lipoproteins from normal or hypercholesterolemic serum are rapidly taken up by arterial smooth muscle, endothelial cells, and skin fibroblasts.[4]

Current knowledge about the pathogenesis of the atherosclerotic plaque indicates that atherosclerosis begins early in life. It becomes clinically important when excessive arterial smooth muscle cell (SMC) proliferation is accompanied by the accumulation of large quantities of extracellular and intracellular cholesterol esters and other lipids as well as by the excessive production of collagen, elastin and possible esters and glycosaminoglycans. These biochemically complex lesions, with their tendency to promote thrombosis and arterial wall weaknesses, lead to a variety of clinical effects. Scientists have suspected for a long time that these effects may be retarded or prevented if arterial SMC proliferation and lipid deposition are prevented. It has been proposed that significant reduction of plasma lipids in patients with developing atherosclerosis will inhibit further progression of the disease. It may lead to significant regression, a decrease in the size as well as evidence of healing of the advanced plaque.[5]

Lipoproteins

The major lipids found in the blood are cholesterol, triglyceride, and phospholipid. They circulate in the blood in the form of lipoproteins that vary in size, weight and amounts of cholesterol and other lipids. There are four major classes of lipoproteins, namely, chylomicrons, very low density lipoproteins (VLDL), low density lipoproteins (LDL), and high density lipoproteins (HDL). Chylomicrons and VLDL are the main carriers of triglyceride and LDL is the main carrier of cholesterol, although HDL also carries substantial cholesterol. High density lipoproteins (HDL) are the heaviest of the lipoproteins and contain the highest proportion of protein. Having a high level of HDL seems to be desirable because there is evidence that this lipoprotein carries cholesterol away from tissues including the arterial intima. Low density lipoproteins (LDL) are thought to be the major source of cholesterol and cholesterol esters in the atherosclerotic plaques, and deposition of cholesterol in plaques is accelerated when LDL concentrations are evaluated.[6] Examination of coronary arteries by X-ray or necropsy has shown that the severity of atherogenesis is greater in individuals with higher levels of LDL and/or with lower levels of HDL. These studies have not revealed any threshold levels of LDL below which atherosclerosis becomes apparent. This finding is in conformity with epidemiologic findings within populations and in

The Power of Intervention

Dietary intervention to reduce serum cholesterol levels has not been successful in reducing overall mortality from CHD in middle-aged persons. Most scientists admit that proof of benefit has not been demonstrated for fat modification of Western diets. The FNB believes that a properly conducted and positive clinical intervention trial of the effect of diet (and/or drugs) on morbidity and mortality from coronary artery disease, or mortality from all causes, is necessary before one can advise physicians and the public to adopt a regimen designed to prevent this disease.

The data needed on the effect of diet on mortality in patients with coronary artery disease is not available. Data has been summarized for 11 intervention trials in 5 countries, in which diet or drug therapy aimed at lowering serum cholesterol was studied for an effect on heart attacks and overall mortality.[12] These clinical trials involved about 5,000 men studied for 40,000 man years. A 5-16% decrease in serum cholesterol was accomplished without affecting overall mortality. These subjects ranged in age from 30 to 59 years. In some studies, the frequency of coronary events was reduced but other causes of death, notably cancer, increased.

The results of a 5-year clinical trial on the effects of reducing elevated plasma cholesterol levels on the incidence of CHD were published in 1978.[13] This study involved 30,000 healthy male volunteers, 30 to 59 years of age.[14] The drug clofibrate, an inhibitor of VLDL synthesis by the liver, was employed as the agent for lowering plasma cholesterol. Three equal-sized study groups of about 5,000 men each were then selected. The first two consisted of all those in the upper third of the serum cholesterol distribution whose mean cholesterol was 248 mg/dl. Half were assigned at random to a clofibrate-treated group (Group I) taking 1.6 gm daily; the other half (Group II) constituted the "high cholesterol" control group and took identical capsules containing olive oil. Group III were men randomly chosen from the lowest third of the serum cholesterol distribution with a mean of 181 mg/dl and constituted a second "low cholesterol" control group. The study lasted 5 years. The mean reduction in serum cholesterol in the treated group was 9%. The overall incidence of "major" ischemic heart disease in the clofibrate-treated Group I was significantly lower than in the control Group II with comparably high cholesterol levels, but the incidence in the low cholesterol control Group III was the lowest of all. The difference between groups I and II was accounted for by the difference in incidence of *non-fatal* myocardial infarctions with no difference in fatal infarctions or sudden deaths. There was also no difference between these groups in the incidence of angina pectoris.

One important finding was that there were significantly more deaths in the clofibrate group than in the high cholesterol control group. This excess of deaths was particularly due to a group of non-cardiovascular diseases, especially those of the gastrointestinal tract.

Spontaneous Changes in CHD

From 1920 to 1960, the mortality rate from CHD in the U.S. increased drastically. Strangely enough, beginning in 1963, it began to decrease at the rate of 1-2% per year and is still declining. There is no clear single reason for either the rise or fall.[15] Since 1920, animal fat intake in this country has been constant, and the increase in the total percent of calories from fat has been due to increases in intake of vegetable oils. Dietary cholesterol intake did not change significantly from 1900 to 1970. Cigarette smoking increased, but the curve showing the rise in lung cancer has a different shape from that showing the rise in coronary disease. The fall in the mortality rate from CHD during the past 20 years is equally mysterious.[15] The cause may in part be a result of a combination of small changes in the cigarette smoking, blood pressure control, improved physical fitness, improved general health care, and small changes in the diet toward a more polyunsaturated fat intake. The changes in serum cholesterol levels over the past 20 years have not exceeded 3-5% (5-12 mg/dl), which is not sufficient of itself, to account for the change in the mortality rate from CHD.

Summary

Toward Healthful Diets was published as the first step in an evolutionary process leading through research and education to a workable dietary strategy for the prevention of the chronic degenerative diseases. This report has provoked a great deal of debate and dissent in professional circles. Notable among these was the presidential address of Thomas James, M.D., to the AHA in 1980[16] who said, "Today, I want to share with you my growing concern about overpromise in coronary disease. My remarks center around the credibility of the AHA and medical science generally." He continued making four main points in his address: (1) we should be more explicit, i.e., make full disclosures of the basis for public recommendations; (2) we should distinguish between risk reduction and true prevention for individuals; (3) we should be aware of the coercive power of public advice, i.e., in generating regulation, and (4) we should admit that we do not know the full effects of dietary restriction in childhood.

In this climate of uncertainty, what can be done? The FNB believes that one should emphasize variety and moderation in diet, weight control, blood pressure control partially through reductions in dietary salt, physical fitness, avoidance of cigarette smoking and excessive alcohol, and maintenance of a good spirit. The report concluded by saying, "Good food that provides appropriate proportions of nutrients should not be regarded as a poison, a medicine, or a talisman. It should be eaten and enjoyed."

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Medical News

Brooklyn is proud

In reviewing the past year, the favorable jury ruling for the College and the rest of medicine in the Wilk case, brought by a group of chiropractors against all of us, was an important victory. As you know, it is still on appeal. If we are upheld, it will demonstrate that we have functioned in the public interest when we set and maintain standards of practice intended to protect patients against inadequate health care. The determination of the American College of Radiology and the efforts of its officers during the last four years, and particularly those of Harold Schwinger, played a major role in maintaining the resolve of the principal defendants to contest the case. This effort clearly has established radiology and the College as a leader in the community of medical specialties. There was a strong effort made by some of the other defendants to persuade the American College of Radiology to accept the settlement, which I think history has shown would have been a tragic mistake. The strong bulwark of that resolve, on the part of the American College of Radiology, rested principally with Harold Schwinger.

New Director of Radiology

Frank M. Purnell, M.D., has been appointed director of the department of radiology at Lenox Hill Hospital.

Honored by national group

The American College of Physicians (ACP) announced that Stephen C. Vlay, M.D., of Stony Brook, New York, and John A. Balint, M.D., of Albany, New York, have been elected to Fellowship.

Undergraduate nursing students scholarships available

Over $70,000 in scholarships for undergraduate nursing students will be available in the 1983 Scholarship Program of the Foundation of the National Student Nurses' Association. In 1982, NSNA awarded 56 students of nursing over $62,000. The Scholarship Program, now in its 10th year, has awarded 91 students $229,000 in scholarships.

Applications will be available in September 1982 from the Foundation, and awards will be made in April 1983. Deadline for application is February 1, 1983. The scholarships are available to nursing students based on need, academic achievement, and demonstrated commitment to nursing through involvement in NSNA and/or school and community activities.

Many of the scholarships have special criteria set by FNSNA and the sponsoring organization. Applications and complete details are available from the Foundation of the National Student Nurses' Association, 10 Columbus Circle, New York, New York 10019.

Record sum raised for research

The Juvenile Diabetes Foundation (JDF) International has awarded $4.9 million to diabetes research for the coming year, announced Roger O. Goldman, chairman of JDF's Board of Directors. This makes a $1 million increase over last year's research funding, bringing JDF's cumulative research support to over $18 million in its twelve years as a voluntary health agency. This money will be used to fund postdoctoral fellowships, career development awards, research grants, and the National Diabetes Research Interchange, a tissue-bank network at the University City Science Center in Philadelphia. The Foundation will also be funding four international workshops during the year.

The research figures were announced to over 500 volunteer delegates and researchers at the Foundation's 12th Annual International Conference earlier this month in Dallas, Tex. The four-day conference drew delegates from JDF's 158 chapters in 39 states and 16 countries, as well as leading medical scientists involved in diabetes research and treatment from around the world.

JACC announces a new editor

Simon Dack, M.D., F.A.C.C., of New York City, has been named editor-in-chief of the new Journal of the American College of Cardiology. A 70-member editorial board has been appointed. Members of this Board will help formulate the editorial policies and directions for the new journal. New York State physicians include: Jeffrey S. Borer, M.D., F.A.C.C., New York City; Peter F. Cohn, M.D., F.A.C.C., Stonybrook, New York; Ephraim Glassman, M.D., F.A.C.C., New York City; Stephen J. Gulotta, M.D., F.A.C.C., Lake Success, New York; Robert I. Hamby, M.D., F.A.C.C., New Hyde Park, New York; Lawrence R. Krakoff, M.D., F.A.C.C., New York City; James R. Malm, M.D., F.A.C.C., New York City; Milton Packer, M.D., F.A.C.C., New York City; and Frank C. Spencer, M.D., F.A.C.C., New York City.

Maimonides appointment

Joseph N. Cunningham, Jr., M.D., has been appointed director of surgery at Maimonides Medical Center, Brooklyn, New York.

Downstate participates in new national registry

Downstate Medical Center (SUNY), Brooklyn, is one of 35 centers involved in a national effort to obtain new insights into a disease called primary pulmonary hypertension, a life-threatening, relatively rare condition. The

National Heart, Lung, and Blood Institute, part of the federal government's National Institutes of Health at Bethesda, Md., is establishing a patient registry to obtain and evaluate data on the disease. Physicians in Downstate's area are being asked to refer patients to the Medical Center.

Patients who are eligible for entry into the register include children older than one year of age and adults who have pulmonary hypertension of unknown origin. The 35 participating medical centers hope to enroll a minimum of 150 patients a year for the three-year period of the study. Specific information will be recorded on a patient reporting form and forwarded to a data and coordinating center where the information will be collected and analyzed.

For additional information or for patient referral, physicians are asked to contact Harold A. Lyons, M.D., at the Downstate Medical Center-SUNY in Brooklyn, New York.

American Psychiatric Association announcements

Naomi Goldstein, M.D., New York City psychiatrist, has been elected to the Board of Trustees of the American Psychiatric Association.

Harvey Bluestone, M.D., director of the Department of Psychiatry at Bronx-Lebanon Hospital Center and associate professor of psychiatry at Albert Einstein College of Medicine, has been voted Assembly Speaker-Elect of the 27,000-member American Psychiatric Association.

Recipient of Walter Reed Medal

Harry Most, M.D., has been named the 1981 recipient of the Walter Reed Medal of the American Society of Tropical Medicine and Hygiene.

$2,000 Grant for minorities medical program

The Clark Foundation of New York City has awarded a grant of $200,000 to support the undergraduate portion of the Rensselaer Polytechnic Institute/Albany Medical College Career Physician Program for minority and educationally disadvantaged students. The Clark Foundation is the first to support the proposed $2.1 million, four-year pilot program, designed to increase the number of minority students who prepare for medical study at Renssalaer Polytechnic Institute (RPI) and who study medicine at Albany Medical College (AMC). The program begins with identification of promising students in high school and combines undergraduate courses at RPI with summer experience at AMC.

Each year for the first four years of the new program, RPI plans to enroll 10 students who show ability to achieve in a rigorous and supportive academic setting and who have interest in and potential for a medical career. Throughout their years as biology majors at RPI, program participants will obtain experience in a medical environment at AMC and will receive tutoring, counseling, and other support services, including an eight-week summer in residence at AMC. Provided academic standards are maintained, these students may apply for early acceptance at AMC following their sophomore year.

The Clark Foundation, established in 1931 in New York City, has a long history of contributing to colleges and universities for scholarships and has helped support the RPI/AMC Accelerated Biomedical Program since the program's inception in 1964. Through collaboration with AMC, this program enables qualified students to obtain a B.S. from RPI and an M.D. from AMC in six calenda years, including summers.

The Clark Foundation grant will be paid over a period of four years. Provided adequate funding is received, the Career Physician Program will begin in the spring of 1983.

ACP takes steps to educate physicians about nuclear accidents, war

A position paper on "The Medical Consequences of Radiation Accidents and Nuclear War" has been adopted by the American College of Physicians, ACP President Thomas F. Frawley, M.D., announced in a news conference on Monday, April 19.

During the news briefing that opened the ACP's 63rd annual education meeting, Dr. Frawley went on to explain the ACP statement.

According to Dr. Frawley, both the public and the medical profession need to know more about the medical consequences of radiation accidents.

"The College, as an organization devoted to continuing medical education for physicians, accepts its share of the responsibility for promoting improved education about the medical consequences of radiation accidents," he said. "On Tuesday we will hold a special symposium on 'The Medical Consequences of Nuclear Accidents and Nuclear War.' We will provide physicians with materials from that program as an educational resource; the bibliography attached to our position paper also can serve as an excellent beginning point for physicians' self-education. Furthermore, we encourage individual physicians to tell the public about what happens to human bodies exposed to ionizing radiation."

Three important issues — treatment, education, and prevention — face physicians and the public with regard to radiation accidents and nuclear war, the ACP position says.

The ACP statement cites the problems faced by practicing physicians in the area around Harrisburg, during the Three Mile Island incident, as an example of the practicing physician's predicament in a radiation accident. Conflicting reports from industry and government made area residents distrust these two institutions. Fearful for their well-being, persons turned to physicians for factual information and reassurance.

Practicing physicians, inundated with telephone calls from their patients requesting interpretation of the accident's significance in terms of their personal health, did not, however, have the immediate knowledge or expertise to give advice on the effects of ionizing radiation, the ACP position paper says.

The ACP maintains that medical education must be improved to increase and update the information physicians receive about the medical consequences of radiation accidents. It also urges that medical care professionals be trained to triage and treat blast, radiation, and burn injuries.

However, the College believes that there can be no adequate medical preparedness for the devastating medical consequences of nuclear war, Dr. Frawley said. "Prevention is the only reasonable medical response to the hazards posed by nuclear weapons," he declared.

Facts argue that medical disaster-planning for nuclear war — unlike that for radiation accidents — is futile, the ACP statement maintains.

This was proved, the ACP points out, by the situation after the nuclear blast suffered by Hiroshima in 1945. Sixty-five of the city's 150 physicians were killed outright, and most of the remainder were wounded. Of the 1,780 nurses, 1,654 were dead or too badly injured to work.

Whatever would be left of the American health care system after a similar blast would be assaulted by the need to provide short-term treatment for untold numbers of fractures, organs ruptured from excess pressure, hemorrhage, and other trauma from flying glass and debris and long-term treatment for injuries from radioactive fallout, the position paper says.

Most people exposed to radiation would die from central nervous system disorders, blood poisoning, or from the effects of violent vomiting, diarrhea, and hemorrhage, the ACP says. Those who survive would suffer extreme stress, trauma, fatigue, and burns. Over time, survivors would suffer an increased incidence of skin cancer, degenerative disease, accelerated aging, and problems of infertility, congenital malformations, still births, neonatal deaths, and genetic disease.

There is no possible adequate medical response to the situation where hundreds of thousands of people would be injured and ill, most hospitals destroyed, most medical personnel killed, and most medical supplies unavailable, the College says.

In closing, The American College of Physicians states its hope that public education of the medical consequences of nuclear war will raise the level of consciousness of the American people. The College also hopes that similar steps will be taken to elevate the awareness of the citizens of the Soviet Union, and of all other nations bearing nuclear arms, so that political leaders throughout the world will come to the bargaining table with identical mandates and incentives for success.

Dr. Frawley is emeritus chairman and professor of internal medicine at the St. Louis University School of Medicine.

The American College of Physicians, founded in 1915, represents 54,000 physicians in internal medicine (internists), related nonsurgical specialists, and physicians-in-training. The ACP works to upgrade the quality of medical care, education, practice, and research through rigorous membership requirements, contact with health care officials in government and the private sector, and continuing medical education programs.

This statement on "The Medical Consequences of Radiation Accidents and Nuclear War" was adopted at the beginning of the College's annual four-day scientific meeting held this year at Philadelphia's Civic Center.

Volunteers sought

If you enjoy mystery solving and have some time to volunteer for a very exciting national study, then you should call the American Cancer Society's New York City Division, (212) 586-8700, ext. 571. The starting date is September 1, but we are recruiting volunteers now!

What is the study and what will it accomplish? Modeled after the first American Cancer Society Cancer Prevention Study conducted from 1959–1972, Cancer Prevention Study II will address a major health concern: what factors are related to cancer and how can this disease be prevented? For answers to these questions, the Study will look at the American lifestyle — the food we eat, the products we use, the conditions we live and work under — to see if these have any bearing on cancer and other diseases. With information from the Study, the American Cancer Society hopes to develop programs to help people reduce their cancer risk.

Needed for this fact-finding bit of sleuthing are 80,000 volunteers nationwide, and 500 for the New York City Division and its units in Brooklyn, Harlem, the Bronx, Manhattan, and Staten Island. Every volunteer will be responsible for selecting ten families and asking them to fill out a questionnaire. Especially valuable for the task will be individuals who have lived in the area for a long time and also members of minorities.

Volunteers will make an enormous contribution to this important survey. Without their donating time and energy, the cost of such a comprehensive study would be prohibitive.

Please call (212) 586-8700, ext. 571 today. A brief training session will prepare you for your participation. Ask your friends, neighbors, and relatives to join in, too!

Material for inclusion in medical news section must be received eight weeks prior to publication date.

(*continued from page 1532*)

tence on July 1, 1982, the $30,000 and $90,000 limitations will apply for plan years beginning in 1983. Certain transition rules will be provided to ensure that benefits already earned under an existing plan are not reduced on account of the reduced limits.

Loans from retirement plans. As a general rule, loans from a tax-qualified or governmental pension plan would be treated as a plan distribution. An exception to this rule is that a loan would not be treated as a distribution to the extent that the loan does not exceed the lesser of $50,000 or 50% of the present value of the vested employee benefit, but not less than $10,000. In other words, loans from plans at any one time would be limited to $10,000 or half of the vested benefits up to $50,000. This exception only applies if by its terms the loan is to be repaid within five years. Loans for principal residences would not be subject to the five-year rule. Effective date: Loans made after August 13, 1982 (with transition rule).

"Top-heavy" plans. Top-heavy plans are defined as pension plans (both corporate and noncorporate) under which more than 60% of the accrued benefits or contributions are provided for key employees. A key employee is an officer, a 5% owner, a 1% owner paid over $150,000 per year, or any of the employees owning the 10 largest interests in the employer. Special plan requirements for top-heavy plans include:

— a rule limiting contained compensation to $200,000 (adjusted for inflation). Only the first $200,000 of an employee's compensation may be taken into account in determining contributions or benefits under the plan.

— minimum vesting schedules: An employee's right to the accrued benefit derived from employer contributions must become nonforfeitable under a vesting schedule which satisfies one of two alternative schedules provided in the bill. A plan satisfies the first alternative vesting schedule ("three-year full vesting") if an employee who has at least three years of service with the employer maintaining the plan has a nonforfeitable right to 100% of his accrued benefit derived from employer contributions. A plan satisfies the second alternative vesting schedule ("six-year graded vesting") if an employee has a nonforfeitable right to at least 20% of the accrued benefit at the end of two years of service, 40% at the end of three years of service, 60% at the end of four years of service, 80% at the end of five years of service, and 100% after six years of service with the employer.

An employer could not avoid the top-heavy plan rules by establishing a plan under a one-man corporate shell or by leasing employees from another employer. Congress has modified the impact of the *Keller v. Commissioner of IRS* decision by restricting corporations set up solely for tax-avoidance purposes.

Keogh plan limits. Changes made have the effect of permitting a self-employed person to contribute into a Keogh retirement plan the lesser of 20% of earned income or $30,000. The $30,000 figure would be adjusted, after 1986, to reflect cost-of-living increases. At present the limits are 15% of income or $15,000. Effective for plan years beginning in 1984.

Estate tax exclusion. A ceiling would be placed on the present law's unlimited estate tax exclusion for annuities paid from qualified pension, stock-bonus or profit-sharing plans, tax deferred annuities, IRAs, and certain military retirement plans. The aggressive amount excludable from the gross estate would be $100,000 for any decedent dying after December 31, 1982.

Estimated revenue increase for pension provisions: $2 billion over three years.

Medical deductions

Medical expense deductions would be allowed for medical costs exceeding 5% of a taxpayer's adjusted gross income, compared with the current 3%. Taxpayers' ability to include prescription drug costs greater than 1% of adjusted gross income would be repealed after 1983. In addition, the current deduction for half of health insurance premiums up to $150 would be repealed.

This complex legislation is covered in greater detail by a special edition of the *Legislative Roundup* (August) recently mailed to Medical Societies.

*** *** ***

A stalemate of sorts is holding up congressional action on legislation to exempt the professions including medicine, from the jurisdiction of the Federal Trade Commission.

The exemption was approved by the Senate Commerce Committee earlier this year as part of a reauthorization of the FTC's operations. However, Committee Chairman Robert Packwood (R-OR), a foe of exemption, has not brought it up for a vote by the full Senate.

On the House side, a flat reauthorization minus any exemption has been approved by the House Commerce Committee (H.R. 6995), with the proviso that another bill (HR 3722) which would place a moratorium on FTC action regarding state-regulated professions, will be offered from the floor as an amendment to HR 6995.

Support for the exemption, strongly backed by the AMA is growing in the House where 214 members already have endorsed the bill (HR 3722) providing for a moratorium on the FTC's actions against the professions.

Packwood and the House Subcommittee Chairman James Florio (D-NY) have launched a coalition drive to permit FTC jurisdiction over the professions. The FTC's authorization is due to expire October 1 and there is a chance an attempt will be made to keep the agency functioning through a continuing resolution providing operating funds if the reauthorization measures stall.

Both House and Senate action is expected shortly after the Labor Day recess.

*** *** ***

Dropped in the hopper as an early entry in the upcoming contest next year over national health plans was an old standby — catastrophic — with a new twist.

The bill was introduced by House Budget Committee Chairman James Jones (D-OK) and Rep. James Martin (R-NC), a member of the House Ways and Means Committee.

Under the legislation, employers would be encouraged to offer catastrophic coverage plans providing that employees would not have to incur out-of-pocket expenses of more than $3,500 yearly. For people not reached by such private insurance, the government would set up a Catastrophic Automatic Protection Plan (CAPP) paying all medical expenses after a specified amount of personal spending based on family income is incurred. CAPP would be administered by the Health and Human Services (HHS) Department. Benefits below the catastrophic level would be the same as those under Medicare.

The two lawmakers said the catastrophic benefit could be financed through imposing limitations on the tax deductions for the costs of providing employees health insurance. This limit would be $100 per month per family. If it is exceeded, employees would be taxed on the surplus as if it were income. The present tax deductions for medical expenses above a certain percentage of income would be eliminated, but people could still deduct part of the cost of their premium payments.

The bill also promotes prospective payments for Medicare by allowing states and legal entities to seek a waiver from the government.

The Catastrophic Health Expense and Cost Constraint (CHECC) plan's tax features are similar to those that have been advanced in some of the procompetition plans introduced in this Congress. The Administration has said it will introduce its procompetition proposal early next year.

Jones said he hoped CHECC will be a factor in the serious debate on the national health debate next year. He estimated the plan would save the government money, perhaps as much as $1 billion a year.

At a news conference, Martin said "The large, unexpected expenses of illness can result in financial ruin" for people with inadequate coverage or none. "This legislation is long overdue in the effort to provide appropriate cost constraints and to provide financial assistance for medical bills for those now unprotected by private or public insurance," he said.

Cerebral vasodilators

In a two-part article, Cook and James reviewed the pathophysiology of cerebrovascular disease and dementia and examined evidence about the effectiveness of various cerebral vasodilators in the treatment of these diseases. The drugs reviewed include four direct-acting vasodilators (papaverine, cyclandelate, nafronyl, and hexobendine), three medications acting on adrenoreceptors (isoxsuprine, nylidrin, and ergoloid mesylates), a drug acting on histamine receptors (betahistine), and several miscellaneous vasodilators (vincamine, niacin derivatives, and cinnarizine). Although a few of these drugs have been shown to be effective cerebral vasodilators when given in single parenteral doses, their efficacy with routine oral use is not well established.

After intravenous injection, papaverine increases cerebral blood flow in patients with cerebrovascular disease, although the effect is short-lived and can be offset by the systemic hypotension that results from large doses. Like some other cerebral vasodilators, papaverine can decrease flow in ischemic areas, especially if given soon after an occlusive stroke or subarachnoid hemorrhage. In six of nine controlled, double-blind trials, use of papaverine resulted in improvement in psychologic test scores, but the effect was of practical clinical significance in only one study.

Studies of improvement in cerebral blood flow and on psychomotor tests after administration of cyclandelate have given conflicting results. A 12-month placebo crossover study suggested that the medication arrests the decline in mental performance with time but does not improve mental function.

In therapeutic doses, oral nafronyl is a weak vasodilator that does not cause tachycardia or hypotension. Seven double-blind controlled trials have shown overall improvement in mental function in patients with cerebrovascular disease or dementia given nafronyl.

A mixture of methane sulfonates of the dihydrogenated derivatives of three ergotoxine alkaloids is called ergoloid mesylates. This compound produces vasodilation, decreased blood pressure, and postural hypotension. All 20 double-blind controlled trials have shown some improvement in psychomotor test scores, most often in subjective cognition and affect variables. A minimum of 3 weeks of therapy is needed before improvement is seen, and benefits tend to increase during the 3 months that trials have lasted.

In an uncontrolled study, average cerebral blood flow increased 20% in patients with cerebrovascular disease taking oral betahistine for 1 week, but focal decreases in flow were seen in some patients. Two of three double-blind controlled studies in patients with cerebrovascular disease reported some improvement in test scores but no practical benefit. In a study of patients with dementia given betahistine, statistically significant changes were seen in scores on psychologic tests.

Three studies with vincamine reported an increase in mean cerebral blood flow after intravenous infusion in patients with cerebrovascular disease. However, one of these studies also showed an intracerebral steal effect, with decreased cerebral flow in some areas of infarction. Seven German studies reported improvement in some psychometric tests, but no clear practical benefit was demonstrated.

The other drugs reviewed by Cook and James either have conflicting or negative effects on cerebral blood flow or have not been studied in adequate controlled trials.

These reviewers conclude that although some of the cerebral vasodilators may be capable of producing minor improvement in patients with strokes or multi-infarct dementia, they also can cause localized decreases in flow in ischemic areas. Because of this risk of intracerebral steal, these drugs are contraindicated in patients with acute stroke, and they may also be harmful in some patients with chronic cerebrovascular disease. Although ergoloid mesylates and nafronyl result in small degrees of improvement on mental performance tests in patients with senile dementia, neither medication has been shown to have practical benefit on behavior. Until rigorous studies on side effects and long-term safety of these drugs have been completed, ergoloid mesylates and nafronyl can be recommended for treatment of dementia only with caution.

Cook P, James I: Cerebral vasodilators. *N Engl J Med* 305: 1508–1513 (pt I); 1560–1564 (pt II), 1981. From Royal Free Hospital, London, England.

Annotation: Clinicians managing patients with severe, chronic, progressive dementias face the considerable temptation to search for *any* therapy that may offer some hope to patients or families. This comprehensive review confirms our clinical impression that cerebral vasodilators have limited clinical utility. We usually try ergoloid mesylates (Hydergine) with patients who have early, mild symptoms, but we have found the degree of improvement to be too small for more severe cases.

Ascorbic Acid (Vitamin C)

History. Scurvy, the deficiency disease caused by lack of vitamin C, has been known since the time of the Crusades, especially among northern European populations who subsisted on diets lacking fresh fruits and vegetables over extensive periods of the year (Sharman, 1974). The incidence of scurvy was reduced by the introduction to Europe in the seventeenth century of the potato, an additional source of vitamin C. However, the long sea voyages of exploration in the sixteenth to eighteenth centuries, which were undertaken without a supply of fresh fruits and vegetables, resulted in large numbers of the crew dying from scurvy.

A dietary cause for scurvy had long been suspected. In 1535, Jacques Cartier learned from the Indians of Canada how to cure the scurvy in his crew by making a decoction from spruce leaves, and several subsequent ship captains prevented or cured scurvy by administration of lemon juice. However, a systemic study of the relationship of diet to scurvy had to wait until 1747 when Lind, a physician in the British Royal Navy, carried out a clinical trial on cases of frank scurvy who were given either cider, vitriol, vinegar, sea water, oranges and lemons, or garlic and mustard. Those who received citrus fruits recovered rapidly. The consequent introduction of lemon juice into the British Navy in 1800 resulted in a dramatic reduction in the incidence of scurvy; whereas the Royal Naval Hospital at Portsmouth admitted 1,457 cases in 1780, only two cases were seen there in 1806. At the present time, frank scurvy is occasionally seen in infants, in older people on restricted diets, and in alcoholics.

The next significant episode in the history of vitamin C was the identification in 1907 of a suitable experimental animal by Holst and Fröhlich, who found that guinea pigs develop scurvy on a diet of oats and bran that is not supplemented with fresh vegetables. It was subsequently shown that most mammals synthesize ascorbic acid; man, the monkey, and the guinea pig are exceptions. The demonstration of scurvy in the guinea pig allowed testing of fractions from citrus fruits for antiscorbutic potency. In 1928, Szent-Györgyi isolated a reducing agent in pure form from cabbage and from adrenal glands; in 1932, Waugh and King identified Szent-Györgyi's compound as the active antiscorbutic factor in lemon juice. The chemical structure of this substance was then soon established in several laboratories, and the trivial chemical name *ascorbic acid* was assigned to designate its function in preventing scurvy.

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EMERGENCY MEDICINE: Spectrum Emergency Care, Inc., is seeking two physicians to complete the staff at our client hospital in Clearfield, PA. Clearfield is located in a scenic recreational area in western PA accessible to major cities and cultural activities. Challenging medicine combined with a competitive income and other amenities make this an opportunity worth pursuing. For complete details write to Mr. James Murphy, c/o Spectrum Emergency Care, Inc., 999 Executive Parkway, St. Louis, MO 63141 or call Mr. Murphy toll free 1-800-325-3982.

PRACTICES WANTED

WANTED: GENERAL PRACTITIONER wanting to relocate and buy a viable general practice in Nassau County or western Suffolk County. Reply Dept. 257, c/o NYSJM.

OPHTHALMOLOGIST, BOARD CERTIFIED desires to purchase practice in the New York City or suburban area. Confidence Maintained. Please contact Dept. 168, c/o NYSJM.

PRACTICES AVAILABLE

OCCUPATIONAL PRACTICE FOR SALE: Well established P.C. in Albany, N.Y. area for treatment of industrial injuries and disability evaluations (legal, Workers' compensation, etc.). Fully equipped including x-ray. Pension Plan and excellent fringe benefits. Real estate purchase also available. Reply Dept. 250, c/o NYSJM.

FOR SALE, VERY ATTRACTIVE PARTNERSHIP (2 man) practice, general and internal medicine. Established 28 years, south shore eastern Nassau County. Grosses 6 figures annually. Partners will retire upon sale of practice after introduction. Reply Dept. 255, c/o NYSJM.

INTERNAL MEDICINE PRACTICE FOR SALE. Nassau County South Shore. Centrally located between 4 community hospitals. Practice includes all furnishings. Well established, lucrative, immediate association, will introduce. Excellent opportunity. Reply Dept. 261, c/o NYSJM.

HUDSON VALLEY FAMILY PRACTICE for sale. Also, eight-room, 1600 square feet, modern office building, off-street parking, for rent. All furnishings and equipment for sale. Recent death leaves this large, vibrant practice in need of one or two family practitioners who are seeking excellent hospital facilities, good life quality and growing area. All inquiries welcome. Please call (914) 229-2896.

St. John's Episcopal Hospital
Brooklyn, New York

Director
Department of Pediatrics

The candidate must have a broad experience in direct patient care and teaching, and demonstrated proficiency in administration and leadership. The candidate must be able to qualify for senior academic rank on the faculty of Downstate Medical Center, and be Board certified or eligible in Pediatrics.

Applications and nominations for the position of Director of Pediatric Department are invited. Please send curriculum vitae and letters of recommendation to:

Alfonso Yu Chan, M.D.
Director of Quality Assurance
St. John's Episcopal Hospital
1545 Atlantic Avenue
Brooklyn, New York 11213
212-467-7000, Ext. 2181

Qualified Medical Assistant And Medical Secretary Graduates Available

No Charge For This Service

Nassau School For Medical And Dental Assistants

W. Hempstead (516) 483-0577

Research Project in

The Treatment of Trigeminal Neuralgia With Chinese Acupuncture Techniques

Any doctor who can refer trigeminal neuralgia patients for whom medications and surgery have brought no significant improvement, please contact:

Ling Sun Chu, M.D.
107 East 73rd St., New York, N.Y. 10021
(212) 472-3000

Acupuncture treatments will be free of charge to the patient if patient brings letter from referring physician that: 1) Contains patient's medical records. 2) Stating that: a) Referring physician agrees to participate in project, by evaluating the effects of the treatment on patient. b) Patient will remain under referring physician's care. Call or write for further details.

DOWNSTATE MEDICAL SCHOOL
DEPARTMENT OF UROLOGY

presents

BLADDER CANCER
A MULTI-DISCIPLINE SYMPOSIUM

NOVEMBER 6, 1982 9 A.M.–2 P.M.

Basic Science Building, Lecture Hall #2,
Lenox Rd. & East 35th St., Brooklyn, N.Y.

MARK S. SOLOWAY
Univ. of Tennessee

LEONARD ZINMAN
Lahey Clinic

KEITH WATERHOUSE

MARVIN ROTMAN

RICHARD J. MACCHIA
Downstate Medical School

CO-SPONSOR: American Cancer Society CME Category 1 approved, 5 hours. Fee: None.

The program is designed for urologists, oncologists, radiotherapists, family practitioners, internists and residents.

Free parking available in the outdoor parking lot behind the Basic Science Building. Enter on Lenox Road off East 35th St.

For further information, contact Richard J. Macchia, M.D., at Downstate Medical School, Box 79, 450 Clarkson Ave., Brooklyn, N.Y. 11203. (212) 270-2554.

POSITIONS WANTED

SENIOR BOARD CERTIFIED ANESTHESIOLOGIST available Greater New York adjoining New Jersey/Connecticut. Practice limited to epidural blocks for surgical/obstetrical anesthesia for high risk patients and intractable pain control therapy. (212) 422-5186.

UROLOGIST, BOARD CERTIFIED. American, mid-fifties. Excellent C.V. Desires to return North. Seeks group, clinic, etc. association. (813) 939-1114.

ACUPUNCTURE IN CLINICAL PRACTICE

N.Y. State Boards of Medicine & Dentistry 25-hour accredited seminar and workshop on the latest theories & techniques of manual and electro-acupuncture, applicable toward the 100-hour requirement for certification, will be given for licensed clinicians (with or without prior training) during the weekend of October 29–31, 1982 and again the weekend of January 29–31, 1983 at the Barbizon Plaza Hotel, New York City. Co-sponsored by the International College of Acupuncture and Electro-Therapeutics, its official journal (published by Pergamon Press), the Heart Disease Research Foundation and the Neuro-Science Dept. of L.I. College Hospital. Also eligible for AMA/CME Category 2 credit. For information, contact Y. Omura, M.D., Sc.D., 800 Riverside Dr. (8-I), NYC 10032. Tel: (212) 781-6262 or (212) 928-0658, or Saul Heller, M.D., (212) 838-7514.

POSITIONS WANTED—CONT'D

INTERNIST-RHEUMATOLOGIST, 33, ABIM both, with excellent clinical training and teaching-practice experience, desires association with subspecialty group/associate. Prefer N.Y. metro area, but will consider all. Reply Dept. 264, c/o NYSJM.

EQUIPMENT

FOR SALE: X-RAY—100 MA MATTERN UNIT with table and bucky. Used very little; like new. Developing tank, upright protective screen and cassettes. Dr. J. C. Tedesco, Buffalo, N.Y. (716) 882-2331.

REAL ESTATE FOR SALE OR RENT

MANHATTAN'S EAST SIDE, 133 EAST 73RD ST., N.Y.C. LEXINGTON Professional Center, Inc. Part time & full time medical, dental, psychiatric office suites. Furnished & equipped. 24 hour answering service; receptionist. Mail service; cleaning. X-ray & clinical laboratory on premises. No leases necessary. Rent by the hour or full-time. (212) 861-9000.

REAL ESTATE: FOR SALE spacious building sites in beautiful park-like setting available for your office needs. Advantages and prestige of ownership. Attractive financing and tax abatement program. Utilities in place, architectural consultant on staff. Located on Route 45 near Palisades Interstate Parkway, Rockland County. Contact: Kenneth Lubin (914) 694-1380.

IF YOU OWN A MEDICAL BUILDING conversion to Professional Condominium gives you tremendous after-tax profits while controlling ownership of your office location. Learn how you can profit from our concept. Contact: Paul Gellert, Gelco Associates, 155 West 68th Street, New York, N.Y. 10023. Phone: (212) 223-1130.

ASSOCIATES IN MEDICINE, FAMILY PRACTICE, pediatrics, etc., to share new professional building in Litchfield, Conn. We have a catchment population of about 20,000 people, and presently only one medical man here with hospital privileges. Excellent opportunity for any practitioner who desires a fast start. Please contact Dr. George Carofino (203) 567-9488 or (203) 482-9481.

MEDICAL OFFICE BUILDING AVAILABLE, built in 1978, 217 Summit Street, Batavia, N.Y. 14020, near Genesee Memorial Hospital. Approximately 2816 square feet, eleven rooms including X-ray room. If interested contact: Ronald Fancher, Attorney, 104 Bank Street, Batavia, N.Y. (716) 343-8877 or John Andrews CPA, 210 East Main Street, Batavia, N.Y. (716) 343-2191.

FOR SALE: ATTRACTIVE CORNER PROFESSIONAL HOUSE, Brooklyn, Ditmas Park area, busy section opposite school. Excellent transportation. Owner (212) 434-8692.

SALE OR RENT—FLORIDA Condo.—760 acres—park like—Indian Springs, Boynton Beach. New, luxurious, 3 bedroom, 2 baths, pro-decorated. Lake view from large terrace. Beautifully located for views, pools, tennis, golf, club, restaurant, security, etc. Vacation or retirement, completely furnished to last detail—move in! (516) 431-0686.

SUITES AVAILABLE FOR IMMEDIATE occupancy at Narrows Medical Bldg. Brooklyn, N.Y. Call (212) 238-6700.

POUGHKEEPSIE, N.Y. For sale: large home with office (office entrance separate) on 1½ acres. Home and office heated by new gas furnace. Office 1700 sq. ft. Brick and stone, center hall, living room, family room, library, formal dining room, E.I.K., 6 bedrooms, 4 baths (2 powder rooms). Near hospitals, Railroad, transportation. Call owner (914) 454-3690.

WESTCHESTER NEW YORK RESIDENCE Substantial English Georgian 6 bedrooms, sun room, artist Alcove, Circa 1920, ⅓ acre, giant oaks, Brick-Stone-Slate: Manageable, Safe-Secure-Secluded in turn of the century neighborhood. 22 minutes train to Grand Central. Buy @ 240K or rent @ $2.4K/mo. Dr. Skalafuris (202) 767-3408.

what goes on IN CONTINUING MEDICAL EDUCATION

NEW YORK STATE **NOVEMBER 1982**

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Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Elizabeth H. Daepp, Editor
Philip Keating, Director, Division of Finance

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NEW YORK

Memorial Sloan-Kettering Cancer Center

1275 York Avenue
New York, NY 10021
November 5–6, 1982
7th ANNUAL MEMORIAL HOSPITAL ALUMNI MEETING
CREDIT: AMA Cat. 1

• Memorial Hospital for Cancer and Allied Diseases

November 13, 1982—8 AM–5 PM
ANNUAL MEETING OF THE NEW YORK STATE SOCIETY OF CRITICAL CARE MEDICINE (NYSSSCCM)
Graziano C. Carlon, M.D.
FEE: $40.00—(Members) $50.00—(Non-Members)
CREDIT: AMA Cat. 1 (7 Hrs.)
November 20, 1982—8 AM–4 PM
WORKSHOP ON HIGH FREQUENCY JET VENTILATION (HFJV): THEORETICAL CONSIDERATIONS AND PRACTICAL APPLICATIONS
Paul L. Goldiner, M.D., Graziano C. Carlon, M.D.
FEE: $50.00—(Members) $75.00—(Non-Members)
CREDIT: AMA Cat. 1 (5 Hrs.)
For further information contact Charlene H. Landis, CME Conference Planner, Memorial Sloan-Kettering Cancer Center, at 212-794-8406.

Beth Israel Medical Center Co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D, Perlman Place
New York, NY 10003
• Little Theatre, Barbizon Plaza Hotel
106 Central Park South, New York
November 6, 1982—Saturday—8:00 AM–5:30 PM
November 7, 1982—Sunday—9:00 AM–5:30 PM
SHORT-TERM DYNAMIC PSYCHOTHERAPY
Harold Been, M.D., Habib Davanloo, M.D., David Malan, M.D.
FEE: $160.00 (Advanced) $170.00 (At Door)
CREDIT: AMA Cat. 1 (12 Hrs.)
November 11–19, 1982—8:00 AM to 1:00 PM & 5:00 PM to 8:00 PM (one day)
INTERNATIONAL ANESTHESIA SYMPOSIUM IN ISRAEL NEW CONCEPTS IN ANESTHESIA AND INTENSIVE CARE
I. Azar, M.D.
CREDIT: AMA Cat. 1 (18 Hrs.)
For further information contact Beverley R. Baptiste at 212-420-2000.
• Loeb Auditorium, Hospital for Joint Diseases Orthopaedic Institute, 301 East 17th Street, New York, NY 10003
November 10, 1982—Wednesday—9:00 AM–4:00 PM
UROLOGIC COMPLICATIONS OF DIABETES MELLITUS
Arnold Melman, M.D.
CREDIT: AMA Cat. 1 (5 Hrs.)
November 12, 1982—Friday—8:30 AM–5:00 PM
GASTROINTESTINAL CANCER: AN UPDATE FOR SPECIALISTS
Alvin Gelb, M.D.
CREDIT: AMA Cat. 1 (6.5 Hrs.)
For further information contact Kathy R. Bonomo, Assistant, Medical Education, Beth Israel Medical Center. Tel: 212-420-2000.

Albert Einstein College of Medicine of Yeshiva University and Montefiore Hospital and Medical Center

111 East 210th Street
Bronx, NY 10467
• Marriott's Essex House, New York City
November 4–6, 1982
NINTH ANNUAL SYMPOSIUM ON CURRENT CRITICAL PROBLEMS IN VASCULAR SURGERY
For further information contact Office of Continuing Professional Education, Einstein/Montefiore, Montefiore Medical Center, 111 E. 210th St., Bronx, NY 10467.
Tel: 212-920-6676.

Albert Einstein College Of Medicine of Yeshiva University
Department of Surgery

1300 Morris Park Avenue
Bronx, NY 10461
• Van Etten Hospital
Room 523
November 5, 1982—4:00 PM–5:30 PM
ONCOLOGY FOR THE FAMILY PRACTITIONER ULTRASONOGRAPHY OF THE ABDOMEN—CASE STUDIES
J. Hoffman, M.D.
CREDIT: AAFP Cat. 1
November 19, 1982—4:00 PM–5:30 PM
RADIONUCLIDE SCANS FOR DETECTING METASTATIC CANCER
D. M. Milstein, M.D.
CREDIT: AAFP Cat. 1
For further information contact Margot L. Wulf, Admin. Secy. to Dr. Herbert Volk, Albert Einstein College of Medicine of Yeshiva University, 1300 Morris Park Avenue, Bronx, NY 10461 at 212-430-8001.

St. Vincent's Hospital and Medical Center of New York Co-sponsored by American Cancer Society, N.Y.C. Division
Department of Surgery

153 West 11th Street
New York, NY 10011
• Cronin 10 Auditorium
November 9, 1982—12:30 PM–5:00 PM
ADVANCES IN DETECTION AND THERAPY OF COLORECTAL AND PELVIC CANCER
Thomas F. Nealon, Jr., M.D.
For further information contact Dr. Thomas F. Nealon, Jr., Tel: 212-790-8344.

Metropolitan Jewish Geriatric Center
Brenner Pavillion

4915 Tenth Avenue
Brooklyn, NY 11219
November 17, 1982—Wednesday
SEMINAR IN GERIATRIC MEDICINE
David Grob, M.D.
Harvey C. Shapiro, M.D.
For further information contact Harvey C. Shapiro, M.D., Metropolitan Jewish Geriatric Center, Tel: 212-853-2800.

The Jewish Hospital & Medical Center of Brooklyn in association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY, Downstate Medical Center, Sponsored by the Division of Hematology/Oncology

555 Prospect Place
Brooklyn, NY 11238
* B-51 Conference Room, Basement
Leviton Building
November 3, 1982—3:30 PM-4:30 PM
ADVANCES IN HEMATOLOGY AND ONCOLOGY
LEUKEMIA DUE TO CANCER TREATMENT
Fred Rosner, M.D.
NOVEMBER 10, 1982—3:30 PM-4:30 PM
THALASSEMIA UPDATE
Joel Schwartz, M.D.
November 17, 1982—3:30 PM-4:30 PM
TREATMENT OF ACUTE LEUKEMIA IN ADULTS
Zalmen Arlin, M.D.
NO FEE. CREDIT: AMA Cat. 1
For further information contact The Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212-240-1211.

Semmelweis Scientific Society

515 Madison Ave. Suite 1720
New York, NY 10022
* New York Academy of Medicine
2 East 103rd Street
November 22, 1982—Monday—8:00 PM
PROSTAGLANDINS AND CARDIOVASCULAR FUNCTION
David Lehr, M.D., Gabor Kaley, M.D.
CREDIT: AMA & AAFP Cat. 1
For further information contact Otto Kestler, M.D., 515 Madison Avenue. NYC 10022. Tel: 212-758-2590-1.

Saint Mary's Hospital of Brooklyn
The Department of Medicine

170 Buffalo Avenue
Brooklyn, NY 11213
* Third Floor—Board Room
November 3, 1982—Wednesday—8:00 AM-9:00 AM
CHRONIC RENAL FAILURE
Eli Frumpkin, M.D.
CREDIT: AMA Cat. 1
November 10, 1982—Wednesday—8:00 AM-9:00 AM
ACID BASE-CASE ANALYSIS
Irving Dunn, M.D.
November 17, 1982—Wednesday—8:00 AM-9:00 AM
CLINICAL APPLICATION OF THE ANION GAP
Hugh Carroll, M.D.
November 24, 1982—Wednesday—8:00 AM-9:00 AM
HYPONATREMIA
Irving Dunn, M.D.
For further information contact the Department of Medicine at St. Mary's Hospital—774-3600 ext. 2044 or 2045.

The New York Academy of Medicine Section on Anesthesiology and Resuscitation

2 East 103rd Street
New York, NY 10029
November 3, 1982—Wednesday—8:00 PM-10:00 PM
SYMPOSIUM ON MYASTHENIA GRAVIS
Gabriel Genkins, M.D., Francis F. Foldes, M.D., Avron I. Weinreich, M.D.
For further information contact Paul A. Radnay, M.D., The New York Academy of Medicine, 2 East 103rd Street, New York, NY. Tel: 212-876-8200.

New York University Medical Center Post-Graduate Medical School—The Institute of Reconstructive Plastic Surgery

550 First Avenue, New York, NY 10016
* Grand Hyatt Hotel—42nd Street (between Park & Lexington Avenues) N.Y.C.
November 1-6, 1982—Monday to Saturday
THIRD ANNUAL REVIEW OF PLASTIC AND RECONSTRUCTIVE SURGERY
Joseph G. McCarthy, M.D., Daniel C. Baker, M.D.
William W. Shaw, M.D.
FEE: $790. CREDIT: AMA Cat. 1 (61 hrs.)
For further information contact Registration Office, Post-Graduate Medical School, 550 First Avenue, New York 10016. Tel: 212-340-5295.

New York University Post-Graduate Medical School The Department of Dermatology

550 First Avenue
New York, NY 10016
October 21-November 18, 1982—Thursdays—1:30-3:30 PM
DERMATOLOGY FOR THE PRACTICING PHYSICIAN
FEE: $215. CREDIT: AMA Cat 1 (10 hrs.)
For further information contact NYU Post-Graduate Medical School, 550 First Avenue, New York, NY 10016. Tel: 212-340-5295. (24-hour telephone)

Westchester Square Hospital in collaboration with Albert Einstein College of Medicine/ Montefiore Hospital & Medical Center
2475 St. Raymond Avenue
Bronx, NY 10461

* Conference Room
November 4, 1982—Thursday—4:00 PM-5:30 PM
"PACEMAKERS"
Martin Cohen, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
November 18, 1982—Thursday—4:00 PM-5:30 PM
"NUCLEAR IMAGING AND EVALUATION OF CARDIAC FUNCTION"
Stephen Scharf, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)

SUNY Downstate Medical Center
Kings County Hospital Center in cooperation with District 1, NYSSA
Department of Anesthesiology

450 Clarkson Avenue
Brooklyn, NY 11203
November 15, 1982—4:00 PM-5:00 PM
VISITING PROFESSOR PROGRAM—ANESTHESIA AND THE PRE-ECLAMPTIC PATIENT
Brett B. Gutsche, M.D.
CREDIT: AMA Cat. 1
November 16, 1982—5:00 PM-6:00 PM
VISITING PROFESSOR PROGRAM—WHY THE OBSTETRIC PATIENT IS DIFFERENT
Brett B. Gutsche, M.D.
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D., SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, NY 11203. Tel: 212-270-1233.

NYU Medical Center Post-Graduate Medical School

550 First Avenue
New York, N.Y. 10016
OFFERS ONE-ON-ONE TUTORIALS IN:
Introduction to Laboratory Microsurgery
Advanced Laboratory Microsurgery
Stress Testing, Nuclear Cardiology
Gastrointestinal Endoscopy
Clinical Electrocardiography
For further information contact NYU Post-Graduate Medical School, 550 First Avenue, New York, NY 10016.
Tel: 212-340-5295.

New York State Office of Mental Health

Kings Park Psychiatric Center
Kings Park, New York 11754
* Auditorium, Day Treatment Center
Kings Park Psychiatric Center
November 10, 1982—10:30 a.m.—12:00 noon
"DEPRESSION—CLINICAL VARIETIES AND MANAGEMENT"
A. Hussain, M.D.
NO FEE CREDIT: AMA CAT. 1
For further information contact G. V. Laury, M.D., Chief of Education and Training, Kings Park Psychiatric Center, Kings Park, New York at 516-544-2669.

Seminars & Symposia, Inc.

1290 Avenue of the Americas
New York, N.Y. 10104
* Americana Dutch Resort Hotel, Disney World, Lake Buena Vista, Florida
November 11–14, 1982
"FLEXIBLE FIBEROPTIC SIGMOIDOSCOPY" AND RELATED COLORECTAL DISEASES"
FEE: $400 CREDIT: AAFP (15 hrs.)
For further information contact Herbert Berger, M.D., Program Coordinator, Seminars & Symposia, 1290 Avenue of the Americas, New York. Tel: 212-489-7790.

State University of New York Downstate Medical Center, Co-sponsored by the American Cancer Society, Department of Urology

450 Clarkson Avenue
Brooklyn, N. Y. 11203
* Lecture Hall #2
November 6, 1982—9:00 a.m.—2:00 p.m.
BLADDER CANCER—A MULTI-DISCIPLINE SYMPOSIUM
NO FEE CREDIT: AMA Cat. 1 (5 hrs.)
For further information contact Dr. Richard J. Macchia at Downstate Medical School, Box #79, 450 Clarkson Ave., Brooklyn, N.Y. 11203. Tel: 212-270-1957.

QUEENS COUNTY

Flushing Hospital and Medical Center

4500 Parsons Blvd.
Flushing, NY 11355
November 14, 1982-December 1983—One Sunday each month 9:00 AM-1:00 PM
SECOND ANNUAL REVIEW IN INTERNAL MEDICINE ENDOCRINOLOGY AND METABOLISM
Ulrich K. Schubart, M.D.
FEE: Per session: $50.00 FH&MC Staff Members
$60.00 Non-Staff Members
CREDIT: AMA Cat. 1
For further information contact Luisa T. Gonzalez, Coordinator, Continuing Medical Education, Flushing Hospital and Medical Center. Tel: 212-670-5741.

Flushing Hospital and Medical Center Department of Medicine

4500 Parsons Blvd.
Flushing, NY 11355
November 9, 1982—Tuesday—10:30 AM-12:00 noon
GRAND ROUNDS—THE DIZZY PATIENT: An Internist's Approach
Ronald Hoffman, M.D.
November 16, 1982—Tuesday—10:30 AM-12:00 NOON
GRAND ROUNDS—CONDUCTION DISTURBANCES AND CARDIAC PACING
Doris Escher, M.D.
November 23, 1982—Tuesday—10:30 AM-12:00 NOON
GRAND ROUNDS—CRYSTALLINE ARTHROPATHIES
Arthur Grayzel, M.D.
November 30, 1982—Tuesday—10:30 AM-12:00 NOON
GRAND ROUNDS—LACTIC ACIDOSIS: PATHOGENESIS, CLASSIFICATION AND TREATMENT
Milford Fulop, M.D.
CREDIT: AMA Cat. 1
For further information contact Luisa T. Gonzales, Coordinator, Continuing Medical Education, Flushing Hospital and Medical Center. Tel: 212-670-5741.

NASSAU COUNTY

Long Island Jewish-Hillside Medical Center Queens Hospital Center Affiliation and The Health Sciences Center, State University of New York at Stony Brook
* The School of Nursing on the Campus of the Queens Hospital Center

82-68 164th Street, Jamaica, NY 11432
November 3, 1982—Wednesday—11:00 AM
GRAND ROUNDS
INFECTION IN THE COMPROMISED HOST
Gerald L. Mandell, M.D.
November 10, 1982—Wednesday—11:00 AM
GRAND ROUNDS
GOUT AND HYPERURICEMIA
Herbert Diamond, M.D.
November 17, 1982—Wednesday—11:00 AM
GRAND ROUNDS
ADJUVANT CHEMOTHERAPY IN BREAST CANCER: AN UPDATE
Marjorie Perloff, M.D.
November 24, 1982—Wednesday—11:00 AM
GRAND ROUNDS
NEW DIAGNOSTIC MODALITIES IN ISCHEMIC HEART DISEASE
Joel Strom, M.D.
CREDIT: AMA Cat. 1
For further information contact Catherine Marino, M.D., Associate Director, Dept. of Medicine, Long Island Jewish-Hillside Medical Ctr. Tel: 212-990-3681.

Long Island Jewish-Hillside Medical Center Sponsored by the Department of Psychiatry New Hyde Park, New York 11042

* Sloman Auditorium
Sloman-Lowenstein Building
Long Island Jewish-Hillside Medical Center
November 12, 1982—Friday—8:30 AM-4:15 PM
CLINICAL TECHNIQUES FOR THE PRACTICE OF FAMILY THERAPY
Stuart L. Kaplan, M.D.
CREDIT: ACCME Cat. 1 (6 hrs.)

For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, at 212-470-2114.

Long Beach Memorial Hospital in affiliation with The Page & William Black Postgraduate School of Medicine of The Mount Sinai School of Medicine (CUNY)

455 East Bay Drive
Long Beach, New York 11561
* Hospital Auditorium
November 16, 1982—4:00 PM-6:00 PM
C. T. SCANNING—CHEST & ABDOMEN
Burton A. Cohen, M.D.
CREDIT: AMA Cat. 1
For further information contact Community Relations Dept. Tel: 516-432-8000, ext. 362 or 363.

North Shore University Hospital—Division of Ophthalmology

300 Community Drive
Manhasset, N. Y. 11030
* The Ketcham Boardroom
Clinical Conference held in Eye Clinic
November 11, 1982—Thursday—8:00 a.m.
NEURO-OPHTHALMOLOGY
Michael Slavin, M.D.
November 18, 1982—Thursday—8:00 a.m.
ANTERIOR SEGMENT APPLICATIONS OF I.O.L.
Robert Cykiert, M.D.
For further information contact North Shore University-Division of Ophthalmology, 300 Community Drive,

SUFFOLK COUNTY

St. Charles Hospital Co-sponsored by the Suffolk Academy of Medicine

200 Belle Terre Road
Port Jefferson, NY 11777
* St. Charles Lecture Room
November 1, 1982—Monday—11:45 AM-1:15 PM
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
* St. Charles Lecture Room
November 8, 1982—Monday—11:45 AM-1:15 PM
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
* St. Charles Classroom A
November 9, 1982—Tuesday—11:00 AM
OB/GYN CONFERENCE HYSTEROSCOPY
David Rosenfeld, M.D.
* St. Charles Board Room
November 15, 1982—Monday—7:00 AM
ANESTHESIOLOGY CONFERENCE
ANTICOAGULATION DURING VASCULAR SURGERY
Edward A. Norris, M.D.
* St. Charles Lecture Room
November 15, 1982—Monday—7:30 AM
OPHTHALMOLOGY CONFERENCE
KRYPTON RED AND ARGON GREEN LASER PHOTOCOAGULATION
Charles R. Beyrer, M.D.
* St. Charles Lecture Room
November 15, 1982—Monday—11:45 AM-1:15 PM
TUMOR CONFERENCE
GYNECOLOGICAL CASES
* St. Charles Lecture Room
November 22, 1982—Monday—11:45 AM-1:15 PM
TUMOR CONFERENCE
PRIMARY RADIATION OF BREAST CANCER
Jay L. Bosworth, M.D.
* St. Charles Lecture Room
November 29, 1982—Monday—11:45 AM-1:15 PM
TUMOR CONFERENCE
SEMINARS IN ONCOLOGY
For further information contact Mary Rotolo, Dept. of Medical Education, St. Charles Hospital, Port Jefferson, NY. Tel: 516-473-2800.

Mather Memorial Hospital Co-sponsored by the College of Physicians & Surgeons of Columbia University

North Country Road
Port Jefferson, NY 11777
* Mather Conference Room
November 9, 1982—Tuesday—11:30 AM-1:00 PM
WEEKLY EDUCATIONAL SERIES
PERCUTANEOUS ABSCESS DRAINAGE
Eric Martin, M.D.

Mather Memorial Hospital Co-sponsored by the Suffolk Academy of Medicine

* Mather Conference Room
November 10, 1982—Wednesday—7:30 AM
PSYCHIATRY CONFERENCE
OVERVIEW OF ATTENTION DEFICIT DISORDERS
Jeffrey Sverd, M.D.
* Mather Conference Room
November 16, 1982—Tuesday—11:30 AM-1:00 PM
WEEKLY EDUCATIONAL SERIES
HYPERALIMENTATION
Bruce R. Bistrian, M.D.
* Mather Conference Room
November 23, 1982—Tuesday—8:15 AM
PEDIATRIC CONFERENCE
PEDIATRIC GASTROENTEROLOGY
Frederick Daum, M.D.
* Mather Conference Room
November 23, 1982—Tuesday—11:30 AM-1:00 PM
WEEKLY EDUCATIONAL SERIES
ULTRASOUND MAMMOGRAPHY
Paul M. Grappell, M.D.
* Mather Conference Room
November 30, 1982—Tuesday—11:30 AM-1:00 PM
WEEKLY EDUCATIONAL SERIES
SLEEP DISORDERS
Merrill Mitler, M.D.
For further information contact Mary Rotolo, Dept. of Medical Education, Mather Memorial Hospital, Port Jefferson, NY. Tel: 516-473-1320.

Brookhaven Memorial Hospital Medical Center

101 Hospital Road
Patchogue, N. Y. 11772
* 1st Floor Conference Room
November 2, 1982—Tuesday—8:00 a.m.—9:00 a.m.
PEDIATRIC CONFERENCES—FLOPPY BABIES: ASSESSMENT & PREDICTION OF OUTCOME IN THE HYPOTONIC CHILD
Paul Rosman, M.D.
CREDIT: AMA Cat. 1 & AAFP
November 5, 1982—8:00 a.m.—9:00 a.m.
CLINICAL PROBLEMS IN FAMILY MEDICINE FOOT DISORDERS
Abram S. Goldsher, D.P.M.
CREDIT: AMA Cat. 1. & AAFP

November 12, 1982—8.00 a.m.—9:00 a.m.
CARDIOVASCULAR/CHEST—EXERCISE & THE HEART
Albert Brest, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Dorothy S. Lane, M.D., Director of Medical Education, Brookhaven Memorial Hospital Medical Ctr., 101 Hospital Rd., Patchogue, NY. Tel: 516-654-7795.

WESTCHESTER COUNTY

White Plains Hospital Medical Center

Davis Avenue at East Post Road
White Plains, NY 10601
November 17, 1982-8:30 AM
DIABETES DAY
For further information contact Toni Calabrese Boelsen, the Community Affairs Department at White Plains Hospital Medical Ctr., 914-949-4500, ext. 2111.

BINGHAMTON

Binghamton General Hospital

Mitchell Avenue
Binghamton, NY 13903
* Doctors Auditorium, General Hospital
Mitchell Avenue, Binghamton, NY
November 10, 1982—8:45 AM–3:45 PM
DENTAL TEACHING DAY
Alan J. Drinnan, M.D.
FEE: $15 per participant (luncheon included)
November 19, 1982—Friday
DIABETIC TEACHING DAY
S. A. Blumenthal, M.D.
For further information contact Christine L. Bowen, Medical Education Coordinator, Binghamton General Hospital. Tel: 607-771-2549.

SYRACUSE

SUNY—Upstate Medical Center

Office of Graduate and Continuing Education
750 East Adams Street
Syracuse, NY 13210
* The Colony Beach and Tennis Resort
Long Boat Key, Sarasota, Florida
November 7–12, 1982
INTERNAL MEDICINE UPDATE '82
Murray A. Grossman, M.D.
FEE: $300.00 CREDIT: AMA Cat. 1 (20 hrs.)
For further information contact the Program Coordinator, Office of CME, Upstate Medical Center, State University of New York, at 315-473-4304.

BUFFALO

Roswell Park Memorial Institute
Dept. of Health—State of New York

666 Elm Street
Buffalo, New York 14263
November 4, 1982—Thursday
"LUNG CANCER: DIAGNOSIS AND THERAPY"
Ronald Vincent, M.D.
CREDIT: AMA Cat. 1
November 18, 1982—Thursday
"CONTEMPORARY ISSUES IN OSTEOPOROSIS"
Julian L. Ambrus, M.D.
CREDIT: AMA Cat. 1
For further information contact Gayle Bersani, R.N., Cancer Control Coordinator, Roswell Park Memorial Institute at 716-845-4406.

DUTCHESS COUNTY

Harlem Valley Psychiatric Center
New York Medical College

Wingdale, New York 12594
November 5, 1982—Friday—10:00–11:30 AM
MEDICAL UPDATE SERIES: CARDIOLOGIC CONCEPTS FOR PSYCHIATRISTS
Richard Kay, M.D.
November 12, 1982—Friday—10:30–11:30 AM
GASTROINTESTINAL DISEASE WITH SPECIAL REFERENCE TO FUNCTIONAL DISORDERS
Steven Heier, M.D.
November 19, 1982—Friday—10:00 AM–11:30 AM
REHEUMATOLOGIC DISEASE
Bento Mascharenhas, M.D.
For further information contact Seymour B. Jacobson, M.D., Director of Medical Education, Harlem Valley Psychiatric Center, Tel: 914-832-6611.

FUTURE EVENTS

Flushing Hospital and Medical Center
Department of Medicine

4500 Parsons Blvd.
Flushing, NY 11355
December 7, 1982—Tuesday—10:30 AM–12:00 NOON
GRAND ROUNDS—OBSTRUCTIVE LUNG DISEASE UPDATE: BRONCHODILATOR THERAPY
John Urbanetti, M.D.
December 14, 1982—Tuesday—9:00 AM–12:00 NOON
GRAND ROUNDS—3-HOUR CRITICAL CASE SYMPOSIUM
THE INTRA-AORTIC BALLOON PUMP IN CRITICAL CARE
THE MEDICAL SURGICAL ASPECTS IN THE TREATMENT OF THE UNCONSCIOUS PATIENT
VITAL ORGAN MONITORING—PART II
David Bregman, M.D., Bernard Perlman, M.D.
Nathan Seriff, M.D.
December 21, 1982—Tuesday—10:30 AM–12:00 NOON
GRAND ROUNDS—BASIC IMMUNOLOGY FOR THE PRACTICING PHYSICIAN
Howard, Fillit, M.D.
CREDIT: AMA Cat. 1
For further information contact Luisa T. Gonzalez, Coordinator, Continuing Medical Education, Flushing Hospital and Medical Center. Tel: 212-670-5741.

Long Island Jewish-Hillside Medical Center
The Department of Ophthalmology

New Hyde Park, New York 11042
* Long Island Jewish-Hillside Medical Center Teaching Center
December 8, 1982—8:00 AM–4:00 PM
CALENDAR OF CLINICAL DAYS IN OPHTHALMOLOGY
CORNEA AND EXTERNAL DISEASE
Stephen Foster, M.D., Dennis O'Day, M.D., J. James Rowsey, M.D.
For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, at 212-470-2114.

physicians' placement opportunities

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SARATOGA SPRINGS, N.Y., contact Allen T. Jones, 384 Broadway, Saratoga Springs 12866. Tel: 518/584-1978.

WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

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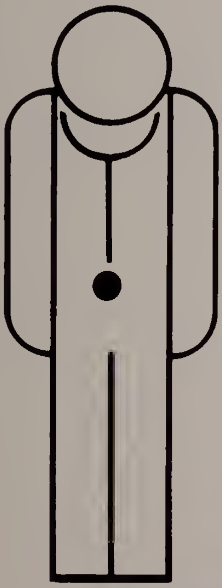

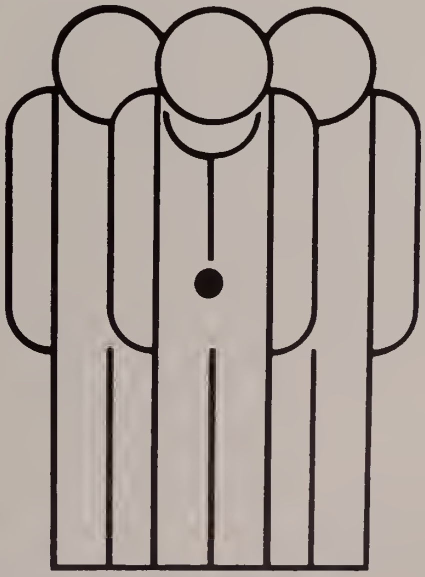

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[1] Borison R Scientific Exhibit, 32nd Institute on Hospital and Community Psychiatry, Boston, MA September 15-18, 1980 [2] Borison R Lecture, Duke University Department of Psychiatry Durham, NC, September 18, 1980
[3] Baldessarini RJ Drugs and the treatment of psychiatric disorders in *Goodman and Gilman's The Pharmacological Basis of Therapeutics*, ed 6 New York Macmillan Publishing Co Inc, 1980 pp 391 402,407

Before prescribing or administering see Sandoz literature for full product information The following is a brief summary

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines Phenothiazines are capable of potentiating central nervous system depressants (e g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides, carefully consider benefit versus risk in less severe disorders During pregnancy, administer only when the potential benefits exceed the possible risks to mother and fetus.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy, observed primarily in patients receiving larger than recommended doses, is characterized by diminution of visual acuity, brownish coloring of vision, and impairment of night vision, the possibility of its occurrence may be reduced by remaining within recommended dosage limits. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g , driving), and increase dosage gradually Orthostatic hypotension is more common in females than in males Do not use epinephrine in treating drug-induced hypotension since phenothiazines may induce a reversed epinephrine effect on occasion.

Neuroleptic drugs elevate prolactin levels, the elevation persists during chronic administration Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. Daily doses in excess of 300 mg should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System* – Drowsiness, especially with large doses, early in treatment, infrequently, pseudoparkinsonism and other extrapyramidal symptoms; rarely, nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System* – Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor *Endocrine System* – Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema *Skin* – Dermatitis and skin eruptions of the urticarial type, photosensitivity *Cardiovascular System* ECG changes (see *Cardiovascular Effects* below). *Other* – Rare cases described as parotid swelling

It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. It has been reported that old age lowers the tolerance for phenothiazines; the most common neurologic side effects are parkinsonism and akathisia, and the risk of agranulocytosis and leukopenia increases. The following reactions have occurred with phenothiazines and should be considered whenever one of these drugs is used. *Autonomic Reactions* – Miosis, obstipation, anorexia, paralytic ileus. *Cutaneous Reactions* – Erythema, exfoliative dermatitis, contact dermatitis *Blood Dyscrasias* – Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia. *Allergic Reactions* – Fever, laryngeal edema, angioneurotic edema, asthma *Hepatotoxicity* – Jaundice, biliary stasis. *Cardiovascular Effects* – Changes in terminal portion of electrocardiogram, including prolongation of Q-T interval, lowering and inversion of T-wave, and appearance of a wave tentatively identified as a bifid T or a U wave have been observed with phenothiazines, including Mellaril (thioridazine); these appear to be reversible and due to altered repolarization, not myocardial damage. While there is no evidence of a causal relationship between these changes and significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients showing characteristic electrocardiographic changes while taking the drug While proposed, periodic electrocardiograms are not regarded as predictive. Hypotension, rarely resulting in cardiac arrest. *Extrapyramidal Symptoms* – Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonus, oculogyric crises, tremor, muscular rigidity, and akinesia. *Persistent Tardive Dyskinesia* – Persistent and sometimes irreversible tardive dyskinesia, characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e.g , protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements) and sometimes of extremities may occur on long-term therapy or after discontinuation of therapy, the risk being greater in elderly patients on high-dose therapy, especially females; if symptoms appear, discontinue all antipsychotic agents Syndrome may be masked if treatment is reinstituted, dosage is increased, or antipsychotic agent is switched Fine vermicular movements of tongue may be an early sign, and syndrome may not develop if medication is stopped at that time *Endocrine Disturbances* Menstrual irregularities, altered libido, gynecomastia, lactation, weight gain, edema, false positive pregnancy tests. *Urinary Disturbances* – Retention, incontinence *Others* – Hyperpyrexia, behavioral effects suggestive of a paradoxical reaction, including excitement, bizarre dreams, aggravation of psychoses, and toxic confusional states; following long-term treatment, a peculiar skin-eye syndrome marked by progressive pigmentation of skin or conjunctiva and/or accompanied by discoloration of exposed sclera and cornea; stellate or irregular opacities of anterior lens and cornea; systemic lupus erythematosus-like syndrome

Dosage: Dosage must be individualized according to the degree of mental and emotional disturbance, and the smallest effective dosage should be determined for each patient *In geriatric patients with multiple symptoms such as agitation, anxiety, depressed mood, tension, sleep disturbances, and fears* the usual starting dosage is 25 mg t i d and the dosage ranges from 10 mg b.i d to q i.d in milder cases to 50 mg t i d or q i.d for more severely disturbed patients, the total daily dose ranges from 20 mg to a maximum of 200 mg

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NEW YORK STATE JOURNAL OF MEDICINE

NOVEMBER 1982

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Pensive Schoolboy. Watercolor, 1981, by Richard C. Gibbs, M.D., New York City. See pages 1685 and 1721.

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*Hannemann, R. E., Erb, R. J., Stoltman, W. P., Bronson, E. C., Williams, E. J., Long, R. A., Hull, J. H. and Starbuck, R. R.: Digital Plethysmography For Assessing Erythrityl Tetranitrate Bioavailability. Clin Pharmacol and Ther 29:35-39, 1981.

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CONTRAINDICATIONS: Idiosyncrasy to this drug.

WARNING: Data supporting the use of nitrates during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Intraocular pressure is increased therefore caution is required in administering to patients with glaucoma. Tolerance to this drug, and cross-tolerance to other nitrites and nitrates may occur.

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop. This drug can act as a physiological antagonist to norepinephine, acetylcholine, histamine and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and / or exfoliative dermatitis may occasionally occur.

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New York State Journal of Medicine (ISSN 0028-7628)

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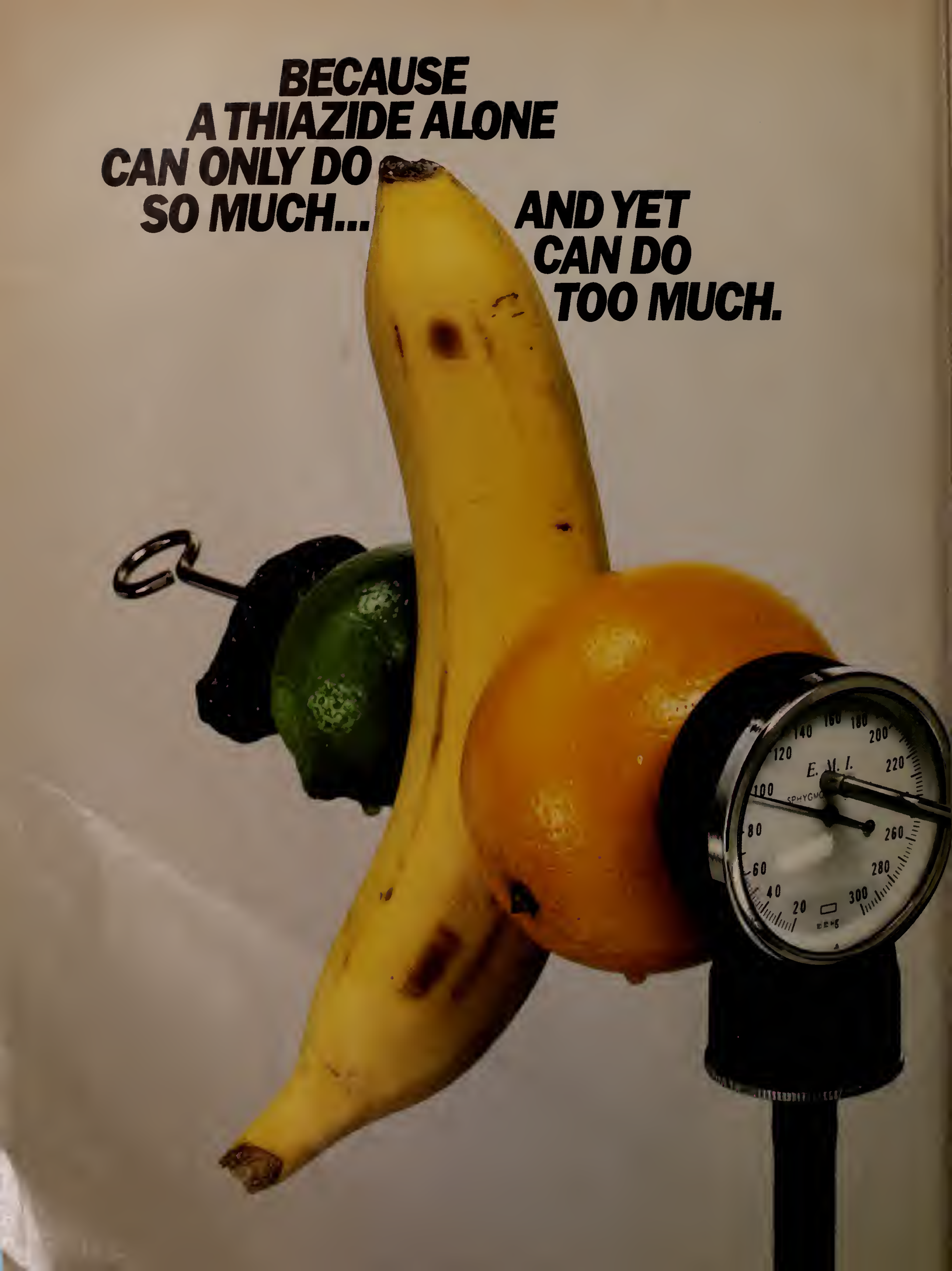
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WARNING: This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

INDICATION: INDERIDE is indicated in the management of hypertension. (See boxed warning)

CONTRAINDICATIONS: Propranolol hydrochloride (INDERAL®): Propranolol hydrochloride is contraindicated in 1) bronchial asthma; 2) allergic rhinitis during the pollen season; 3) sinus bradycardia and greater than first degree block; 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol, 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs.

Hydrochlorothiazide: Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS: Propranolol hydrochloride (INDERAL®): CARDIAC FAILURE Sympathetic stimulation is a vital component supporting circulatory function in congestive heart failure, and inhibition with beta blockade always carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure Propranolol acts selectively without abolishing the inotropic action of digitalis on the heart muscle (*i.e* , that of supporting the strength of myocardial contractions) In patients already receiving digitalis, the positive inotropic action of digitalis may be reduced by propranolol's negative inotropic effect The effects of propranolol and digitalis are additive in depressing AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, continued depression of the myocardium over a period of time can, in some cases, lead to cardiac failure In rare instances, this has been observed during propranolol therapy. Therefore, at the first sign or symptom of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and the response observed closely: a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol therapy should be immediately withdrawn; b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and the patient closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of propranolol therapy Therefore, when discontinuance of propranolol is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when propranolol is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long-term use have not been adequately appraised. Special consideration should be given to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm This is another reason for withdrawing propranolol slowly Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta blockade impairs the ability of the heart to respond to reflex stimuli For this reason, with the exception of pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery, at which time all chemical and physiologic effects are gone according to available evidence However, in case of emergency surgery, since propranolol is a competitive inhibitor of beta-receptor agonists, its effects can be reversed by administration of such agents, e.*g* , isoproterenol or levarterenol However such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has also been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (e g , CHRONIC BRONCHITIS, EMPHYSEMA) propranolol should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Because of its beta-adrenergic blocking activity, propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia This is especially important to keep in mind in patients with labile diabetes Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure

Hydrochlorothiazide: Thiazides should be used with caution in severe renal disease In patients with renal disease, thiazides may precipitate azotemia In patients with impaired renal function, cumulative effects of the drug may develop

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease since minor alterations of fluid and electrolyte balance may precipitate hepatic coma

Thiazides may add to or potentiate the action of other antihypertensive drugs Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported

USE IN PREGNANCY: Propranolol hydrochloride (INDERAL®): The safe use of propranolol in human pregnancy has not been established Use of any drug in pregnancy or women of childbearing potential requires that the possible risk to mother and/or fetus be weighed against the expected therapeutic benefit Embryotoxic effects have been seen in animal studies at doses about 10 times the maximum recommended human dose.

Hydrochlorothiazide: Thiazides cross the placental barrier and appear in cord blood The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult

Nursing Mothers Thiazides appear in breast milk. If the use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS: Propranolol hydrochloride (INDERAL®): Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if propranolol is administered The added catecholamine blocking action of this drug may then produce an excessive reduction of the resting sympathetic nervous activity Occasionally, the pharmacologic activity of propranolol may produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension.

As with any new drug given over prolonged periods, laboratory parameters should be observed at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function.

Hydrochlorothiazide: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely hyponatremia, hypochloremic alkalosis, and hypokalemia Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present or during concomitant use of corticosteroids or ACTH

Interference with adequate oral electrolyte intake will also contribute to hypokalemia Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effects of digitalis (e *g* , increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements such as foods with a high potassium content

Any chloride deficit is generally mild, and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease) Dilutional hyponatremia may occur in edematous patients in hot weather, appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening In actual salt depletion, appropriate replacement is the therapy of choice

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged Diabetes mellitus which has been latent may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy

Thiazides may decrease serum PBI levels without signs of thyroid disturbance

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism such as renal lithiasis, bone resorption, and peptic ulceration, have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function

ADVERSE REACTIONS: Propranolol hydrochloride (INDERAL®): *Cardiovascular* bradycardia, congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura.

Central Nervous System lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis

Allergic pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress

Respiratory bronchospasm.

Hematologic agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Miscellaneous reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been conclusively associated with propranolol.

Clinical Laboratory Test Findings: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

Hydrochlorothiazide: *Gastrointestinal* anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis, sialadenitis

Central Nervous System. dizziness, vertigo, paresthesias, headache, xanthopsia

Hematologic leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia

Cardiovascular orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics)

Hypersensitivity purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever, respiratory distress including pneumonitis, anaphylactic reactions

Other hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn

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Abstracts

Lawrence C, Grossman R: Macro-microangiopathic blood smears in megaloblastic anemia. ***New York State J Med 1982;*** 82:1665–1668.

Striking erythrocyte poikilocytosis that suggested a microangiopathic disorder was found on the initial blood smears in two patients with uncomplicated megaloblastic anemia. To estimate the frequency of such abnormalities we reviewed the findings in all patients with megaloblastic anemia seen here during the preceding seven years. There were 30 patients whose main problem was uncomplicated megaloblastic anemia. Most of those with hemoglobin concentrations of less than 7 g/dL had remarkable red cell fragmentation (mean 11.4% ± 1.1 (SEM) poikilocytes, compared with 0.50% ± 0.05 in normal controls, $P < .001$). Erythrocyte abnormalities regressed rapidly after treatment. The cause of the marked erythrocyte shape distortion and fragmentation is now known. One factor may be the buffeting of macrocytes that is likely to occur in patients with high cardiac outputs associated with severe chronic anemia. These microangiopathic red cell abnormalities are important diagnostically and may be a factor in the increased hemolysis in pernicious anemia.

Whitehead ED, Leiter E: New frontiers in alloplastic genitourinary prostheses. I. The surgical management of urinary incontinence. ***New York State J Med 1982;*** 82:1669–1674.

In the last ten years, various genitourinary prostheses for the surgical management of urinary incontinence have been introduced. Both passive and active compression devices are in use to manage urinary incontinence. The most significant recent prosthesis is the Artificial Urinary Sphincter (Models 791/792) for use in adults and pediatric patients with incontinence due to many etiologies. As a result of implantation with these prostheses, many incontinent patients who would have been social cripples due to their dependency on clamps, catheters, and rubber underwear are now able to lead a relatively normal life.

Bennett AH, Rivard DJ: Male impotence: new concepts in management. ***New York State J Med 1982;*** 82:1676–1683.

The evaluation and treatment of impotence in the male has changed dramatically in the past decade. Newer diagnostic tests have shown that organic causes account for the majority of cases of impotence in the adult. Progress in the medical and surgical treatment of impotence has vastly improved patient and partner satisfaction.

Copperman S: Cherchez le chien: household pets as reservoirs of persistent or recurrent streptococcal sore throats in children. ***New York State J Med 1982;*** 82:1685–1687.

The purpose of this article is to make the physician aware that household pets may be a source of otherwise unexplained persistent or recurrent group A beta-hemolytic streptococcal sore throats within a family. Such awareness may help in eradicating the infective organism from a household. Cooperation with veterinarians is urged so that appropriate cultures may be taken and treatment instituted to the benefit of animals and owners.

The aggregation of these abnormalities in two families and in other unrelated individuals in the present study and in a review of the literature suggests that the clinical expression of leukonychia is a pleiotropic manifestation of a gene that leads separately to leukonychia, duodenal ulcer, and gallstones.

Abstracts in Interlingua

Lawrence, C, e Grossman, R: Le frotes macro-microangiopathic del sanguine in le anemia megaloblastic. ***New York State J Med 1982;*** 82:1665–1668.

Poikilocytosis erthrocytic sorprendente, que suggere un morbo microangiopathic, esseva trovate in le frotes initial del sanguine de duo patientes con anemia megaloblastic non complicate. Pro calcular le frequentia de iste anormalitate nos revisteva le trovatos in omne patientes con iste anemia observate durante le ultime 7 annos. Habeva 30 patientes con anemia megaloblastic non complicate como le problema principal. Le patientes con hemoglobina inferiori a 7 g/dl presentava un notabile fragmentation del erythrocytos (promedie 11.4% ± 1.1 (SEM) poikilocytos, comparate con 0.5% + 0.005 in le controlos normal; p 0.001). Le anormalitates del erythrocytos regressava rapidemente depost del tractamento. Non es cognoscite le causa del marcate distortion e fragmentation del erythrocytos. Un del factores pote esser le "buffeting" del macrocytos que pare ocurrer in patientes con redimento cardiac elevate e associate con anemia chronic grave. Iste anormalitates erythrocytic microangiopathic ha importantia diagnostic e pote esser un factor in le hemolysis augmentate in le anemia perniciosa.

Whitehead, ED, e Leiter, E: Nove frontieras per le prosthesis genitourinari alloplastic. I. Tractamento chirurgic del incontinentia urinari. ***New York State J Med 1982;*** 82:1669–1674.

In le ultine 10 annos, differente prosthesis genitourinari ha essite introducite per le tractamento chirurgic del incontinentia urinari. Iste ha consistite in dispositivos compressive active e passive. Le plus significative e recente del prosthesis es le sphincter urinari artificial (Modelos 791–792) per esser usate in patientes adultos e pueros con incontinentia de differente etiologia. Como resultato del implantation de iste prosthesis, multe patientes con incontinentia urinari que ha essite invalidate socialmente debite a su dependentia de crampas o catheteres, o de subvestimenta de cauchu, ora pote viver un vita relativemente normal.

Bennett, AH, e Rivard DJ: Impotentia masculin: nove conceptos therapeutic. ***New York State J Med 1982;*** 82:1676–1683.

Le evalutation e tractamento del impotentia masculin ha cambiate dramaticmente in iste ultime decade. Plus nove diagnostic tests ha demonstrate que causas organic es responsabile per le majoritate del casos de impotentia in adultos. Le progressos therapeutic, medic e chirurgic, per le impotentia ha meliorate grandemente le satisfaction desirate per patientes e su companion.

Copperman, S: "Cherchez le chien" (pesquisar le can): le animales de menage ("pets", in anglese) como reservorios de pharyngitis streptococcal persistente o recurrente in pueros. ***New York State J Med 1982;*** 82:1685–1687.

Le objectivo de iste articulo es facer cognoscer al medico que le animales domestic de menage ("pets") pote esser un fonte non explicate de altere modo de pharyngitis streptoccocal (Gruppo A hemolytic beta) persistent o recurrente in un familia. Iste cognoscimento pote adjutar al erradication del agent infective del casa. Le cooperation de veterinarios es urgente perque iste debe facer le culturas appropriate e etiam le tractamento del animales infective pro le beneficio del proprietario e su animal.

Translated by Edwardo I. Juliet, M.D.

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Medical Meetings

Material for inclusion in the medical meetings section must be received eight weeks prior to publication date.

Cardiovascular teaching day

"Cardiovascular Update 1982" will be the theme of a teaching day sponsored by St. Peter's Hospital and subdepartment of Cardiology on Thursday, December 2, 1982 from 1:00 to 4:45 PM in the Cusak Auditorium.

62nd annual meeting

The Association for Research in Nervous and Mental Disease, Inc. will hold its sixty-second annual meeting on December 3 and 4, 1982 at the Waldorf Astoria Hotel in New York City. The meeting will be devoted to *The Psychobiology of Eating and Its Disorders.*

Conference on borderline syndrome

Long Island Jewish-Hillside Medical Center announces a conference on *The Borderline Personality—Current Concepts and Approaches* to be held on Friday, December 3, 1982 from 8:30 AM to 4:30 PM at the Sloman-Lowenstein Auditorium of the Medical Center. For further information contact: Ann J. Boehme, CME Coordinator, (212) 470-2114.

Medical News

Material for inclusion in medical news section must be received eight weeks prior to publication date.

College of Chest Physicians award recipient

Arthur Q. Penta, M.D., was the recipient of an award presented by the New York State Chapter of the American College of Chest Physicians in conjunction with the Section on Diseases of the Chest. The award was presented in grateful recognition of his leadership and dedication for the past 42 years in the development and operation of the Chapter. During this same period of time, Dr. Penta has been an active member and participant in the Medical Society of the State of New York (MSSNY). He has been a Delegate to the College of Chest Physicians and a Delegate to the MSSNY Section on Chest Diseases at the annual meeting of the House of Delegates. Over the years, he has been an active participant at the annual CME Assembly Program proffering outstanding service to the Scientific Exhibit Committee.

(*continued on page 1660*)

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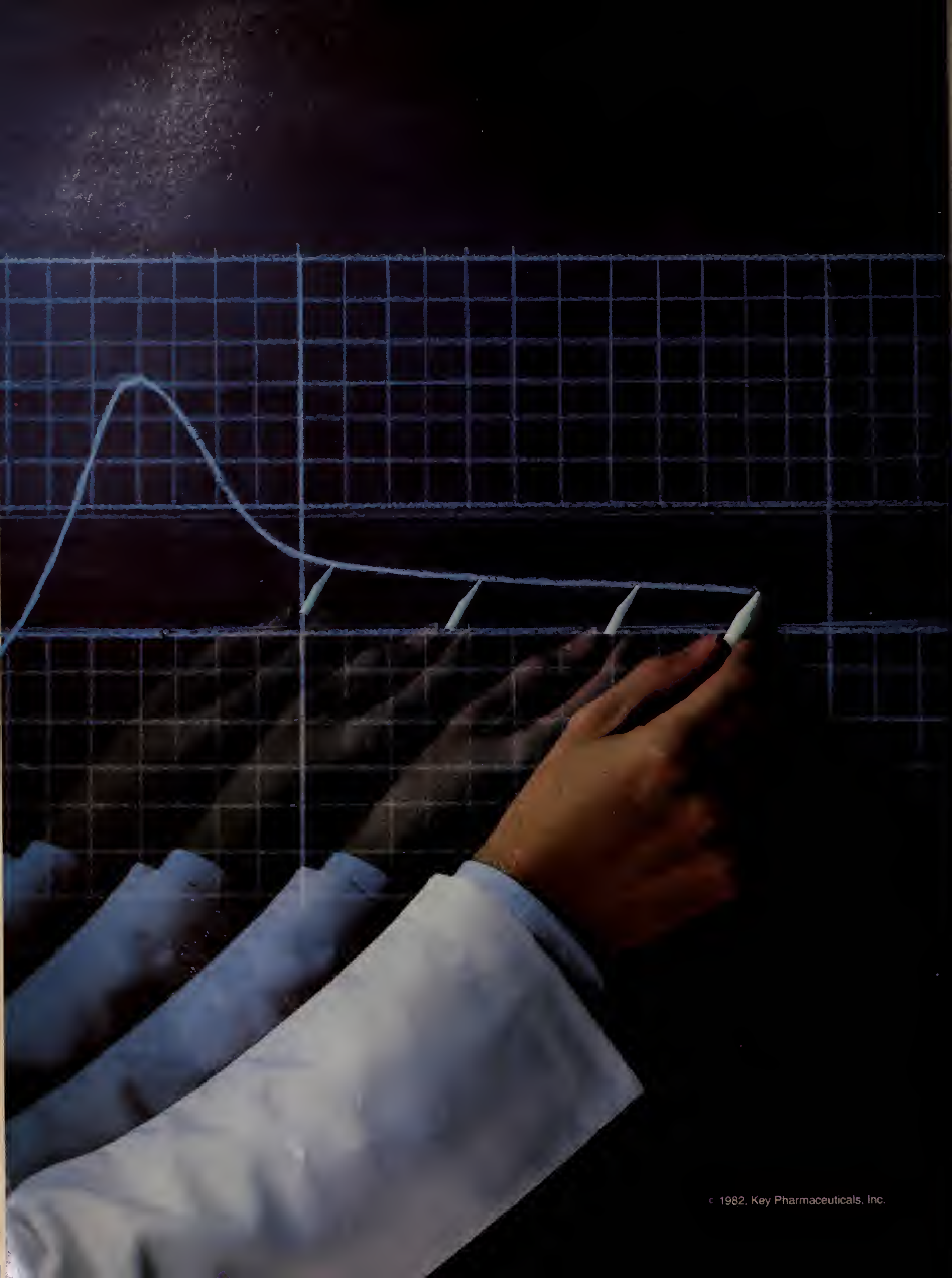

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Usage in Pregnancy: Safe use in pregnancy has not been established relative to possible adverse effects on fetal development, but neither have adverse effects on fetal development been established. This is, unfortunately, true for most anti-asthmatic medications. Therefore, use of theophylline in pregnant women should be balanced against the risk of uncontrolled asthma.
Precautions: THEO-DUR TABLETS SHOULD NOT BE CHEWED OR CRUSHED. Theophyllines should not be administered concurrently with other xanthine medications. It should be used with caution in patients with severe cardiac disease, severe hypoxemia, hypertension, hyperthyroidism, acute myocardial injury, cor pulmonale, congestive heart failure, liver disease, and in the elderly, particularly males, and in neonates. Great caution should be used in giving theophylline to patients in congestive heart failure since these patients show markedly prolonged theophylline blood level curves. Use theophylline cautiously in patients with history of peptic ulcer. Theophylline may occasionally act as a local irritant to G.I. tract, although gastrointestinal symptoms are more commonly central and associated with high serum concentrations above 20 mcg/ml.
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Surgeon General to physicians

Surgeon General C. Everett Koop has issued the following statement to U.S. physicians and other health care providers: ". . . I urge other physicians and professionals to advise parents and patients about the harmful effects of using marijuana and to urge discontinuation of its use. What little we know for certain about the effects of marijuana on human health—and all that we have reason to suspect—justifies serious national concern."

Call for papers

EVALUATION AND THE HEALTH PROFESSIONS announces a call for papers dealing with all aspects of the assessment of quality of care/quality assurance within the professions. Manuscripts or proposals may be submitted to: R. Barker Bausell, Ph.D., Editor, Evaluation and the Health Professions, University of Maryland, 655 West Lombard Street/SNB, Baltimore, Md. 21201.

Alzheimer disease research grants

The Commonwealth Fund, in a significant departure from its customary pattern of health care philanthropy, today announced the awarding of three five-year grants for basic research on the major causes of Alzheimer's disease, a form of senile dementia, which affects well over one million Americans. In announcing the grants, Margaret E. Mahoney, President of the Commonwealth Fund, stressed that "Research in Alzheimer's disease is exactly at the point where private philanthropy can make a large contribution with relatively small amounts of money by accelerating work that could lead to more promising evidence of a possible cure and dramatizing the case for a broader base of funding.[11]

1983–1984 Postgraduate research fellowships in hemophilia

The National Hemophilia Foundation is accepting applications for two Judith Graham Pool postgraduate research fellowships to be awarded competitively for the academic year beginning July 1, 1983. Grants of up to $15,000 a year will be awarded through medical and graduate schools to applicants engaged in or planning clinical or basic research relating to hemophilia. Application forms are available from the National Hemophilia Foundation, 19 West 34th Street, Suite 1204, New York, New York 10001.

Lenox Hill Hospital announcement

Alan Caspi, Pharm. D., has been appointed director of the Department of Pharmacy.

Eye-Bank names new medical director

Chin Wing Chu, M.D., has been named medical director of the Eye-Bank for Sight Restoration, Inc.

(continued on page 1730)

Patient/Physician Relationships — A Growing Void

It would seem that by the time a medical student graduates knowledge of his expected relationship and obligations to his patients has been established; and if not by then, certainly by the time he completes his training and starts practice. Unfortunately, this is not always the case.

Partial blame may fall on the schools which may spend little, if any, time inculcating the concept of humanistic personalized service because their own faculties currently approach, almost exclusively, the narrow, highly specialized pillars of current medical practices. They apparently give few lectures on just how to interact with patients as persons; they convey little awareness of patients' rights. Lawyers are greatly aware of patients' rights. This leaves a void and has contributed much to the increasing number of malpractice suits, many of which might have been avoided if there had been a closer, more personal rapport between the patient and his or her physician.

Another aspect to the problem is the increase of group practice, full-time practice, and narrow specializations that have added to the complexity of modern practice. The general type of office practice has also aggravated the loss of a personal, intimate relationship between a patient and the physician.

Physicians of the past knew families, individuals, their financial burdens, and their aspirations. No longer does he have access to these insights. The few physicians who still practice medicine compassionately are falling into an over-worked, and ever-decreasing minority.

No longer do many physicians adhere to Osler's admonition to let the patient talk so that he can state his problems. Or, as one of my professor's used to say: "Let the patient talk and he will give you the diagnosis and his needs." This form of communication has become a lost art. The patient has now become "Bed 22, Ward B" and often is not consulted. Decisions are made for him and he must respond or be labeled as uncooperative.

As executive director of a large medical society for many years, I received daily complaints from callers who felt that their physician had not proceeded properly. More often than not it seemed that their complaints were valid.

I recently spent the better part of a year in several hospitals. It was a revelation to learn, first hand, about the new medical order. There was an almost complete lack of detailed history-taking; often only a rudimentary physical examination beyond the evident chief complaint. Only rarely was there a consultation of any contemplated procedure.

Several physicians, over the past few years, have apprised me of their experience with large teaching establishments. They knew what the routines should have been but found no taking of an analytical history. They also found that casual questions at times lead to specialized consultation immediately, along with esoteric tests and prices, often without the patient's request or knowledge.

This might well lead to formulating a "raison d'etre" for instigating cause and formulation of a Patients Bill of Rights. A set of guidelines would bring some control back to the patient.[1]

The Patient's Bill of Rights:

- The patient has a right to prompt attention, without excuse.
- The patient has a right to be informed of all decisions and comtemplated actions, with complete and accurate information concerning the medical rationale, prognosis, risks, and side effects.
- The "informed consent" should encompass consent in writing; competent information of and comprehending awareness of the contemplated procedures so that the patient will not be subjected to any regimen without first understanding and agreeing to having the right of refusal. There should be no experimentation or irrevocable decisions, without prior permission.
- The patient has a right to prior knowledge of all treating physicians and consultants; and he has a right to know of his status and the evaluation of his progress.
- The patient has the right of privacy with no recognizable discussions or publication of his case without his permission.

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- The patient has a right to know of his projected discharge, and can question the desirability as planned.
- The patient has a right to see his own record, or obtain a copy, on written request.

These tenets, and others, create legalities on which malpractice claims are often based. Much of this protocol does not prevail, partially because patients are not aware of their rights, but more often because physicians may not know their legal limitations regarding patients' rights. However, patients' lawyers *will* know and patients' physicians *will not* be saved by their ignorance.

Unfortunately, many physicians proceed according to their own judgment and find themselves under the Sword of Damocles. In so doing, even when they have chosen medical conclusions and techniques that are the correct ones, they have left themselves open to litigation.

Three elements could lead to a solution.

First, return to the "one-to-one" basis of medical practice that establishes a personal relationship between the physician and the patient. Second, appreciate the patient as an intelligent individual, one with a free will; with the ability to understand and make his own decisions; with the opportunity to request or inquire about modifications of treatment that may be more palatable and just as efficacious; with the right to request another opinion. Third, attempt to appreciate a patient's state of mind, as well as his future needs and responsibilities that begin after leaving a hospital or termination of treatment. Give consideration to how the patient will be affected by the choice of therapy. It is possible that it might be modified once the problems are fully known. And, finally, full recognition that patients are human beings, not chattel owned by physicians, and that they have a right to control of their own destinies.

"Father may not know best" in every case.

LESTER J. CANDELA, M.D.
Past President and Executive Director
Medical Society of the County of Queens

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1. The Rights of Doctors, Nurses, and Other Allied Professionals. Patients Bill of Rights. ACLU Handbook, Appendix A.

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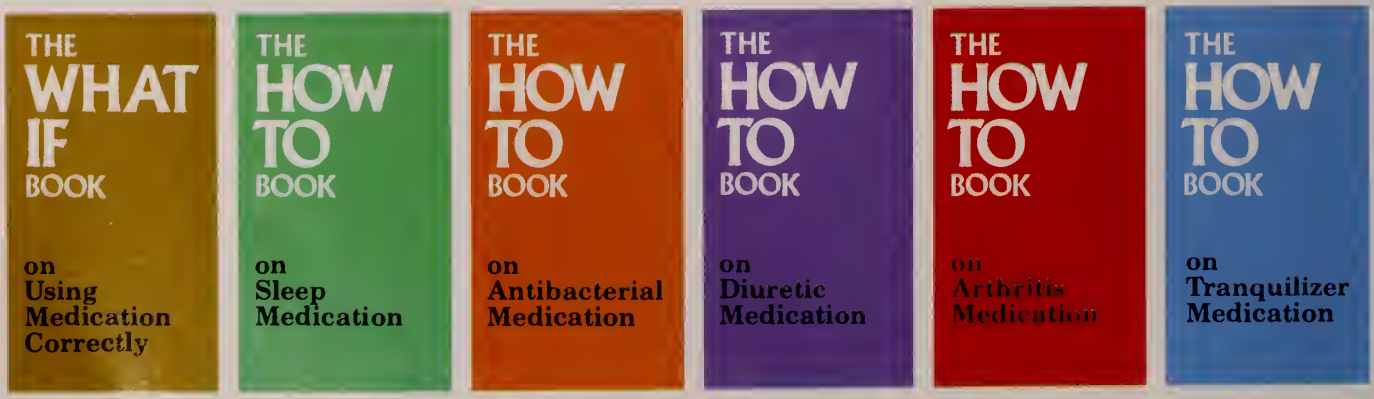
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Macro-Microangiopathic Blood Smears in Megaloblastic Anemia

CHRISTINE LAWRENCE, M.D.
The Bronx, New York
ROSE GROSSMAN
The Bronx, New York

From the Department of Medicine, Albert Einstein College of Medicine and the Bronx Municipal Hospital Center

Striking erythrocyte poikilocytosis that suggested a microangiopathic disorder was found on the initial blood smears in two patients with uncomplicated megaloblastic anemia. To estimate the frequency of such abnormalities we reviewed the findings in all patients with megaloblastic anemia seen here during the preceding seven years. There were 30 patients whose main problem was uncomplicated megaloblastic anemia. Most of those with hemoglobin concentrations of less than 7 g/dL had remarkable red cell fragmentation (mean 11.4% ± 1.1 (SEM) poikilocytes, compared with 0.50% ± 0.05 in normal controls, $P < .001$). Erythrocyte abnormalities regressed rapidly after treatment. The cause of the marked erythrocyte shape distortion and fragmentation is not known. One factor may be the buffeting of macrocytes that is likely to occur in patients with high cardiac outputs associated with severe chronic anemia. These microangiopathic red cell abnormalities are important diagnostically and may be a factor in the increased hemolysis in pernicious anemia.

We recently observed two patients with megaloblastic anemia whose initial peripheral blood smears showed striking erythrocyte fragmentation. The red blood cell (RBC) abnormalities first suggested that the patients might have a microangiopathic disorder. However, the bone marrow smears and other laboratory findings, the patients' prompt and complete response to vitamin B_{12} and folate administration, with regression of the poikilocytosis, suggested that they had uncomplicated megaloblastic anemia. We wondered whether their RBC fragmentation might be relevant to the hemolysis that occurs in pernicious anemia, whether it might be specific for B_{12} or folate deficiency, and whether the presence of small RBC fragments might lower the average mean corpuscular volume (MCV). Therefore, we reviewed laboratory and clinical findings in the other patients with megaloblastic anemia we had seen during a seven-year period. Of 30 patients whose findings were appropriate for analysis, 15 of the 18 with hemoglobin concentrations of less than 7 g/dL had striking poikilocytosis that suggested the presence of a microangiopathic disorder. In the six patients whose serial blood smears were available for examination, abnormal poikilocytosis disappeared as they responded to treatment with vitamin B_{12} and folate.

Methods

We searched our laboratory file in which we record all hematologic consultations. Megaloblastic anemia was diagnosed in 135 patients between August 1974 and April 1981 at the Bronx Municipal Hospital Center. Thirteen of those patients' charts were unobtainable. The records of the other 122 patients were reviewed and, among other findings, we recorded each patient's age, sex, key laboratory values, all diagnoses besides megaloblastic anemia, and response of the anemia to treatment. All the initial smears of peripheral blood and bone marrow aspirates were reexamined to confirm the original diagnosis and to assess the iron content in the aspirates. Iron content was graded 0 to 4+ using a Prussian blue stain, with 2+ representing normal iron stores.

The findings in 30 patients whose main problem was uncomplicated megaloblastic anemia are the subject of this report. The other 92 patients whose charts and blood and bone marrow smears were reviewed were excluded because they had other major complications. In 58 patients the main problem was not their megaloblastic anemia, but rather disorders such as acute alcoholism, decompensated liver disease, hemolytic anemia, sepsis, or acute bleeding. Thirty-four other patients were excluded because they had concurrent iron deficiency (marrow iron less than 1+). Of the remaining 30 patients whose findings are presented here, the presence of abnormal hemoglobins was excluded in ten of the 14 nonwhite patients. Follow-up blood counts were available in 26 of the 30.

Erythrocyte poikilocytosis was evaluated by counting 1,000 RBCs in two different areas on the admission peripheral blood smear. Triangular RBCs were present but uncommon, and small numbers of helmet cells and teardrop cells were often present.

Cells that were fragmented, irregular in shape, or distorted were considered to be poikilocytes. In 21 control specimens with normal hemoglobin concentrations (13.4 to 16.4 g/dL), the incidence of poikilocytosis in peripheral blood was 0.50% ± 0.05 (SEM).

The laboratory studies were performed in the hospital's routine chemistry and hematology laboratories using standard methods. Before September 1979 blood counts were performed using a Coulter Counter Model S (18 patients). Since September 1979, a Coulter Model S Plus has been used (12 patients). Serum vitamin B_{12} and folate concentrations were measured by the Upjohn Laboratory from August 1974 to April 1978. Vitamin B_{12} levels of less than 330 pg/mL and folate levels under 4 ng/mL were considered low. Since May 1978, the assays have been performed in the hospital laboratory using the Diagnostic Products Corporation dual count kit. Folate levels below 3 ng/mL were considered low.[1] Prior to March 1980, B_{12} levels below 250 pg/mL were considered low,[2] and since March 1980, following correction for cobalamin analogues,[3] levels under 130 pg/mL were considered abnormal. Statistical analyses were performed using standard methods; mean values are reported ± SEM, and the significance of differences between means was calculated using Student's *t* test.[4]

Results

Figure 1 shows the admission blood smear of a 53-year-old man with B_{12} deficiency when his hemoglobin was 6.2 g/dL and packed cell volume (PCV) 19%. The smear shows striking anisocytosis and poikilocytosis with many fragmented RBCs. Triangle, helmet, and teardrop cells were common. Fifty percent of the RBC fragments disappeared within ten days after starting treatment in the five untransfused patients with the most marked poikilocytosis who had serial smears.

The relation between the 30 patients' pretreat-

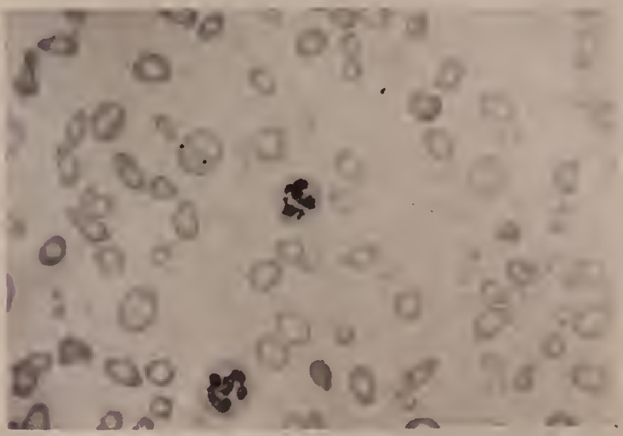

FIGURE 1. Admission peripheral blood smear in a patient with megaloblastic anemia due to vitamin B_{12} deficiency showing marked poikilocytosis.

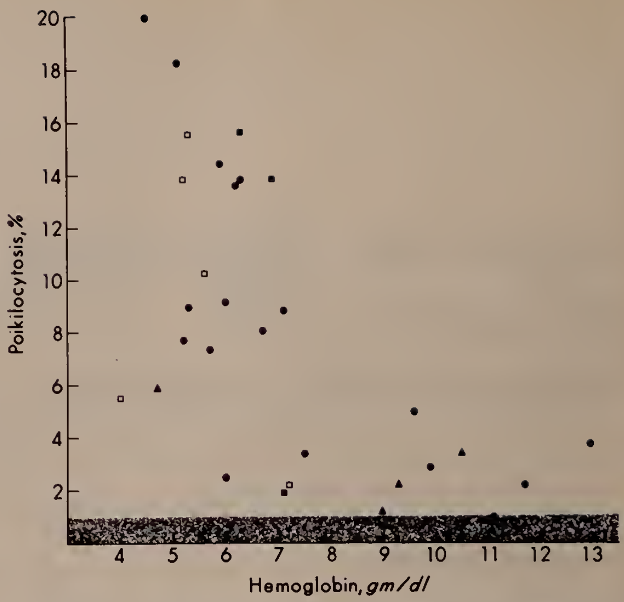

FIGURE 2. Relation between percent poikilocytes and initial hemoglobin concentration in 30 patients with megaloblastic anemia. The shaded area at bottom shows mean poikilocyte percent +2 SD in normal controls (n 21, 0.5% + 0.5). Key: ●–B_{12} deficiency; ▲–folate deficiency; ■–combined deficiency; □–undetermined deficiencies.

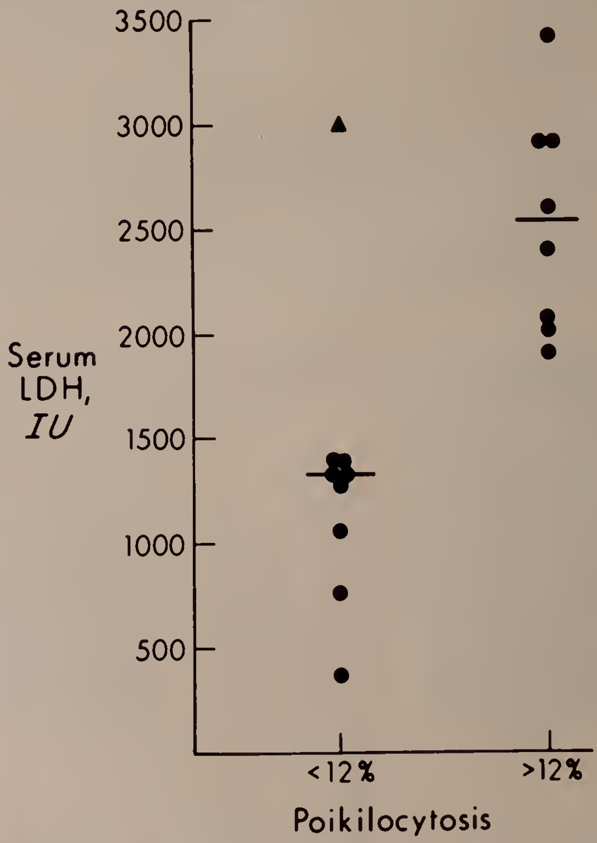

FIGURE 3. Relation between percent poikilocytes and serum LDH activity in 17 patients with initial hemoglobin <7 g/dL. Triangle refers to a value over 3,000 IU.

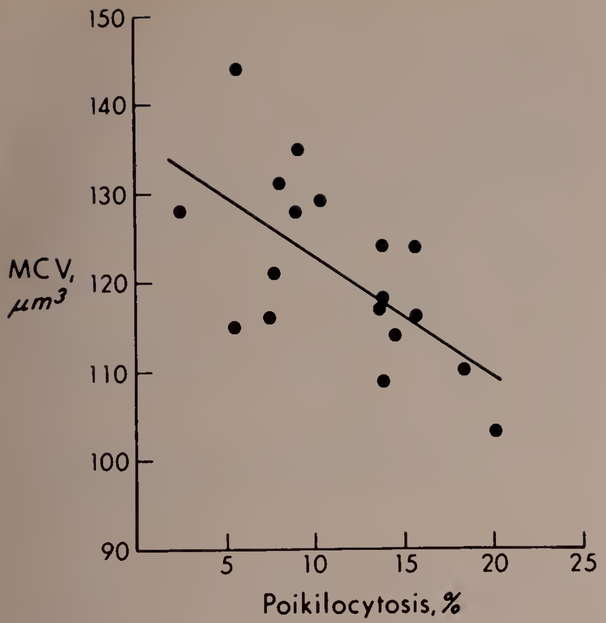

FIGURE 4. Relation between percent poikilocytes and erythrocyte MCV in 18 megaloblastic anemia patients with hemoglobin concentrations less than 7 g/dL.

ment percentages of poikilocytes and their hemoglobin concentrations is shown in Figure 2. The abnormality was marked in the 18 patients with hemoglobin concentrations under 7 g/dL; their mean percentage of grossly distorted erythrocytes was 11.4% ± 1.1. Eleven of the patients with hemoglobin concentrations under 7 g/dL had B_{12} deficiency, one had folate deficiency, two had combined deficiencies, and in four the data were not available. Poikilocytosis was mild, but significantly above normal, in the 12 patients with hemoglobin values above 7 g/dL (mean 3.2% ± 0.6), (t 5.77, $P < .001$).

Among the patients with hemoglobin concentrations under 7 g/dL there was no relation between the severity of poikilocytosis and their age, sex, blood pressure, or serum bilirubin concentration. There was, however, a relation to serum lactic dehydrogenase (LDH) activity. The patients with hemoglobin concentrations under 7 g/dL seemed to cluster into two groups (Fig 2), those with more or less than 12% poikilocytes. Those with less than 12% poikilocytes had a mean serum LDH of 1,328 IU ± 239 and those with more than 12% poikilocytes a mean LDH nearly twice as high, 2,544 IU ± 187 (n 16, t 3.93, $P < .005$) (Fig 3).

Figure 4 shows a significant inverse correlation between MCV and percent poikilocytosis in the patients with hemoglobin concentrations of less than 7 g/dL (n 18, $r = -0.64$, $P < .01$). Patients with the most marked erythrocyte fragmentation tended to have lower MCVs than those with less marked poikilocytosis. Indeed, the patient with the most poikilocytosis (20.1%) had the lowest MCV, 103 μm^3, barely above the normal range.

The patients with marked poikilocytosis did not have evidence of disseminated intravascular coagulation. The six of the nine patients with more than 12% poikilocytes who were studied had normal plasma prothrombin times, and three patients also had normal partial thromboplastin times. Also, there was no significant difference between the platelet counts in the severely anemic patients with more than 12% poikilocytes (mean 128,000 platelets/mm^3 ± 27,000) and the patients with less than 12% poikilocytes (mean 171,000 platelets/mm^3 ± 49,000, n 17, t 0.79).

Comment

Our review of 30 patients whose main medical problem was uncomplicated megaloblastic anemia showed that abnormal erythrocyte fragmentation was common, and was striking among most with severe anemia. Poikilocytosis has been recognized as a feature of severe megaloblastic anemia,[5,6] but has been less emphasized in some recent texts.[7] The prominent poikilocytosis in some severely anemic patients may divert attention from the diagnosis of megaloblastic anemia for two reasons. One is that the erythrocyte abnormalities may suggest a primary microangiopathic disorder because a significant number of the RBCs have the typical triangular and helmet fragments associated with this disorder.[8] The second is that in the most anemic patients, erythrocyte MCVs were lower than anticipated because of the marked cell fragmentation (Fig 4). Several of the most severely anemic patients had MCVs of about 110 μm^3 or less.

One possible explanation for the erythrocyte fragmentation is that the large macrocytes might be traumatized in the circulation, especially in severely anemic patients who presumably have high cardiac outputs and turbulent blood flow. The erythrocyte fragmentation may account in part for the increased hemolysis that is a feature of pernicious anemia.[9,10] Our findings are consistent with Nyman's demonstration that haptoglobin was absent and methemalbumin was present in the sera of patients with untreated pernicious anemia.[11] The latter finding is generally thought to indicate that accelerated RBC destruction may be occurring intravascularly (at least in part),[6] and fits with the finding of RBC fragmentation. In our studies, patients with the most marked poikilocytosis (over 12%) had the greatest elevations of serum LDH activity (mean 2,544 IU ± 187). Poikilocytosis regressed within ten days after starting treatment. Follow-up peripheral smears at two months in 13 of the 15 patients with severe fragmentation showed entirely normal erythrocyte morphology.

Patients with megaloblastic anemia, especially if severe, tend to have marked erythrocyte fragmentation that may suggest the presence of a microangiopathic process. Such a process may, in fact, be present, and is presumably an inherent feature of the megaloblastic disorder (at least when severe), and may well be related to the increased hemolysis that occurs in pernicious anemia.

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Is old fashioned hospital ward better for elderly?

Is a private hospital room the best place for providing care to sick elderly patients? Perhaps not, according to the *Journal of the American Medical Association.*

The solitude inherent in the concept of a private room may work to the detriment of the hospitalized elderly, according to Gregg A. Warshaw, M.D., and colleagues at Duke University Medical Center, Durham, North Carolina. "Isolation increases sensory deprivation and aggravates confusion. Private rooms mean that direct nursing observation is intermittent, and, to reduce the risk of injury, either physical or chemical restraint is commonly used."

New approaches may be needed to manage the functional disabilities of the hospitalized elderly, Warshaw says. He describes special units for the elderly that have already been established in some hospitals which abandon private rooms in favor of small wards of six to ten patients, and are designed to allow continual direct observation of patients. Where possible, patients are nursed out of bed and allowed to wear their own clothes. The nursing staff aids patients in moving from rooms to lounges and to toilets. They encourage patients to eat together and to socialize.

These units can help increase patients' orientation, decrease confusion, maintain social skills, and enhance independence in activities of daily living. Controlled trials of such functionally oriented care units for acutely ill hospitalized elderly patients are needed, Warshaw says, to evaluate their efficacy in producing a better patient outcome than traditional hospital units.

To help document the extent and severity of functional disability in elderly patients, Warshaw's group surveyed 279 patients aged 70 years or older in an acute-care community hospital. They found that about half the patients demonstrated varying degrees of confusion increasing in severity with age. Almost a quarter of the patients were incontinent, about one-third had impaired hearing, 40% had impaired vision, even with eyeglasses, and 25% had speech problems. Almost two-thirds were unable to walk independently and even more needed help with dressing. Body or arm restraints were used for 19% of the patients, and psychotropic drugs and sedatives (excluding pain medications) were prescribed for 43%.

Most patients in the study were confined to single rooms with only occasional nursing contact.

Diminished physical health and a decreased capacity to adapt to new surroundings place the hospitalized older patient at risk of medical complications and deterioration of functional abilities, Warshaw points out. The elderly are more than twice as likely to have complications as younger patients, previous studies have revealed.

New Frontiers in Alloplastic Genitourinary Prostheses

I. The surgical management of urinary incontinence

In the last ten years, various genitourinary prostheses for the surgical management of urinary incontinence have been introduced. Both passive and active compression devices are in use to manage urinary incontinence. The most significant recent prosthesis is the Artificial Urinary Sphincter (Models 791/792) for use in adults and pediatric patients with incontinence due to many etiologies. As a result of implantation with these prostheses, many incontinent patients who would have been social cripples due to their dependency on clamps, catheters, and rubber underwear are now able to lead a relatively normal life.

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Increasing cooperation between specialists in biomedical engineering and urologists in recent years has resulted in significant advances in the diagnosis and management of urinary incontinence, including sophisticated techniques of urodynamic evaluation that are essential for proper management of patients with this condition. The development of prostheses to control urinary incontinence has been one of the most striking of these advances. This article will review the development of these prostheses for urinary control and present indications for their use and the results of implantation.

In general, prostheses for the management of urinary incontinence can be divided into passive-compression and active-compression devices. In both, urinary control is accomplished by either partial or complete urethral or vesicle neck compression, resulting in increased resistance to urine flow. All of these devices or materials are totally implantable and have a high degree of tissue acceptance.

Passive-compression prostheses

Techniques of urethral constriction by passive compression, either by autologous tissue or prosthetics, have received extensive clinical testing with less than optimal long-term results.[1]

The Berry prosthesis. In 1961, Berry proposed the first operation in which an acrylic prosthesis was used to prevent urinary incontinence by implantation in the perineum. It was anchored to the inferior border of the symphisis pubis and the ascending ramus of the ischium posteriorly.[2] Subsequently, other similar types of prostheses have been developed.[3] Virtually all failures were due to loosening of the prosthesis from its moorings secondary to fatigue or breakage of the stainless steel wires or because they cut through periosteum and fascia. As a result, wire sutures were replaced with Teflon-impregnated Dacron sutures, and in 1964 the procedure was further modified by using silicone rubber instead of acrylic for the prosthesis.[4]

The Berry prosthesis was constructed in various configurations, including rectangular, balloon, spindle, H-type, rolling pin, and yoke.[5] Berry has been recognized and credited for his pioneering work with prosthetic materials to correct urinary incontinence. His contributions are an important milestone, marking application of the principle of passive bulbourethral compression and elevation of the urogenital diaphragm.

The Kaufman prosthesis. In 1970, Kaufman published the first of a series of reports in which he used autogenous orthotopic tissue,[6] then a combination of autogenous and alloplastic materials,[7] and finally, alloplastic materials alone to prevent urinary incontinence by passive urethral compression.[8–11] In these reports, he credits Berry with the principles involved.

In his first operation (Kaufman I) the penile crura are detached and crossed to the opposite ramus to compress the urethra.[6] Shortly thereafter, this procedure was modified by approximating the bodies of the crura in the midline with Teflon mesh tape, with or without a wad of Marlex (Davol, Inc.) compressing the crura (Kaufman II).[7,12] The prototype of the current Kaufman operation was introduced in 1973 and initially consisted of placement of a polyurethane-velour pillow (Kaufman III).[8,9]

The currently employed Kaufman prosthesis is silicone-gel filled and has an external velour of polypropylene to encourage fibrous tissue ingrowth and fixation (Fig 1).* Dacron straps are placed around the penile crura and/or stapled to the pubic bones. This prosthesis has an external, unveloured, expandable dome and a base that can be injected with a needle through the perineum to increase ure-

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* Heyer-Schulte Corporation, Goleta, California.

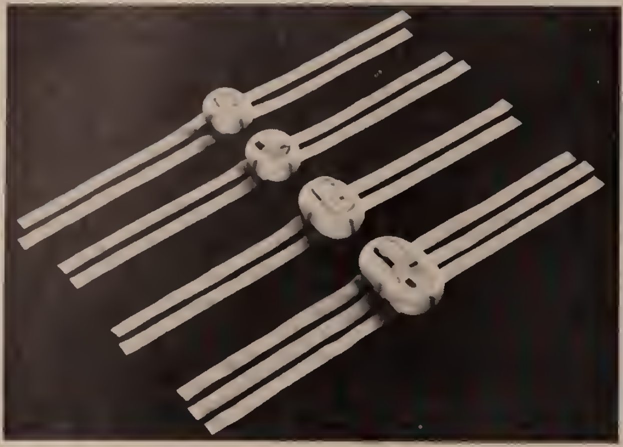

FIGURE 1. Kaufman silicone-gel prosthesis.

thral compression. Compression with this prosthesis changes the configuration of the bulbous urethra from a normal circular lumen to a transverse, slitlike or semilunar, configuration.[13] Recent modifications in the implantation techniques of Kaufman's prosthesis have included suspension of the posterior strap of the device to the anterior rectus fascia as well as combined perineal-abdominal approach for suprapubic "wad" suspension and crural approximation.[14,15]

Even with modifications, however, urethral erosion, infection, urinary retention, perineal pain, osteomyelitis, erectile impotence, and progressive tissue accommodation and displacement of the prosthesis resulting in recurrence of urinary incontinence have occurred in a significant number of patients. Nevertheless, the current Kaufman prosthesis is probably the most popular surgical procedure employing passive urethral compression for the correction of urinary incontinence. The advantageous features of the Kaufman silicone-gel prosthesis are its simplicity and its ability to be adjusted postoperatively by additional injection of fluid. The long-term success rate is not greater than 60% to 70%.[1]

Periurethral Teflon paste injection. Politano and associates have reported a large experience with patients who had Teflon paste (polytetrafluoroethylene) injected periurethrally.[16,17] In females, a needle is inserted at the urethral meatus and advanced to the bladder neck, where the paste is ejected. The needle is withdrawn and the injection continues along the course of the urethra. In males, the needle is inserted into the perineum and advanced to the apex of the prostate, where it is injected at the external sphincter and along the prostatic urethra. Periurethral Teflon injection results in the addition of bulk to the tissues, which stimulates ingrowth of fibroblasts among the small Teflon particles, producing passive compression of the urethral lumen at the injection site and, consequently, increasing the resistance to urine flow. The success rate is approximately 70%.[17]

Active-compression prostheses

The theoretical basis for today's active-urethral-compression devices dates back to 1947 when Foley introduced a hydraulic, externally controlled, implantable cuff.[18]

Scott inflatable prostheses (artificial urinary sphincter). The modern era of active circumferential compression of the urethra for urinary incontinence was introduced in June 1972, when the first alloplastic, totally internal, prosthetic urinary sphincter was implanted in a human by the team of Scott, Bradley, and Timm.[19] They reported their experience with the earliest model (AS 721) of the current series of inflatable hydraulic urinary incontinence prostheses in 1974.[19,20] This device consisted of a zero-pressure fluid reservoir, an inflatable occlusive cuff, and two pumps. Pressurization of the cuff encircling the urethra was activated by squeezing the pump on the right (inflate-bulb assembly), which caused passage of fluid from the reservoir into the cuff, while squeezing of the pump on the left (deflate-bulb assembly) deflated the cuff into an "open" position and allowed fluid to return to the reservoir. The pumps were placed within the scrotum of the male or within the labia of the female. The AS 721 Artificial Urinary Sphincter maintained a controlled pressure on the urethra in the male or female.[21,22] This prosthesis and subsequent modifications of later prostheses in this series have revolutionized the clinical management of adult and pediatric patients with urinary incontinence.

In 1974, the AS 742 Artificial Urinary Sphincter was introduced, incorporating the first delay-fill resister.[23] This model consisted of a pressure-regulating balloon/reservoir, a deflation bulb, a pressurized inflatable occlusive cuff, and the delay-fill resister. In order to void, the patient simply squeezed the single bulb in the scrotum or labia several times. In this manner, fluid was transferred from the pressurized cuff to the bulb and back into the pressure-regulating balloon/reservoir. After two to seven minutes, the fluid automatically returned to the cuff through the delay-fill resister that repressurized the cuff and restored continence. The balloon pressures ranged between 70 to 80 cm water and 100 to 110 cm water. The disadvantage of the AS 742 model was that the cuff could not be left in the deflated open position, as was possible with the earlier model AS 721 and the later model AS 761.

In 1976, the AS 761 Artificial Urinary Sphincter was introduced. This prosthesis was similar to the AS 721, except that like the AS 742, it had a pressure-regulating balloon, but unlike the AS 742, it did not have a delay-fill resister. This prosthesis did not receive widespread clinical application.[24]

The currently employed semiautomatic artificial urinary sphincter (Models 791/792)* was introduced in 1979 (Fig 2).[25] Model AS 791 has a cuff that fits

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* American Medical Systems, Inc., Minneapolis, Minnesota.

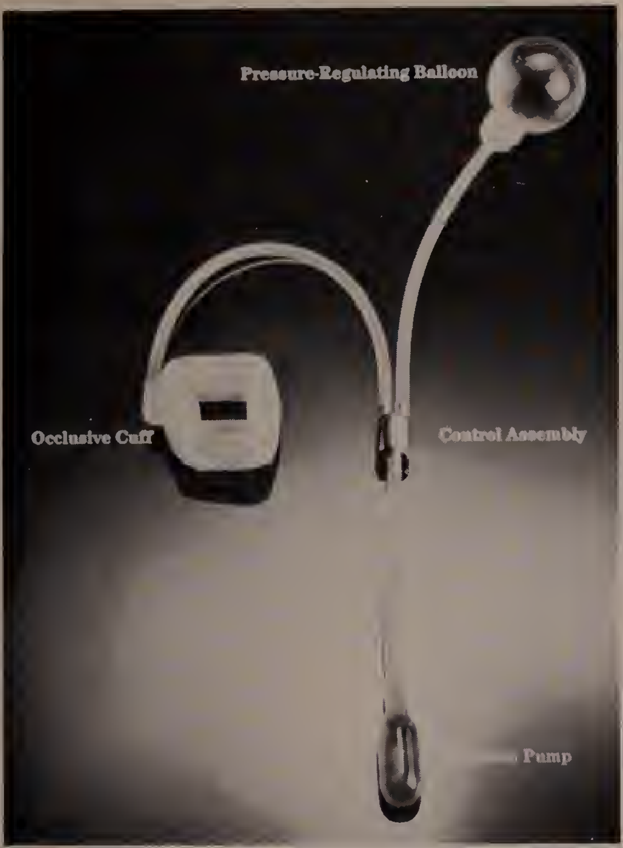

FIGURE 2. Artificial Urinary Sphincter, Model AS 792, components.

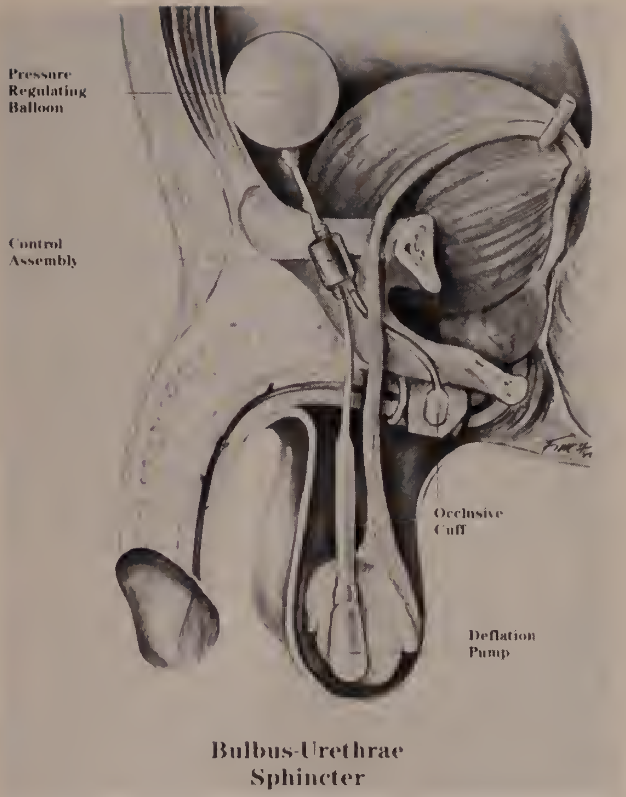

FIGURE 3. Artificial Urinary Sphincter, Model AS 791, with cuff around bulbous urethra.

around the bulbous urethra in the male (Fig 3), and Model AS 792 has a cuff that fits around the bladder neck in males (Fig 4) and females (Fig 5). These sphincters consist of an inflatable occlusive cuff, a predetermined and preselected pressure-regulating balloon placed perivesically, a deflation pump in the scrotum or labia, and a control assembly. During the surgical procedure, the occlusive cuff, the pressure-regulating balloon, and the deflation pump are connected to the appropriate parts of the control assembly. The control assemblies are made of stainless steel and incorporate a delay-fill resister and valve mechanisms. The rest of the components are silicone rubber and are dip-coated and seamless to reduce the chances of fluid leakage noted in some instances with earlier models that were not dip-coated. The pressure-regulating balloons come in various pressure ranges, ie, 51–60 cm water, 61–70 cm water, 71–80 cm water, and 81–90 cm water. Several sizes of the occlusive cuffs are available in lengths from 4.5 cm to 11 cm. In most patients, pressure-regulating balloons in the range of 51–60 cm water or 61–70 cm water are adequate for urinary control. This prosthesis has been bench tested for 80,000 times, which is equivalent to voiding four times a day for 50 years.

Following implantation with either model, voiding

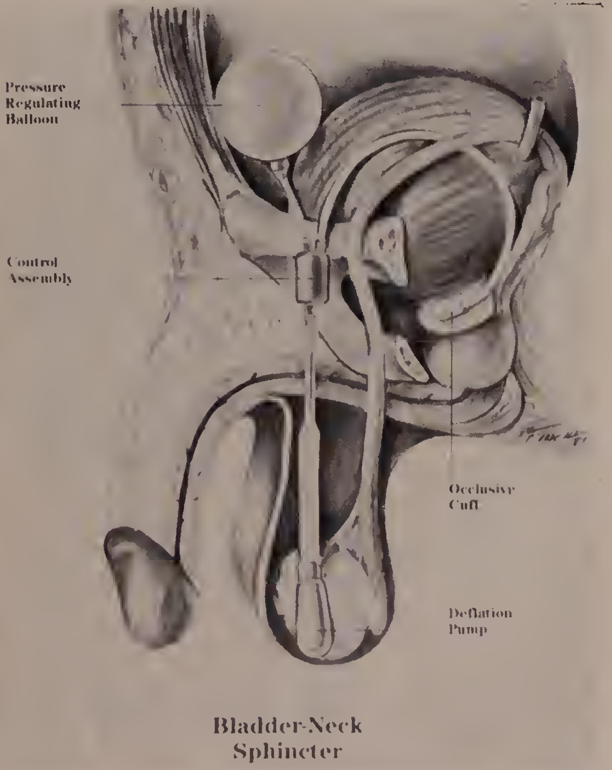

FIGURE 4. Artificial Urinary Sphincter, Model AS 792, with cuff around bladder neck in male.

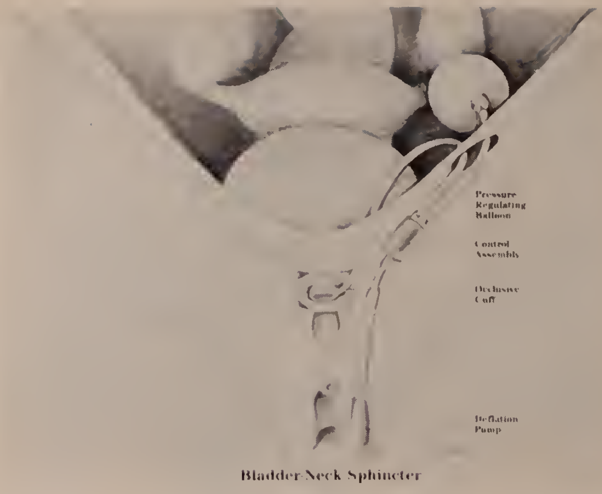

FIGURE 5. Artificial Urinary Sphincter, Model AS 792, with cuff around bladder neck in female.

takes place after the patient manually squeezes the deflation pump several times, which opens the cuff and releases the pressure at the bladder neck or bulbous urethra. After voiding, automatic delayed repressurization and closure of the cuff occur through the delay-fill resister in the control assembly which results in urinary control after several minutes. The delay-fill resister also allows the occlusive cuff to automatically open in the event that unphysiologic bladder pressures develop. The location and design of these components also results in the automatic transmission of increases in intraabdominal pressure such as in sneezing or coughing. Since with these models, the cuff cannot be left open in the unpressurized state, under certain circumstances the sphincter is implanted in two stages. At the first stage, all components are implanted, but the sphincter is not pressurized (primary deactivation). At the second stage, eight to 12 weeks later, the sphincter is pressurized (secondary activation).

Indications for the current artificial urinary sphincter. The indications for implanting models AS 791 or AS 792 have occurred in adult and pediatric patients with incontinence due to the following: prostatectomy, spinal trauma, urethral surgery, myelomeningocele/myelodysplasia, epispadias/exstrophy, sacral dysgenesis/agenesis, failed stress-incontinence surgery with total incontinence, pelvic fracture, and neurogenic dysfunction.[25]

The advantageous features of the current models (AS 791/792) are: (1) continence with minimal occlusive pressure around the bulbous urethra or bladder neck; (2) efficient cuff design; (3) self-regulating balloon control of occlusive pressure, not subject to excessive patient-initiated pressures; (4) automatic opening of the occlusive cuff due to uninhibited bladder contractions; (5) absence of urine leakage with stress and straining; (6) minimal complications, particularly a lower incidence of urethral erosion; and (7) the highest long-term success rate of any alloplastic prosthesis used in the management of urinary continence.

Results. In analyzing the usefulness of the latest models of the artificial urinary sphincters (AS 791/792) the following definitions are applicable: *success:* absence of failure, or failure and successful subsequent mechanical revision; *failure:* device removed due to infection, erosion of the cuff into the urethra, failure of healing, or persistent urinary incontinence requiring the wearing of pads or protective clothing. By using these definitions, greater than 80%—and in some patient groups, greater than 90%—of patients have experienced successful implantations.[25,27]

It should be emphasized that models AS 791/792 with pressure-regulating balloons in the relatively low ranges of 51–60 cm of water or 61–70 cm of water have almost eliminated urethral erosion as a cause of postimplantation incontinence, particularly when primary deactivation has been employed. Additionally, mechanical failure of the pump, balloon, or cuff is very unusual.[27] Rarely do patients implanted with the lowest pressure-regulating balloons (51–60 cm of water) develop postimplantation stress incontinence. If this occurs, they are suitable candidates for replacement of the balloon with a higher-pressure regulating balloon.

The overall costs, including diagnostic urodynamic workup, surgical implantation (prosthesis and surgical fee), and hospitalization are usually in the range of $5,000 to $7,000. As of this date, approximately 2,000 artificial urinary sphincters of all models have been implanted in the United States, including our institution, and also abroad.

Rosen inflatable urinary incontinence prosthesis. The Rosen prosthesis, introduced in 1976, is a simple, inflatable, hydraulic, alloplastic sphincter consisting of a three-pronged clamp with two fixed arms that are parallel and an opposing single arm containing a balloon.[28] * These arms fit transversely across the bulbous urethra (Fig 6); the balloon is inflatable and is connected to tubing that passes to a reservoir, which is placed in the scrotum and is also the pumping mechanism. Compression of the reservoir/pump inflates the balloon, which elevates and compresses the urethra, resulting in urinary continence. When squeezed, the neck of the reservoir activates the release valve, allowing fluid to flow back into the reservoir from the balloon, which results in urination. This device is constructed of medical-grade silicone elastomer. Due to the large size of the reservoir/pumping device, some surgeons have found it necessary to remove one testicle in order to facilitate handling of the reservoir valve. The three-pronged clamp is designed to reduce the incidence of pressure necrosis around the urethra because inflation of the balloon results in lengthening and collapse of the urethral wall. This results as the balloon

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* Heyer-Schulte Corporation, Goleta, California.

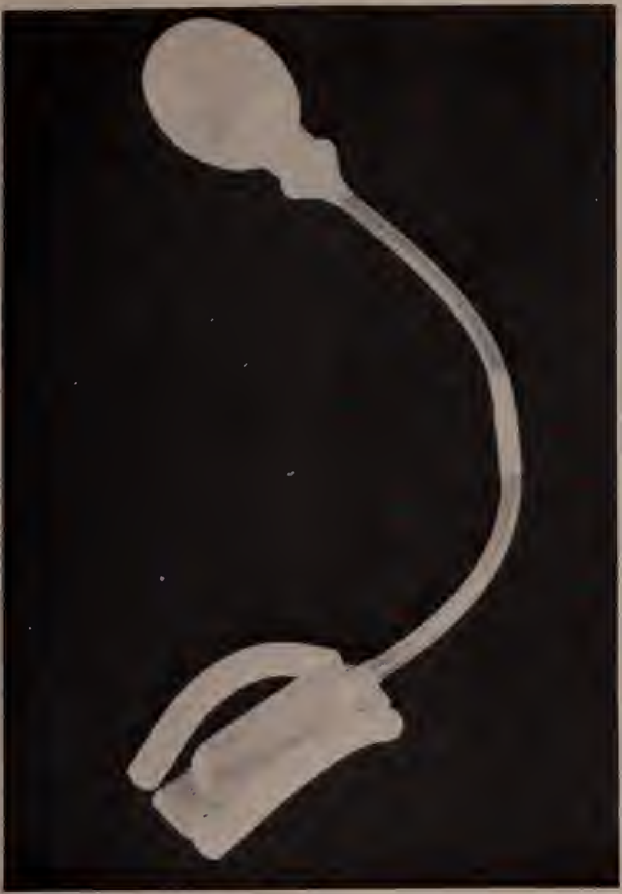

FIGURE 6. Rosen Incontinence Prosthesis.

pushes the urethra against the fixed arms on the opposite side. The degree of urethral resistance is controlled by the patient.

Initially, it was believed that the Rosen prosthesis was as simple as the Berry and Kaufman prostheses, while being free of the hydraulic and circumferential urethral or bladder-neck compression complications found with the circular cuff as well as the mechanical complications found with the early models of the Scott inflatable urinary incontinence prostheses.[29–31] The advantageous features of the Rosen prosthesis are its simplicity, the reliability of a single valve permitting inflation and deflation, the multiple urethral compression planes that avoid circumferential pressure upon the urethra, and volitional patient control over continence.[31] However, numerous complications have been noted, including balloon aneurysm, balloon or connecting tube leakage, urethral erosion, perineal pain, and urinary incontinence.[32–34] While almost all patients in whom Rosen implanted his prosthesis experienced postprostatectomy incontinence, he has postulated (letter, July 1976) that it might have clinical application in patients with neurogenic vesicle dysfunction. The reported long-term success rate is not usually greater than 60%.[34]

Treatment of coexisting urinary incontinence and erectile impotence

The simultaneous treatment of urinary incontinence and erectile impotence has been managed by placement of a Small-Carrion penile prosthesis and insertion of the Rosen prosthesis during the same operation[35]; a Small-Carrion penile prosthesis and the latest model Kaufman prosthesis[36]; and a Scott inflatable penile prosthesis and a Scott artificial urinary sphincter.

Conclusion

During the past decade, there has been an intense interest in developing new techniques for the management of urinary incontinence. The varying success rates of these techniques have depended in great part on recent advances in biomedical engineering, plastics technology, better understanding of the physiology of urinary incontinence, emergence of urodynamic evaluation, and innovative surgical techniques and instruments. With the development of the latest models of the artificial urinary sphincter (AS 791/792), many incontinent patients who would have been social cripples due to their dependency on clamps, catheters, or rubber underwear are now able to lead a relatively normal life. Undoubtedly, in the future, modifications of design of either or both the passive and active methods of prosthetic urinary control will result in a higher long-term success rate.

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Improved survival noted for patients with cancer of the testis

Age-adjusted mortality of testis cancer (other than seminoma) among white males in the United States has declined by one third, according to an analysis of recent data reported in the February 12 issue of *The Journal of American Medical Association.*

The substantial decline in mortality — the first noted in recent decades — attributable to improvements made in the 1970s in combination chemotherapy, particularly for patients with testis cancer that has spread to other regions of the body.

The authors of the report analyzed data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute, which monitors cancer incidence and survival rates in diverse geographic regions of the United States. They found that incidence rates rose slightly from 1973 to 1979. However, the 30-month survival rate also rose from 65% to 78% in the same period.

Their finding of a decrease in mortality of 34% was calculated from death certificate data collected by the National Center for Health Statistics for 1973 to 1978. Data for 1979 were not available at the time of publication.

The present study of cancer registries suggests that knowledge of these new therapies has been rapidly communicated to physicians and effectively applied to patient treatment, according to the primary author of the *JAMA* article, Frederick P. Li, M.D., of the National Cancer Institute, Bethesda, Md.

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Male Impotence

New concepts in management

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The evaluation and treatment of impotence in the male has changed dramatically in the past decade. Newer diagnostic tests have shown that organic causes account for the majority of cases of impotence in the adult. Progress in the medical and surgical treatment of impotence has vastly improved patient and partner satisfaction.

To evaluate and treat the impotent male there are now newer diagnostic techniques and treatment programs. As a history taker, the physician must be a receptive listener and clearly recognize the nature and degree of a patient's sexual complaints. After a thorough physical exam, diagnostic tests then help to define the etiology for the sexual dysfunction. Laboratory and mechanical testing of the impotent male is now a standard procedure.

Anatomy and physiology

Before detailing these tests, a brief review of the anatomy and physiology of the male genitalia is noted in Figs 1–4. A cross-sectional view (Fig 1) displays the three erectile bodies that engorge, producing the erection. These are two central and laterally placed corpora cavernosa and a ventrally placed corpus spongiosum that surrounds the urethra. The corpora cavernosa are composed of multiple blood-filled cavernous spaces separated by trabecular extensions from the tunica albuginea. Distally, they end as blunt projections under the glans penis.

The blood supply to the penis is derived from the internal pudendal artery on each side, which branches to form the artery of the bulb, the cavernosal artery, and the dorsal artery (Fig 2). The dorsal artery anastomoses freely, with multiple small branches supplying the corpus spongiosum and the erectile tissues of the corpora cavernosa. The deep, or cavernosal, artery of the penis runs longitudinally through each corpus cavernosum and supplies most of the blood to this structure. The bulbourethral artery runs longitudinally through the corpus spongiosum ventral to the urethra. Small capillary extensions from this artery, called the helicine vessels, empty directly into the cavernous spaces of the corpora cavernosa.

The venous drainage of the penis is composed of three separate systems of veins that drain either into the saphenous veins, the pudendal plexus, the inferior epigastric veins, or other abdominal wall veins (Fig 3).[1] Although somewhat complex, this venous system has been implicated in the development of impotence in the male.

Fitzpatrick believes that either absent, destroyed, or incompetent valves located in the dorsal or the circumflex venous system may be responsible for erectile incapacity.[2] Furthermore, varying degrees of impotence have been documented secondary to iatrogenically produced fistulas or congenital malformations resulting in abnormal venous outflow from the cavernous bodies.[3]

Figure 4 outlines the autonomic innervation of the male genital organs. Parasympathetic fibers exiting from the anterior route of the spinal cord from sacral segments S-2 through S-4 are the main parasympathetic outflow responsible for erection. These are the same sacral segments that provide the efferent parasympathetic innervation of the urinary bladder, colon, and rectum. After exiting the anterior spinal root, these parasympathetic fibers pass through the inferior pelvic, or hypogastric, plexus located lateral to the rectum and provide innervation to multiple pelvic organs. In addition, sympathetic thoracolumbar efferents from T-12 through L-3 have been identified as an important pathway in the production of psychogenic erection.

With application of neuropharmacologic methods and the electron microscope to the study of human penile morphology, a more rational physiologic mechanism has been proposed to explain tumescence. The corpora cavernosa are no longer perceived as passive reservoirs receiving increased blood flow during erection but as intrinsically active contractile units sensitive to neurologic stimuli, particularly adrenergic in origin.[4] Alternating contractions of endothelium and smooth muscle bundles within the trabeculae of the corpora cavernosa can then be utilized to explain the physiologic processes of erection and detumescence. Enlargement of lacunar spaces with creation of a negative pressure within the corporal system is initiated by contraction of the corporal smooth muscle with concomitant relaxation of the endothelium. This permits blood to rush into the previously flaccid lacunar spaces and produces erection.

Diagnosis and evaluation

The history is perhaps one of the most important aspects of the evaluation of the impotent male. It

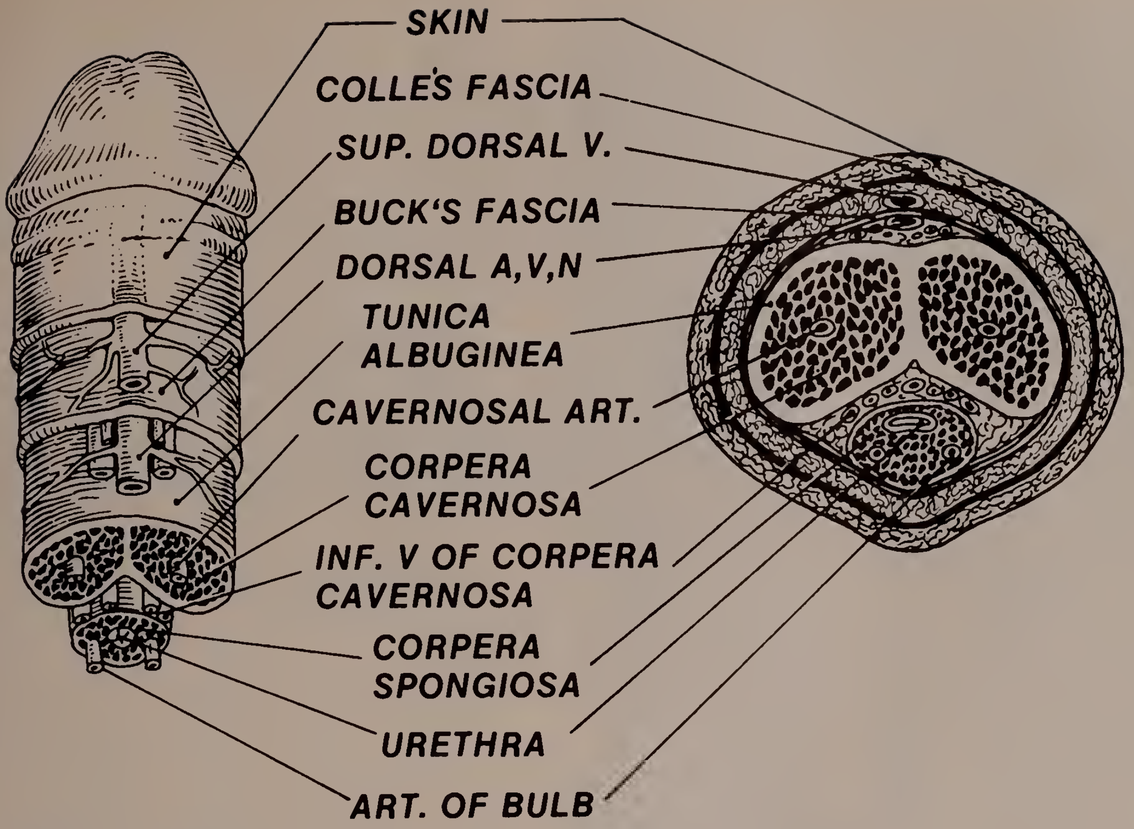

FIGURE 1. Cross section of anatomy of the penis.

provides the physician an opportunity to establish an open and trusting relationship with his patient. While some prefer a questionnaire type of inquiry to be completed before the initial interview, a more direct and informative session may be had without a questionnaire. A sufficiently unhurried, uninterrupted segment of office time must be alloted to the interview. This will require adequate scheduling on the part of the physician and staff. Besides the sexual history, a routine medical and drug history should be part of the patient's record.

An assessment of general well-being and inspection of the secondary sexual characteristics of the patient are initially noted. The pertinent physical examination is confined to the abdomen, lower extremities, and genitalia. The abdomen is examined for aneurysm, and peripheral pulses are checked for atherosclerotic changes. The testes should be examined for position, size, and consistency. The penis should be checked for evidence of inflammation. The corporal bodies are examined for focal placques of Peyronie's disease or for diffuse areas of corporal fibrosis. A neurologic examination, including inspection of gait, examination of lower extremities for proprioception, sensation, deep tendon reflexes, and plantar responses, is performed. Lastly, careful rectal examination will provide needed information about the prostate gland, in addition to checking the activity of the bulbocavernosus reflex.

Laboratory exam

The laboratory examination of the impotent male should be a fairly standardized procedure. A urinalysis and acid phosphatase with prostatic fraction help to assess the status of the genitourinary system. A CBC, sedimentation rate, serum electrolytes, SMA-12 examination, and a VDRL should give indications of general body health. A three-hour glucose tolerance test is needed to screen for unsuspected diabetes mellitus. Thyroid function studies will eliminate both the hypoactive and the hyperactive gland as potential problems. The hypothalamic-pituitary-gonadal axis is screened by determination of serum FSH, LH, prolactin, and testosterone.

Noninvasive tests are available to evaluate vascular and neurologic causes of impotence. These include Doppler flow meter examinations, penile blood pressure determination, penile pulse volume recordings, sacral spinal evoked responses, and finally, nocturnal penile tumescence monitoring.[5] Doppler flow meter examinations are easily performed utilizing Doppler ultrasonic probes. A Doppler stethoscope with a frequency of 9.3 mHz can easily be connected to a strip-chart recorder and provide a permanent tracing of flow characteristics in penile arteries. Penile blood pressure determinations can then be performed utilizing the same

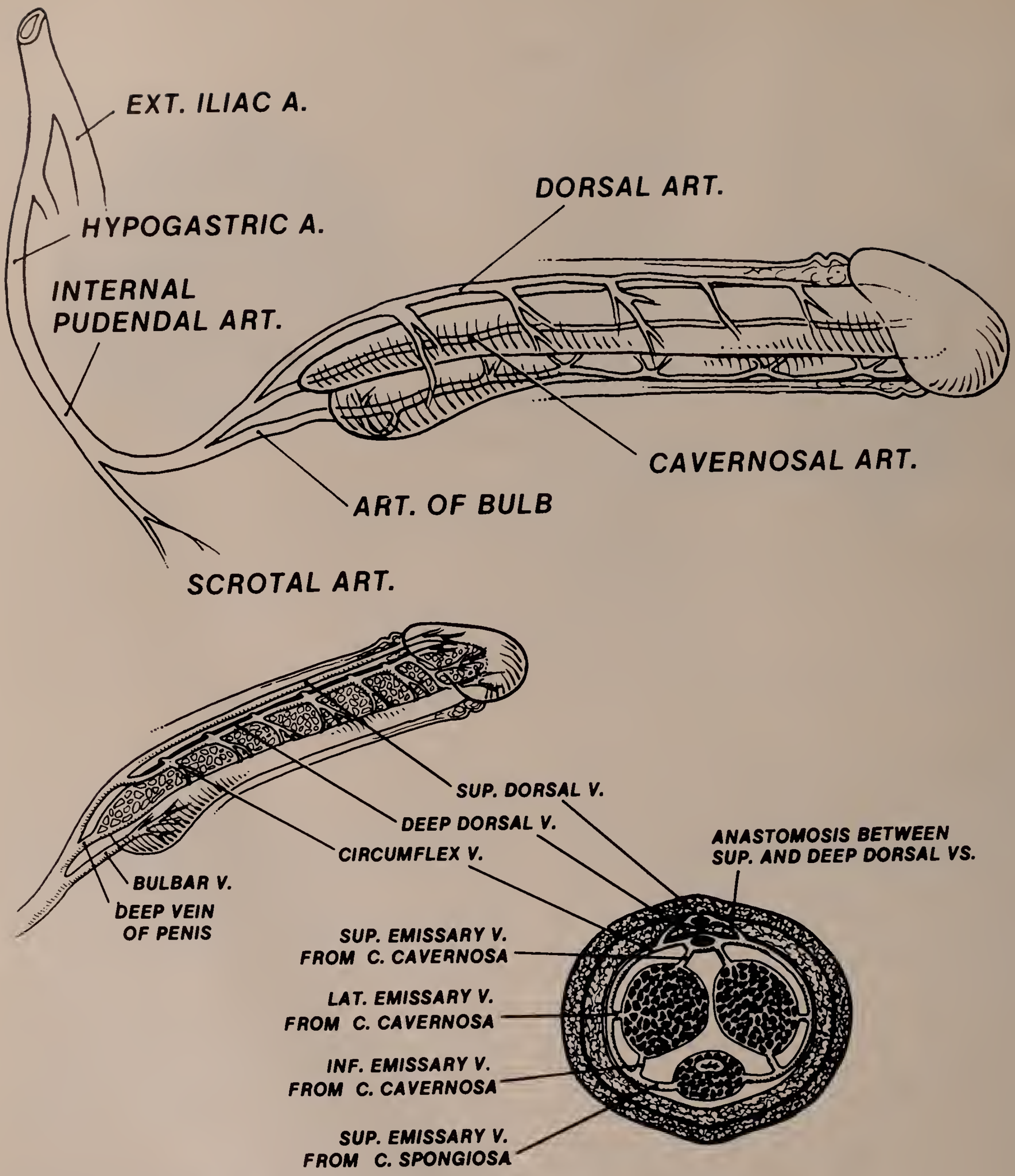
EXT. ILIAC A.
DORSAL ART.
HYPOGASTRIC A.
INTERNAL PUDENDAL ART.
CAVERNOSAL ART.
ART. OF BULB
SCROTAL ART.
SUP. DORSAL V.
DEEP DORSAL V.
ANASTOMOSIS BETWEEN SUP. AND DEEP DORSAL VS.
CIRCUMFLEX V.
BULBAR V.
DEEP VEIN OF PENIS
SUP. EMISSARY V. FROM C. CAVERNOSA
LAT. EMISSARY V. FROM C. CAVERNOSA
INF. EMISSARY V. FROM C. CAVERNOSA
SUP. EMISSARY V. FROM C. SPONGIOSA

FIGURE 2. (Top) Arterial blood supply of the penis; (bottom) venous supply of the penis.

apparatus with a 3-cm-wide pediatric blood pressure cuff placed around the base of the penis. A systolic blood pressure for the penis can easily be determined. This can then be compared to the brachial systolic pressure; this brachial-penile index should be 0.7 or greater. The ratio of the penile systolic pressure to the mean arterial pressure should be greater than 1.0. Penile pulse volume recordings or penile plethysmography can be performed with the same diagnostic materials. Pulse volume recordings in individuals with vasculogenic impotence characteristically show a slow upswing to the curve, a low peak, a relatively small area included under the curve, and the absence of a dichrotic notch.

Sleep study research, as initiated by Karacan, has demonstrated the presence of nocturnal penile tumescence episodes that occur with EEG evidence of rapid eye movement (REM) sleep.[6] Several

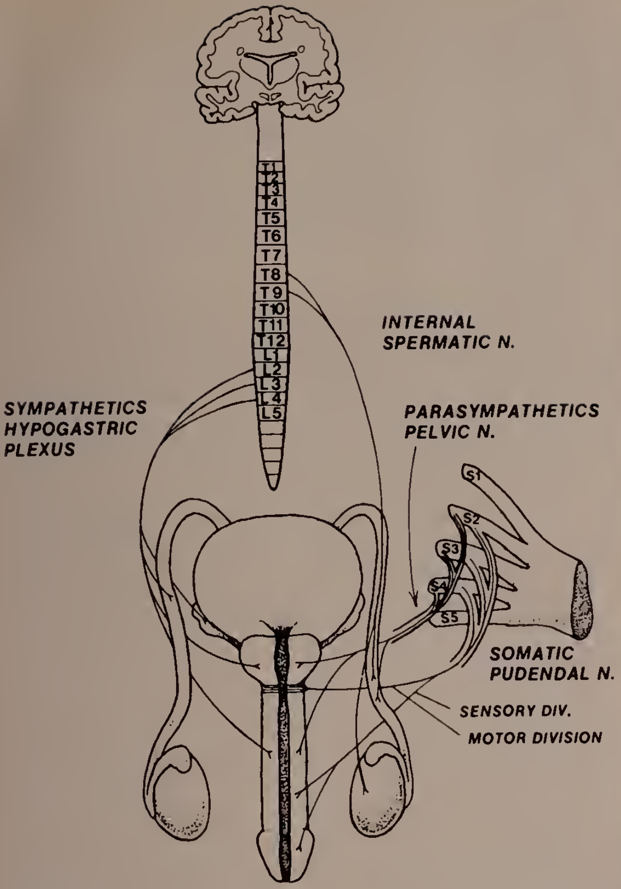

FIGURE 3. Parasympathetic, sympathetic, and somatic innervation of the male genital organs.

simple strain gauge monitoring devices are now commercially available for monitoring the activity of nocturnal penile tumescence episodes. Patients who demonstrate normal erections with REM sleep usually have psychogenic impotence, whereas individuals with absence or insufficient duration or intensity of nocturnal erectile episodes have organic impotence. Thus this simple test has become an accurate diagnostic screening method for determining whether the therapy for an impotent male should be under the supervision of a sexual therapist or a urologist.

Besides these simple diagnostic steps, several additional invasive radiographic diagnostic procedures that have been helpful in delineating the etiology of impotence are available. These include corpora cavernosography that may document the presence of abnormal venous drainage and communications between the corpora cavernosa and extracorporeal venous systems as a cause of impotence. In those patients where previous penile vascular evaluation was thought to be abnormal, internal pudendal arteriography may be performed on an inpatient basis. Flush aortography will demonstrate aortic bifurcation, common and external iliac arteries, and the internal iliac system. Selective injection into the anterior division of the internal iliac artery allows

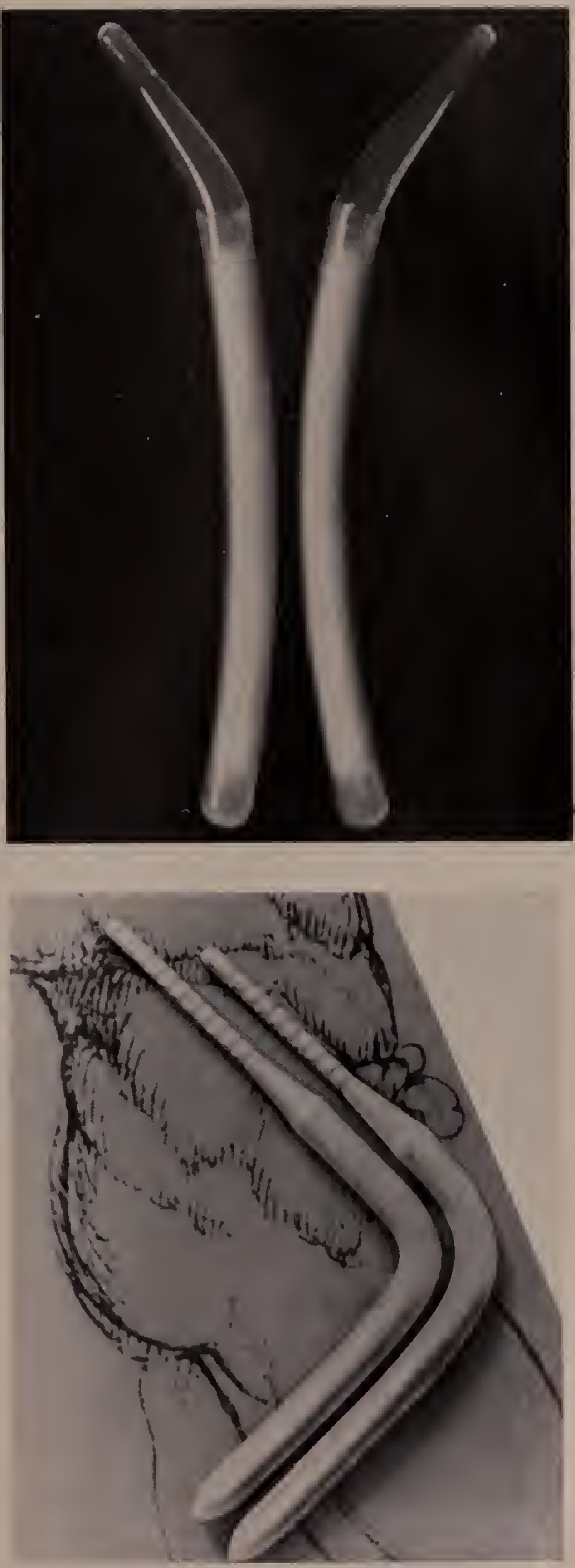

FIGURE 4. (Top) Small-Carrion prosthesis; (bottom) Surgitek semirigid prosthesis.

TABLE I. Organic causes of impotence in the male

- Systemic Disease
  - Debilitation (heart disease, malignancy)
  - Alcoholism, liver disease
  - Hypofunction or hyperfunction of pituitary-adrenal-testis axis
- Chronic Renal Failure
- Drugs
- Neurovascular Causes
  - Diabetes
  - Arteriosclerotic/occlusive aortic vascular disease
  - Lumbar disk disease
  - Various demyelinating/degenerative neurologic states
  - Spinal cord injury/tumors
  - Urethral rupture associated with pelvic fracture
- Radiation Therapy
  - External beam
  - I-125 implantation

easy visualization of the internal pudendal artery with its major branches. This technique can be utilized to confirm the diagnosis of vasculogenic impotence and to demonstrate the extent of occlusive disease. It has been helpful in selection of patients for penile revascularization as well as in predicting postoperative success.

Finally, psychologic or psychiatric consultation may be indicated in a select group of patients. These include patients who, after testing, have an unclear etiology to explain their sexual dysfunction and those with a blatant past history of psychosocial maladjustment, multiple psychosomatic complaints, or a history of severe marital instability or ethanol or other drug abuse, which might additionally support the diagnosis of anxiety-depressive neuroses.

In the past decade, the previously mentioned techniques for evaluating impotence enabled physicians to accurately differentiate organic and psychogenic causes. It is now apparent that secondary impotence, defined as impotence developing in a male with prior normal sexual functioning, is almost always organic when first presenting over the age of 50.

TABLE II. Organic causes of impotence in the male

- Primary Conditions of the Genitalia
  - Testicular dysfunction or absence
  - Priapism
  - Congenital penile disorders
  - Peyronie's disease
  - Emasculation, severe genital trauma
- Surgery for Benign Conditions
  - Prostatic or bladder-neck surgery
  - Lumbar sympathectomy
  - Aortoiliac reconstruction
  - Colectomy, proctectomy
- Surgery for Malignancy
  - Bilateral orchiectomy
  - Cystoprostatectomy
  - Radical prostatectomy
  - Retroperitoneal lymphadenectomy
  - Other radical pelvic surgery

Tables I and II list the various categories and causes of impotence in the male. All of these possible diagnoses should be kept in mind when examining and evaluating a male who complains of a problem with potency. A careful drug history, including smoking and alcohol habits, is essential in the workup of the patient. Table III lists various drugs that have been implicated in the development of impotence.

Treatment

The treatment of impotence can be divided into three categories: (1) correction of metabolic or endocrine abnormalities or testosterone replacement, (2) implantation of a penile prosthesis, and (3) revascularization.

When impotence is associated with an abnormality of the pituitary-adrenal-testis axis, sexual function will usually improve when the hormonal mileu returns to normal. Hyperprolactinemia can be successfully treated with bromocriptine, 2.5 mg three times a day. A prolactin level should be drawn whenever an impotent male is found to have an abnormal serum testosterone level. A low serum testosterone can be corrected by supplemental androgen replacement given as Depo-Testosterone, 200 mg intramuscularly biweekly. Often impotence associated with low testosterone will improve with this treatment. Oral androgen is usually not effective as replacement therapy. Impotence associated with diabetes is often permanent and will persist in spite of good control of the glycosemia and/or glycosuria with insulin and/or oral diabetic agents or diet.

Penile prosthesis placement is a very satisfactory solution for the male with irreversible impotence. Table IV compares four penile prostheses available in the United States. Figures 4, 5 demonstrate these prostheses. Figure 6 depicts the inflatable penile prosthesis in the flaccid and erect state. Complications of penile prosthesis implantation range from 1% to 10% in most series.[7–9] Most of the complications of the rigid or malleable prosthesis are related to infection or extrusion of the prosthesis and can be minimized by attention to the details of measurement for correct sizing of the prosthesis and strict precautions to prevent infection. Over the years, the inflatable prosthesis has been improved so that the rate of malfunction has been decreased to less than 10% of cases. However, the durability of the inflatable prosthesis will not be known for several more years.

The choice of which prosthesis to implant relates to cost, as well as to the experience of the surgeon and the availability of prostheses in the institution in which the surgeon operates. However, there is little difference between any of the prostheses as far as patient and partner satisfaction is concerned. There are certainly cosmetic advantages to the semirigid, malleable, and inflatable prostheses.

Placement of a penile prosthesis in a male who has lost the ability to have an orgasm or ejaculation due

TABLE III. Pharmacologic effect on the male

		Inhibition	
Drugs	Ejaculation	Erectile Capacity	Libido
Alcohol	X	X	...
Amphetamines	X	...	...
Anuretics	...	X	...
Anticholinergics	X	X	...
Antiparkinsonian	X	X	...
Barbiturates	X	X	X
Benzodiazepines	X	X	...
Bethanidine	X	X	...
Butyrophenones	...	X	X
Cannabis	...	X	...
Cocaine	X	...	...
Chlorthalidone	...	X	X
Cimetidine	...	X	X
Clofibrate	...	X	...
Clonidine	...	X	X
Digoxin	...	X	X
Disopyramide	...	X	...
Glutethimide	X	X	X
Guanethidine	X	X	...
Hydrochlorothiazide	...	X	...
Hydralazine	...	X	...
Immunosuppressives	...	X	X
Indomethacin	...	X	...
Lithium	X	X	...
Methyldopa	X	X	X
Methysergide	...	X	...
Metoclopramide	...	X	...
Metronidazole	...	...	X
MAO-inhibitors	X	...	...
Nicotine	...	X	...
Opiates	X	X	X
Phenothiazine/ thioxanthines	X	X	X
Phentolamine	X	...	...
Phenoxybenzamine	X	...	...
Prazosin	X	...	...
Propranolol	...	X	...
Reserpine	...	X	X
Spironolactone	...	X	X
Tricyclic antidepressants	X	X	X

TABLE IV. Penile Prostheses: Advantages, Disadvantages, and Cost

Type	Company	Advantages	Disadvantages	Cost (prosthesis only)
Small-Carrion	Heyer-Schulte	Surgery easier	Cosmetic problems significant	Patient $500–600
Surgitek semirigid	Medical Engineering Corporation	Surgery easier	Minor cosmetic problems	Patient $700
Jonas-Silver	Dacomed Corporation	Surgery easier; normal position "at rest"	Minor cosmetic problems	Patient $1,000–1,100 Hospital kit $9,995 (14 pairs)
Inflatable	American Medical Systems	Voluntary erection possible	Potential mechanical problems; 10% redo operations	Patient $1,700–1,800 Hospital kit $5,000 (3 cases)

to organic causes will not cause him to recover these functions. The patient and his partner should be counseled prior to prosthesis placement so that they have a realistic expectation of what the prosthesis is going to do for the sexuality of the couple.

A direct approach to the correction of vasculogenic impotence has been proposed in the past five years by Vaclav Michal in Czechoslovakia and Ronald Virag in France. Through a thorough workup of both arterial and venous disease, specific operations have been designed that increase flow to the cavernous bodies. In the United States, revascularization of the penis has not yet gained popularity because of the limited reports of prolonged success with

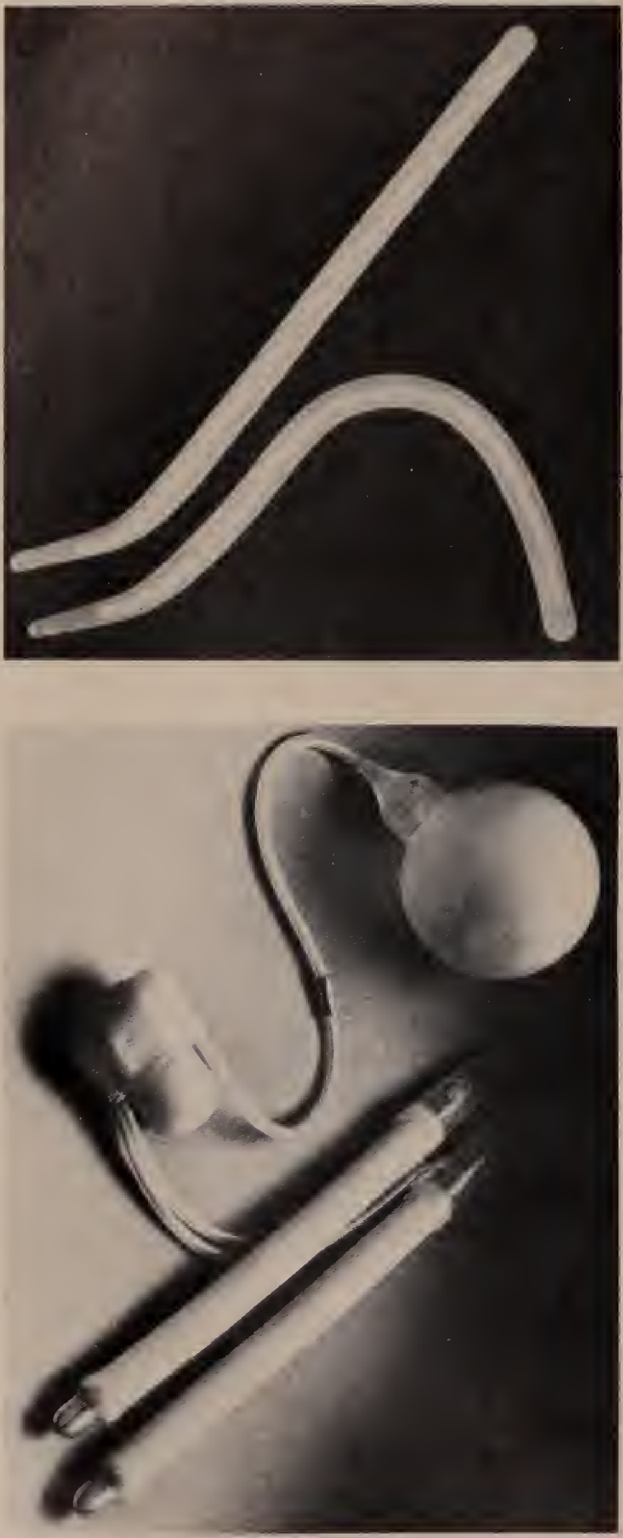

FIGURE 5. (Top) Jonas-Silver malleable prosthesis; (bottom) Inflatable penile prosthesis.

this type of surgery. However, it is becoming more apparent that utilizing microsurgical techniques, flow into the corporal bodies can be improved by using epigastric artery bypass techniques.[10,11] The cost-effectiveness of revascularization must also be considered when discussing revascularization for vasculogenic impotence. One important cause of vasculogenic impotence is surgery on the abdominal aorta and iliac arteries for the correction of aneurysms. It has been noted that over 50% of patients undergoing aneurysm surgery of the abdominal aorta develop erectile dysfunction in the immediate postoperative period. DePalma[12] has proposed various techniques which, if closely followed, often prevent the development of erectile dysfunction. These include careful and close dissection of the aorta, with the surgeon trying not to interrupt autonomic nerves, being careful not to allow debris to pass downstream during the time of reconstruction, and also trying to avoid ligation on the internal iliac artery during the course of aneurysm surgery.

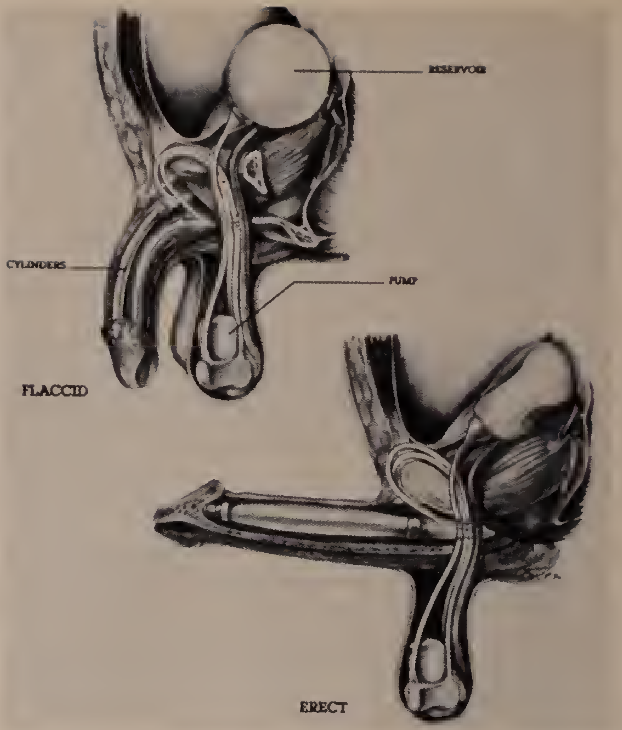

FIGURE 6. Inflatable prosthesis in flaccid and erect state.

Careful and thorough evaluation of a male who complains of impotence will often yield a specific organic diagnosis. With the knowledge of this diagnosis, a treatment program can be instituted so that the impotent male may be able to resume satisfactory sexual activity.

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Anatomy of a disaster

At about 7:15 in the morning of November 21, 1980, fire broke out in a delicatessen in the rear of the casino area at the MGM Grand Hotel in Las Vegas. Flames presumably spread along the false ceiling of the casino towards its main entrance and within seconds after the flashover point was reached the entire area was filled with smoke.

Smoke from the burning casino rose along the outside of the 26-story residential tower, shrouding the building, and spread inside through the elevator shafts to the upper floors, pouring into the corridors and stairwells.

Within ten minutes of the first alarm, the first triage station — where casualties among the 6,000 people in the hotel would be assessed to determine who would need medical attention first — had been established near the secondary main entrance of the hotel. Two more would be set up in the following hour and a half at the south and east sides of the hotel.

Because of prior disaster planning in Las Vegas, four major, full-service hospitals prepared to receive casualties from the three triage stations and a secondary refuge center. Surgical schedules were cancelled, operating teams were mobilized, and hospital beds were made available by the early discharge and transfer of the minimally ill.

During the first phase of the disaster — marked by individual escapes from the lower floors — patients arrived at the hospitals at a manageable rate and with minimal injuries, according to the published account, which was read before the Western Surgical Association last November. But during the later phase — marked by mass evacuations from rooftops by helicopters and gantries — a great many more patients who were more seriously injured needed hospitalization.

Disaster plans presuppose a large influx of surgical patients, but, says Charles A. Buerk, M.D., the principal author of the account, most of the patients in the MGM fire required medical treatment, and only three patients required surgical treatment.

The vast majority of victims suffered from smoke inhalation, chest pain, or hysteria. And, writes Buerk, who is with the University of Nevada School of Medicine in Las Vegas, "it did not take long to see that this emphasis on surgical capabilities was misplaced."

Even though years of planning and dedicated rehearsal paid off, there was a disaster drill the day before the fire started, Buerk and his coauthors say that it was unfortunate that more internists and general medical specialists had not been involved in disaster planning. While such specialists were willing to participate, "they did not adequately understand disaster priorities, triage, and the space and personnel problems associated with the rapid influx of casualties."

Among the lessons the authors learned are include medical, as well as surgical personnel in disaster planning; evacuate minimally injured and displaced persons from the disaster site; and give "loading and transferring" priority over diagnosing and categorizing.

The final toll in the MGM fire was 84 people dead — five of burns and related trauma and the rest of smoke inhalation — 726 people referred to local hospitals, and 322 of this group admitted for further observation.

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Cherchez le Chien

Household pets as reservoirs of persistent or recurrent streptococcal sore throats in children

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The purpose of this article is to make the physician aware that household pets may be a source of otherwise unexplained persistent or recurrent group A beta-hemolytic streptococcal sore throats within a family. Such awareness may help in eradicating the infective organism from a household. Cooperation with veterinarians is urged so that appropriate cultures may be taken and treatment instituted to the benefit of animals and owners.

Group A beta-hemolytic streptococcal sore throats are frequently diagnosed by clinical evaluation and confirmed by culture of symptomatic patients seen in pediatric practice. Recurrent or persistent streptococcal sore throat requires investigation as to possible etiology. Causes might include, among others: (1) patient noncompliance resulting in inadequate therapy, (2) intimate school or household contacts causing reinfection, or (3) immunologic deficiency.

Up to 20% of patients treated with oral antibiotic regimens for streptococcal sore throat will continue to harbor group A streptococci in their throats after therapy is completed, or they may have intercurrent viral sore throats while merely carrying the streptococcus.[1] Reinfection may occur with different streptococcal serotypes, or repetitive infections with the same M-protein serotype may occur.[2] Reinfections occur because protective anti-M antibodies require up to eight weeks to form and formation of antibodies is further delayed by effective antibiotic therapy.[3,4] It is the purpose of this article to alert physicians to the possibility of a household pet serving as the source of reinfection in recurrent streptococcal sore throat.

Case reports

Streptococcal sore throat was epidemic in Fort Devins, Massachusetts, in the winter of 1964, with nearly 75% of cultures taken in the pediatric clinic positive for group A beta-hemolytic streptococcus. The epidemic abated by late spring, at which time only rare cultures were positive. In one family however, at least two of the seven children, ages 3 to 18 years, were recurrently ill at any one time with obvious clinical symptoms and signs of streptococcal sore throat confirmed by culture. Attempts to eliminate the infective organims included cultures of all household and social contacts, use of penicillin G benzathine by injection, adequate amounts of penicillin and other antibiotics for longer than ten days, and simultaneous treatment of the entire family. Patient compliance was ascertained and documented in each case.

Despite the assertion that "brief mention must be made of the streptococci and staphylococci . . . [in animal pets] . . . as disease producers in man,"[5] and lack of reference to animal carriers of streptococcal sore throat in a search of the American medical literature until that time, a culture of the family dog was obtained. This culture was positive for group A beta-hemolytic streptococcus, and treatment by the veterinarian with 1.2 million units of penicillin G benzathine eliminated the organism from the animal's pharynx. Subsequent cultures of the entire family revealed no further streptococci for the balance of their two years at the Army base.

During the following 18 months, four other military families were investigated for the source of reinfection in recurrent, otherwise unexplained streptococcal sore throat. Three dogs and one cat were found to harbor the infective organism. Treatment of the pet was associated with elimination of recurrent streptococcal sore throat in each family. Control throat cultures of pets in noninfected families were requested of the veterinary staff but could not be obtained.

During 16 years of private practice in Nassau County we have had 100 occasions to search for a source of recurrent streptococcal sore throat in family pets (Table I). In 40 instances, cultures of the dogs or cats were positive for group A beta-hemolytic streptococcus. In each instance, culture was confirmed by various local veterinarians who treated the infected pet. Culture was plated on selective streptococcus agar (Gibco) by direct cross-streaking, and group A streptococci were identified by greater than 10 mm zone inhibition surrounding 0.04-unit bacitracin disks (Pfizer, No. 902R). Following treatment of the animal, no involved family has had recurrent and persistent streptococcal sore throat. Posttreatment cultures of animals and families were

TABLE I. Group A Beta-Hemolytic Streptococcal Cultures From Pets in Families with Children Who Had Streptococcal Infections

Animal	No. of Cultures	Positive	Negative	% Positive
Dogs	72	30	42	41.7
Cats	28	10	18	35.7
TOTALS	100	40	60	40.0

TABLE II. Control Population*

Animal	No. of Cultures	Positive	Negative	% Positive
Dogs	20	2	18	10.0
Cats	20	1	19	5.0
Birds	10	2	8	20.0
TOTALS	50	5	45	10.0

* Results of cultures for streptococci in pets randomly selected and not known to have been exposed to humans with streptococcal infections. Cultures obtained by Robert B. Altman, D.V.M., and Arthur C. Walch, D.V.M.

negative for group A beta-hemolytic streptococci. In four instances, families subsequently did develop the same problem months or years later. Each family had a reinfected animal, who was again treated with good results.

A series of 50 consecutive pharyngeal cultures of dogs, cats, and birds done by veterinarians in Bellmore, New York (A.C.W.) and Franklin Square, New York (R.B.A.) revealed two birds, two dogs, and one cat with group A beta-hemolytic streptococci, and two dogs each with group B and group C beta-hemolytic streptococci (Table II). Other organisms found included alpha-hemolytic streptococci, diphtheroids, coagulase-positive *Staphlococcus aureus*, and *Pseudomonas aeruginosa*.

Comment

Prior to 1967, no report could be found confirming transmission of streptococcal infections from animals to human beings. In 1967 B. Bisseru,[6] a physician and zoologist, reported from Fort Hare, South Africa that:

> Sometimes the causes of streptococcal, staphylococcal and *E coli* infections in a household are obscure and the domestic dog or cat is as likely a source as any. The throats of dogs and cats have been shown to harbor at times hemolytic streptococci, coagulase-positive staphylococci and coliform organisms sensitive to the common antibiotics . . . haemolytic streptococci (Lancefield Group A), the cause of sore throat, tonsillitis, otitis media and other suppurative inflammatory conditions in human beings, may affect household dogs and cats which may transmit the organisms back to humans. Dogs can be susceptible to infection with a living culture of scarlet fever organisms (streptococci) succumbing at times with an acute hemorrhagic nephritis. Killed cultures of these streptococci are also toxic to dogs. *Staphylococcus aureus* causes ear infections (otitis) in dogs and wounds on the body are contaminated with the organism. Septicemia can be fatal in these animals.

More recently, Khan et al[7] reported that human group G beta-hemolytic streptococcal infections can be acquired from pets. Their search of the literature revealed only the concept that "even though dogs and cats are highly susceptible to infection with group G beta-hemolytic streptococcus, they seldom transmit it to human masters." In addition, it was claimed that "the group G streptococcus rarely invades the human body but, even when it does, it seems incapable of causing more than the mildest of infections."[7] In recent years, that prevailing concept has been challenged by isolated reports of life-threatening infections, including not only pharyngitis epidemics but also empyema, puerperal sepsis, septicemia, and endocarditis. Khan's report offers convincing evidence that domestic pets can transmit infection with this organism to humans. In one case described, the infected child was treated and recovered, but her untreated, infected but apparently asymptomatic dog suddenly expired one week after his culture was taken. To avoid similar experiences and "to avoid further dissemination," Khan suggests "the prudent clinician must also consider treating an asymptomatic dog or cat."

In 1980, Biberstein et al[8] complained that, "Existing information on the laboratory aspects of beta-hemolytic streptococci from dogs is fragmentary and contradictory," and that, "recent studies, particularly in the United States, are virtually nonexistent." They recovered 254 isolates of hemolytic streptococci from various anatomic sites over a three-year period. The skin yielded 44.5% of these, the genitourinary tract 25.2%, and respiratory tract only 12.9%. Of these, Lancefield group G was most prevalent at 81.1%, with groups C, E, and A representing considerably fewer numbers. In fact, group A only represented 1% of the hemolytic streptococci isolated.

In contrast, Kurek and Rutkowiak[9] reported a 7% prevalence rate in pets from an urban environment. Although Peterson[10] only found 1% positive, those pets who did have group A streptococcal infections were often from households in which there was a concurrent group A streptococcal upper respiratory infection in human household members.

Crowder et al[11] attempted in 1977 to investigate this relationship. They cultured 104 animals representing 80 index households, and compared results in 220 animals in 180 comparison households. They found only three positive cultures (2.8%) in animals from households in which humans had positive cultures, and six positive cultures (2.7%) in comparison households. They concluded that since there was no significant difference, it was "unlikely that the pet would play a major role in the maintenance of streptococcal disease within the family group."

McMillan et al,[12] however, list both scarlet fever and septic sore throat under the category of "bacterial diseases of humans having animals as a disease source." There are at least 100 different zoonoses, diseases that can be transmitted naturally from animals to human beings. With the domestic pet population doubling every 20 years, the importance of considering these animals as potential sources of unexplained or recurrent infection can not be overemphasized. Allergy to animals can, of course, thicken mucous secretions and set children up for recurrent infection as well.

On the other hand, Schauffler[13] cautions physicians to be wary of undeserved ailurophobia (pathologic fear of cats) due to sensational articles implicating cats as a source of leukemia. The lay press has also publicized epidemiologic studies that showed a strong correlation between familial multiple sclerosis and exposure to small house pets.[14] Schauffler[13] stresses the importance of pets in maintaining human health and advises physicians to "think twice before using them unfairly as sacrificial goats or vehicles of their own prejudices."

Summary

During a 16-year survey of animal pets as possible reservoirs of recurrent streptococcal sore throats in children in one private pediatric practice in Nassau County, New York, positive cultures were found in 40%. In contrast, cultures of bird and animal controls yielded only 10% positive cultures. Treatment of household pets with positive cultures interrupted a pattern of recurrent human streptococcal sore throats in those households. It would be prudent to inquire concerning the presence of household pets and to advise cultures when attempting to eradicate otherwise unexplained recurrent human group A beta-hemolytic streptococcal sore throats in families. The possibility that bird pets may be a more important carrier than heretofore suspected is worthy of further examination.

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Turtle headaches

Early morning headaches can plague "sleepyheads" who bury themselves beneath the blankets to catch a few more winks. In a letter to the editor of the *Journal of the American Medical Association*, Gordon J. Gilbert, M.D., of St. Petersburg, Florida, explains that a bilateral headache, probably due to a lack of oxygen and buildup of carbon dioxide in the blood, can result when the sleeper pulls the bedcovers over his head or retracts his head under them in order to avoid daylight and go back to sleep.

Gilbert first reported "turtle headache" in the September 4, 1972, issue of *JAMA*.

Discovering the "turtle" habit could be important in avoiding permanent neurological damage from a recurrent oxygen deficit in the brain, Gilbert says.

Selected Highlights

Recommendations of the National Advisory Committee on Immunization Practice

Immune Globulins for Protection Against Viral Hepatitis*

The term "viral hepatitis" is commonly used for at least three clinically similar diseases that are etiologically and epidemiologically distinct.[1] Two of them, hepatitis A (formerly called "infectious hepatitis") and hepatitis B (formerly called "serum hepatitis"), have been recognized as separate entities since the early 1940s. The third, currently known as "non-A, non-B hepatitis," is probably caused by at least two different agents and, lacking a specific diagnostic test, remains a disease diagnosed by exclusion. It is an important cause of acute viral hepatitis in adults and is responsible for most of the posttransfusion hepatitis cases in the United States.

Hepatitis surveillance

Approximately 30,000 cases of hepatitis A, 16,000 cases of hepatitis B, and 8,000 cases of unspecified hepatitis are reported each year in the United States. Most patients are young adults.

Immune globulins

Immune globulins used in medical practice are sterile solutions of antibodies (immunoglobulins) from human plasma. They are prepared by cold ethanol fractionation of large plasma pools and contain 10% to 18% protein. In the United States, plasma is primarily obtained from professional donors. Only plasma shown to be free of hepatitis B surface antigen (HBsAg; abbreviations are summarized in Table I) is used to prepare immune globulins.

Immune globulin (IG) formerly called "immune serum globulin," ISG, or "gamma globulin") produced in the United States contains antibodies against the hepatitis A virus (anti-HAV) and the hepatitis B surface antigen (anti-BSs). Tests of lots of IG prepared since 1977 indicate that both types of antibody have uniformly been present at stable titers.

Hepatitis B immune globulin (HBIG) is an immune globulin prepared from plasma containing extremely high titers of anti-HBs.

Neither IG nor HBIG when properly prepared transmits hepatitis A or B.

Serious adverse effects from immune globulins administered as recommended have been exceedingly rare. Globulins are prepared for intramuscular use and should not be given intravenously.

Immune globulins are not contraindicated for pregnant women if needed.

Hepatitis A

Hepatitis A is caused by the hepatitis A virus (HAV), a 27-nm RNA (ribonucleic acid) agent that is a member of the picornavirus family. The illness caused by HAV characteristically has an abrupt onset of fever, malaise, anorexia, nausea, abdominal discomfort, and jaundice. Severity is related to age. In children, most infections are asymptomatic, and illness is not accompanied by jaundice. Fatality among hospitalized patients is quite low (about 0.1%).

Hepatitis A is primarily transmitted by person-to-person contact, generally through fecal contamination. Transmission is facilitated by poor sanitation and close personal contact, including sexual exposures. Common-source infections from contaminated food and water also occur.

The incubation period of hepatitis A is 15 to 50 days (average 28 to 30). HAV has consistently been demonstrated in stools of infected persons, with the highest concentrations of virus being excreted late in the incubation and early in the prodromal phase of illness. Virus excretion diminishes rapidly once jaundice appears. Greatest infectivity is during the 2-week period immediately before the onset of jaundice. Viremia is of short duration. A chronic carrier state with HAV in blood or feces has not been

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* Reprinted from *Morbidity and Mortality Weekly Report* (1981;30:423–428), Centers for Disease Control, Atlanta, Ga.

TABLE I. Hepatitis Nomenclature

Abbreviation	Term	Comments
Hepatitis A		
HAV	Hepatitis A virus	Causal agent of "infectious" hepatitis; probably an enterovirus; single serotype.
Anti-HAV	Antibody to HAV	Detectable at onset of symptoms; lifetime persistence.
Hepatitis B		
HBV	Hepatitis B virus	Causal agent of "serum" or "long-incubation" hepatitis; also known as Dane particle.
HBsAg	Hepatitis B surface antigen	Surface antigen(s) of HBV, detectable in large quantity in serum; several subtypes identified.
HBeAg	Hepatitis B e antigen	Soluble antigen; correlates with HBV replication; high titer HBV in serum, and infectivity of serum
HBcAg	Hepatitis B core antigen	No commercial test available.
Anti-HBs	Antibody to HBsAg	Indicates past infection with and immunity to HBV, passive antibody from hepatitis B immune globulin, or immune response from HBV vaccine.
Anti-HBe	Antibody to HBeAg	Presence in serum of HBsAg carrier suggests lower titer of HBV.
Anti-HBc	Antibody to HBcAg	Indicates past infection with HBV at some undefined time.
Non-A, non-B hepatitis		
NANB	Non-A, non-B hepatitis	Diagnosis of exclusion; at least two candidate viruses; epidemiology parallels that of hepatitis B.

demonstrated. Although theoretically possible, transmission of HAV by blood transfusion or percutaneous routes appears to be extremely rare.

Specific tests are available to differentiate anti-HAV of the IgM class, which appears in the acute phase of illness, from anti-HAV of the IgG class, which appears in convalescence (4 to 6 weeks after onset) and largely replaces IgM-class antibody. The diagnosis of acute hepatitis A is therefore confirmed by finding IgM-class anti-HAV as the predominant specific antibody in serum collected during the acute phase of disease. IgG-class anti-HAV, which replaces IgM-class antibody, remains detectable in serum for years and apparently confers life-long protection against reinfection.

Seroepidemiologic studies show that hepatitis A is still a common infection in the United States. More than half the population over age 40 have serologic evidence of past infection.

Immune globulin and hepatitis A

Numerous field studies conducted in the past 4 decades confirm that IG given before exposure or during the incubation period of hepatitis A is protective.[2-4] Its prophylactic value is greatest (80% to 90%) when given early in the incubation period and declines thereafter.[4] In view of the need to give IG as soon as possible after exposure to HAV, and recognizing its intrinsic safety and the time required for—and cost of—antibody testing, routine serologic screening for anti-HAV before giving IG is not encouraged. Giving IG more than 2 weeks after exposure is not indicated.

Recommendations for immune globulin prophylaxis for hepatitis A

Specific recommendations for IG prophylaxis for hepatitis A depend on the nature of the HAV exposure.

Postexposure prophylaxis

Close personal contact. IG is recommended for all household and sexual (heterosexual or homosexual) contacts of persons with hepatitis A.

Day-care centers. Day-care centers with children in diapers can be important locales for HAV transmission.[5,6] If epidemiologic evidence shows the HAV transmission is occurring in a day-care center that cares for children in diapers, IG should be administered to staff, attendees, and to all members of households whose diapered children attend. Careful handwashing after changing diapers is important.

Schools and preschools. Contact at school is usually not an important means of transmitting hepatitis A. Routine administration of IG is not indicated for pupils and teachers in contact with a patient. However, when epidemiologic study clearly shows the existence of a school or classroom outbreak, it is reasonable to give IG to those who have close personal contact with patients.

Institutions for custodial care. Living conditions in some institutions, such as prisons and facilities for the developmentally disabled, favor transmission of hepatitis A. When outbreaks occur, giving IG to residents and staff who have close contact with patients with hepatitis A may effectively reduce the spread of disease. Depending on the epidemiologic circumstances, prophylaxis can be limited in extent or can involve the entire institution.

Hospitals. Routine IG prophylaxis for hospital personnel is not indicated. Rather, sound hygienic practices should be emphasized. Intensive continuing staff education should point out the risk of exposure to hepatitis A and emphasize precautions regarding close contact with patients with hepatitis or with infective materials.[7]

Offices and factories. Routine IG administration is not indicated under the usual office or factory conditions for persons exposed to a fellow worker with hepatitis A.

Common-source exposure

IG might be effective in preventing foodborne or waterborne hepatitis A if exposure is recognized in time. However, IG is not recommended for persons exposed to a common source of potential hepatitis infection once cases have begun to occur.

If a foodhandler is diagnosed as having hepatitis A, common-source transmission is possible. IG should be administered to other kitchen employees and may be considered for patrons if (1) the infected person is directly involved in handling foods that are not to be cooked or cooked foods before they are eaten. (2) the hygienic practices of the foodhandler are deficient, and (3) consumers can be identified and treated within 2 weeks of exposure.

For postexposure IG prophylaxis, a single intramuscular dose of 0.02 mL/kg of body weight is recommended.

Pre-exposure prophylaxis

Travelers to foreign countries. The risk of hepatitis A for Americans traveling abroad appears to be small. It varies with living conditions, the prevalence of hepatitis A in the areas visited, and especially the length of stay.[8,9] As with any enteric infection, the best way to prevent hepatitis A is to avoid potentially contaminated water and food.

Travelers who follow the usual tourist routes may be at no greater risk of getting hepatitis A than they would be in the United States. IG is not recommended for them. However, travelers to high-risk areas outside ordinary tourist routes may be at increased risk. For such travelers, at risk for up to 2 to 3 months, a single IG dose of 0.02 mL/kg is recommended. For more prolonged travel, 0.06 mL/kg should be given every 5 months.

Hepatitis B

Hepatitis B is caused by hepatitis B virus (HBV), a 42-nm, double-shelled DNA (deoxyribonucleic acid) virus. Several well defined antigen-antibody systems have been associated with HBV infection. Hepatitis B surface antigen (HBsAg), formerly called "Australia antigen" or "hepatitis-associated antigen," is an antigen found on the surface of the virus and on accompanying 22-nm spherical and tubular forms. HBsAg can be identified in serum 30 to 60 days after exposure to HBV and persists for variable periods. The various subtypes of HBsAg provide useful epidemiologic markers. Antibody against HBsAg, ie, anti-HBs, develops after a typically resolved infection and is responsible for long-term immunity.

The frequency of chronically carrying HBsAg apparently relates both to age and immunologic competency. As many as 10% of HBV infections result in chronic carriage of HBsAg. The carrier state can be completely asymptomatic or, less commonly, associated with active liver disease. HBsAg carriers play an important role in continuing transmission of hepatitis B, even though they show varying degrees of infectivity.

The hepatitis B e antigen (HBeAg) and antibody (anti-HBe) are distinct from HBsAg and anti-HBs. The potential infectivity of a carrier is higher if the HbeAg is present and lower if anti-HBe is present.

Routes of transmission of HBV include (1) direct percutaneous inoculation of infective serum or plasma by needle or transfusion of infective blood or blood products; (2) indirect percutaneous introduction of infective serum or plasma, such as through minute skin cuts or abrasions; (3) absorption of infective serum or plasma through mucosal surfaces, such as those of the mouth or eye; (4) absorption of other potentially infective secretions such as saliva or semen through mucosal surfaces, as might occur following sexual (heterosexual or homosexual) contact; and (5) transfer of infective serum or plasma via inanimate environmental surfaces or, possibly, vectors. Experimental data indicate that fecal transmission of HBV does not occur and that airborne spread is not epidemiologically important.

The onset of hepatitis B is generally insidious. Clinical symptoms and signs include various combinations of anorexia, nausea, vomiting, abdominal pain, and jaundice. Arthralgias and arthritis can also occur. Overall fatality rates for hospitalized patients generally do not exceed 1%. The incubation period of hepatitis B is long—45 to 160 days (average 60 to 90). Cirrhosis and primary hepatocellular carcinoma are closely associated with chronic HBV infection.

Immune globulins and hepatitis B

IG and HBIG contain different amounts of anti-HBs. IG is prepared from plasma that is not preselected for anti-HBs content. Since 1977, all lots tested have contained anti-HBs at a titer of at least 1:100 by radioimmunoassay (RIA). HBIG, on the other hand, is prepared from plasma preselected for high titer anti-HBs. In the United States, HBIG has an anti-HBs titer of >1:100,000 by RIA. (Currently, the price of a dose of HBIG is more than 20 times that of IG.)

Recent studies have shown that immune globulins can prevent up to 75% of hepatitis B cases in certain settings.[10,11] What has been difficult to determine is the concentration of antibody that would be effective under various conditions of exposure, because studies differed in experimental design and in the immune globulins tested.[12–19]

The studies generally indicated that: (1) HBIG is effective when given after percutaneous (needle stick) or mucous membrane exposure to blood containing HBsAg; (2) IG appears to have some effect in preventing clinical hepatitis; and (3) an immune globulin is most effective if given immediately after exposure.

It can be agreed further that HBIG is preferable to IG when there is bona fide percutaneous or mucous membrane exposure to blood known to contain HBsAg. However, because IG does contain anti-HBs, it remains an important alternative to HBIG whenever HBIG is unavailable, its cost is prohibitive, or a truly significant exposure to HBV may not have occurred.

Postexposure prophylaxis

Acute exposure to blood that might contain HBsAg. Percutaneous (needle stick) or mucous membrane exposure to blood that might contain HBsAg calls for a prompt decision about giving an immune globulin. In deciding whether to give a globulin and, if so, whether it should be IG or HBIG, one must recognize that the need is relative and depends on the kind of exposure. In the hospital, risk of clinical hepatitis B following exposure to blood known to contain HBsAg is approximately 1 in 20. If the blood is of unknown HBsAg status, the risk is 100 times lower, only about 1 in 2,000. This latter risk increases, however, in direct proportion to the likelihood that the blood is HBsAg-positive.

Recommendations on prophylaxis can, thus, be categorized as to (1) whether the source of blood is known or unknown and (2) whether the HBsAg status of the source blood is known or unknown. The following outline and summary table (Table II) are based on these categories. Management of each exposure must be individualized in view of the number of contributing factors. Furthermore, it is important to emphasize that for greatest effectiveness, globulin should be given promptly (its value beyond 7 days of exposure is unclear).

A. Source known, HBsAg status positive. HGIB (0.06 mL/kg) should be given immediately, ideally within 24 hours of exposure. A second identical dose should be given 1 month later. (If HBIG is not available, IG should be used in the same dose and schedule.)

B. Source known, HBsAg status unknown. Two decisions are involved here: whether to test for HBsAg and which immune globulin to give. Because these decisions relate both to the relative probability that the source will be HBsAg-positive and to the inherent delay in testing, the following operational guidelines are suggested:

1. High risk that the source is HBsAg-positive, such as associated with patients with acute, unconfirmed viral hepatitis; patients institutionalized with Down's syndrome; patients on hemodialysis; persons of Asian origin; male homosexuals; users of illicit, intravenous drugs. If HBsAg test results can be known within 7 days of the exposure, IG (0.06 mL/kg) should be given immediately, certainly within 24 hours. If test results are positive HBIG (0.06 mL/kg) should be given at that time and again 1 month later. If HBsAg test results cannot be known within 7 days of the exposure, the decision to use IG or HBIG must be based on the clinical and epidemiologic characteristics of exposure and the availability of globulin, remembering the importance of characterizing the source and giving globulin as soon after exposure as possible.

2. Low risk that the source is HBsAg-positive, such as associated with the average hospital patient. Prophylaxis is optional; HBsAg testing is not recommended. If an immune globulin is to be used, IG (0.06 mL/kg) should be given promptly, certainly within 24 hours. No further action is necessary.

C. Source unknown, HBsAg status unknown. Prophylaxis is optional. If an immune globulin is to be used, IG (0.06 mL/kg) should be given promptly, certainly within 24 hours. No further action is necessary.

TABLE II. Summary of Postexposure Prophylaxis of Acute Exposures to Hepatitis B Virus*

Exposure	HBsAg Testing	Recommended Prophylaxis
HBsAg positive	. . .	Hepatitis B immune globulin, 0.06 mL/kg body weight, immediately and 1 month later.
HBsAg status unknown; source known		
High risk†	Yes**	Immune globulin, 0.06 mL/kg body weight, immediately. If test result is positive, administer hepatitis B immune globulin immediately and 1 month later. If test result is negative, administer nothing.
Low risk†	No	Nothing or immune globulin, 0.06 mL/kg body weight.
HBsAg status unknown; source unknown	No	Nothing or immune globulin, 0.06 mL/kg body weight.

* Important details are in the text.

† Characterized in text.

** If results can be known within 7 days of exposure.

Exposure of the newborn. Infants born to HBsAg-positive mothers (especially mothers who are HBeAg positive) are at risk of being infected with HBV and becoming chronic carriers. Recent studies have shown that the carrier state can be prevented in about 75% of such infections if newborns are given HBIG immediately after birth.[20] (IG was not included in the protocol.)

All infants born to HBsAg-positive mothers should be given HBIG, total dose 0.5 mL intramuscularly, as soon after birth as possible (no later than 24 hours). The same dose (0.5 mL) should be repeated 3 months and 6 months later.

Sexual contact with persons with hepatitis B. In only one study has there been any evaluation of the value of immune globulin for sexual contacts of patients with acute hepatitis B.[21] Although results suggest protection with HBIG, additional studies comparing IG, HBIG, and placebo are needed before specific recommendations can be made.

Pre-exposure prophylaxis

Staff and patients of hemodialysis units. Routine passive immunization against hepatitis B is not recommended for staff and patients of hemodialysis units. Instead, precautions such as serologic screening of patients and staff, segregation of carriers, and environmental hygiene should be encouraged. In the rare event that such measures fail to interrupt transmission, prophylaxis with an immune globulin may be considered. Because carefully controlled studies have failed to demonstrate an advantage of HBIG over IG in this setting, IG (0.05 to 0.07 mL/kg) every 4 months is recommended for patients and staff.[22]

Staff and patients of institutions for custodial care of the developmentally disabled. HBV is commonly endemic in institutions for the developmentally disabled, but passive immunization is not routinely recommended for staff or clients unless it is shown that hepatitis B cannot be controlled by environmental measures alone. Then IG may be administered in the same dose and at the same intervals as for patients and staffs of hemodialysis units.

Hepatitis non-A, non-B and hepatitis–nonspecific

Without accurate tests for diagnosing non-A, non-B viral hepatitis, the value of prophylaxis with immune globulins cannot be determined. No specific recommendation can be made, but as with hepatitis that cannot be specifically diagnosed (hepatitis–nonspecific), it is reasonable to apply the recommendations for prophylaxis against hepatitis A.

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Persistent Left Upper Lobe Infiltrative Density

Case history

The patient was a 55-year-old white man who entered the hospital after having had a routine chest examination which revealed a left upper lobe density. He had a history of chronic bronchitis for more than ten years. He complained of dysthymia, chronic wheezing, and cough with scanty sputum, with one to two exacerbations per year for the last four years, all associated with upper respiratory tract infections. The patient denied weight loss, hemoptysis, and febrile episodes. The past medical history included asthma and multiple allergies from childhood. The patient was presently allergic to penicillin. He had a 60 pack-year smoking history.

Physical examination revealed generalized decreased breath sounds and a slightly increased expiratory phase of respiration. Physical examination disclosed nothing else remarkable. Laboratory data included a normal complete blood count (CBC), normal blood chemistries, and a slightly elevated sedimentation rate of 27. The patient had negative results of a tuberculin test (PPD) and of multiple sputum cytologic studies.

Posteroarterior (PA) and lateral chest x-rays were performed, revealing a lobulated nodular density in the left midlung field which was anterior on the lateral projection.

Radiograph findings

Irving Fuld, M.D.*: The plain films of the chest reveal an irregularly outlined, fairly dense infiltrative density in the left upper lobe, anteriorly located on the lateral film. It measures approximately 3.5 by 2.5 cm in diameter. There is no associated atelectasis, adenopathy, or air bronchogram (Fig 1A). A follow-up film one month later (Fig 1B) fails to show discernible change when differences in film technique are taken into account.

The radiographic appearance is not specific, but I will summarize some of the more likely possibilities. The irregularity of outline without sharply circumscribed margins, slight lobulation, and relative homogeneity would imply a fairly solid but infiltrative process rather than a classical "coin lesion" with sharply demarcated borders. The lack of change over a one-month period would mitigate against an acute pneumonitis or localized allergic pneumonitis.

Viral pneumonia infiltrates can occasionally persist relatively unchanged for many weeks, long after cessation of symptoms. This would include atypical pneumonia. Primary atypical mycoplasmal pneumonia, although classically involving lower lobes, can appear as a patchy, fairly persistent infiltrate in an upper lobe. It generally is less dense than this patient's infiltrative process, and usually has laboratory manifestations of positive cold agglutinins as well as some low-grade fever, although physical symptoms may be very mild or lacking. CBC is often normal. The anterior upper lobe segmental location would count somewhat against reinfection tuberculosis which is characteristically in the apical or posterior segments of the upper lobe or apical segment of the lower lobe. Atypical mycobacterial pneumonia can produce such a radiographic picture. (Indeed, atypical mycobacterial infections can produce radiographic appearances similar to tuberculosis.[1])

As for other mycotic infections, the radiographic manifestations of histoplasmosis and coccidioidomycosis usually are more diffuse and involve lower lobes.[1] However, one might consider the reinfection or "chronic" form of histoplasmosis, which can be a fairly well-defined area of parenchymal consolidation, generally in the upper lobes. Usually, though, there are systemic symptoms such as mild fever, weight loss, cough, or chest pain.

Mucoid impactions are often Y- or V-shaped, and associated with fever, chills, and expectoration.

Lipoid pneumonia from exogeneous aspiration of organic minerals can appear about 50% of the time as a peripheral mass with well-circumscribed margins, closely simulating a bronchogenic carcinoma. It often has linear shadows radiating from the mass. The patients are usually asymptomatic. Withdrawal from exposure can show slow resolution. The lesions do not cavitate or calcify normally. Recently, computed tomography scans have been shown to help in

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* Resident in Radiology.

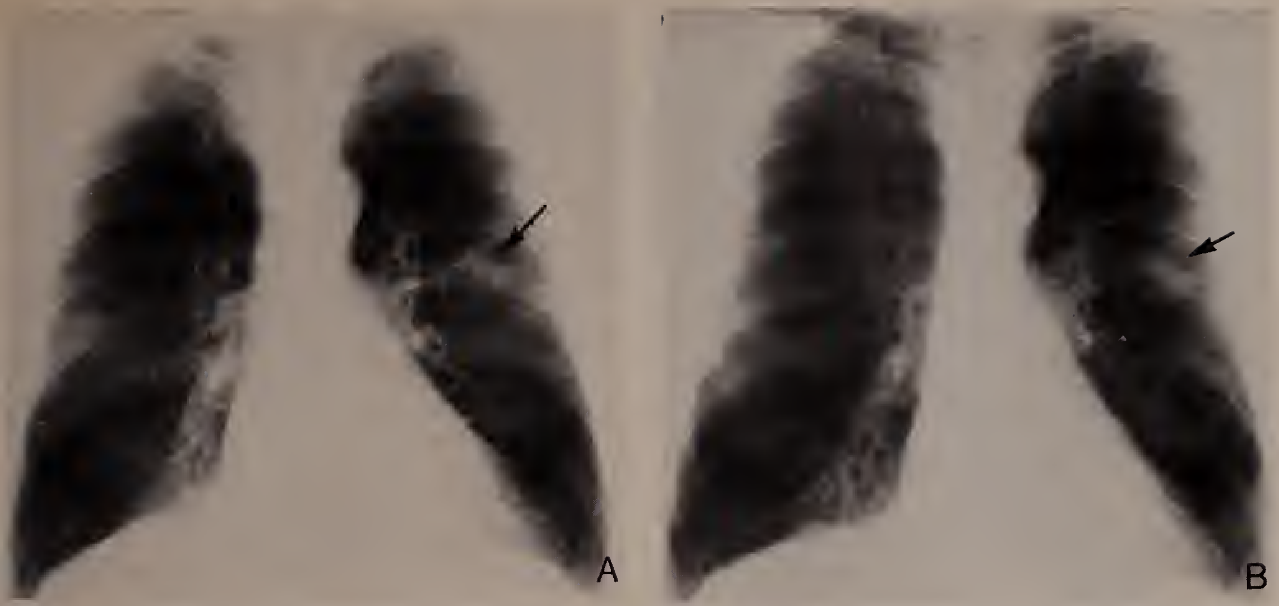

FIGURE 1. (A) PA view of chest showing fairly homogeneous density in left upper lobe (arrow), with lobulated, not very sharply defined borders. (B) One month later. No significant change in lesion (arrow), considering differences in film technique.

establishing a diagnosis of fat density in the lung nodule.[2] This patient gave no appropriate history of this condition.

Pseudolymphoma of the lung may appear as a localized segmental parenchymal consolidation and is not associated with adenopathy. It may also be a diffuse interstitital infiltrate or have multiple peripheral nodules. It is a benign condition of lymphocytic infiltrates including germinal centers. As such, it would fit the radiologic and clinical picture of this case.[3-6]

Immunologic causes of density, such as with rheumatoid necrobiotic nodules and Wegener's granulomatosis, are associated with systemic diseases. They are more commonly multiple with a high incidence of cavitation. This patient's history failed to show any specific indication of such systemic disease.

Under the category of neoplasia, many neoplasms could appear as the infiltrative density in this patient.[7,8] Bronchogenic carcinoma would be most likely statistically, in that such tumors characteristically show poor margination with ill-defined lobulated borders. Previous chest films for comparison if they were available would have been of aid. Alveolar cell carcinoma, as the name suggests, can have just such an appearance with a localized alveolar infiltrative density. It also may be bilateral, fairly diffuse, have an air bronchogram, or be a solitary mass-like density. Alveolar cell carcinoma also characteristically is slow growing.

Primary lymphoma of the lung and Hodgkin's disease can on occasion produce isolated lung consolidation of variable size. They may appear as a homogeneous nonsegmental mass with shaggy ill-defined borders. An air bronchogram is sometimes visible, as there is no bronchial obstruction. In most instances, however, there is associated mediastinal and/or hilar enlargement, which was not present in this patient. Also, non-Hodgkin's lymphoma is usually more aggressive than this lesion and would tend to change over a one-month period.

Rarely, plasmacytoma can appear like a bronchogenic carcinoma. This patient, however, had normal blood chemistries and a normal urinalysis. Proteinuria is found with most patients with multiple myeloma. Nevertheless, on occasion a patient with myeloma can have normal laboratory findings, and the diagnosis is only made by biopsy.

Radiologic differential diagnosis

The left upper lobe density in question is not radiographically specific. Multiple differential possibilities are mentioned with some of the more likely choices including primary bronchogenic carcinoma and alveolar cell carcinoma, persistent viral pneumonia, pseudolymphoma, and lipoid pneumonia.

Hospital course

Additional work-up included bronchoscopy, bronchial biopsy, and pulmonary function tests. None of these were contributory. The patient refused needle aspiration biopsy in favor of an open lung biopsy.

Pathologic discussion

Boyce Bennett, M.D.*: A thoracotomy was performed, the left upper lobe of lung was resected,

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* Professor of Pathology.

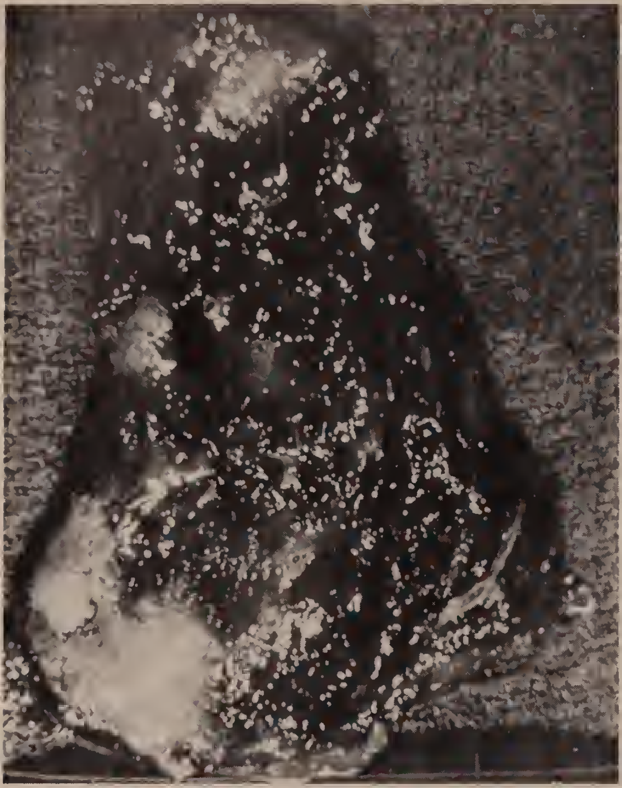

FIGURE 2. Appearance of cut surface of lung. Three separate, ill-defined masses are present.

and a mediastinal lymph node was biopsied. The pleura and external appearance of the lobe of lung was unremarkable, but the cut surface of the lung showed three pink-tan, ill-defined firm areas, the largest measuring approximately 3.0 cm in greatest dimension (Fig 2). Microscopically, all the nodules were identical, and each consisted of a large mass of lymphocytes containing scattered, normal-appearing germinal centers (Fig 3A). These masses were fairly well-demarcated from the surrounding, histologically normal lung parenchyma. Higher magnification (Fig 3B) showed that the lymphocytes were mature with no atypia, and that the germinal centers were not remarkable in their architecture. The mediastinal lymph node was histologically normal.

The lesion was diagnosed as a pseudolymphoma of the lung, in that it fulfilled the established criteria for this entity[6]: (1) a mixed cellular infiltrate with mature lymphocytes predominating, (2) the presence of germinal centers, and (3) lymph nodes free of lymphoma. Pseudolymphoma of the lung may be solitary, multiple, or diffuse, and, as the name implies, the subsequent course is a benign one. On occasion, nevertheless, such a mass as this does indeed prove to be malignant in that the disease recurs and disseminates as a lymphocytic lymphoma.[9] Adequate pathologic criteria to distinguish the benign lesions from those with malignant potential do not yet exist, and therefore the unequivocably benign nature of the lesion cannot be assumed. Studies regarding the polyclonal nature of the cells comprising a pseudolymphoma have been published,[10] and this method may provide an additional means for clarifying the nature of such lesions.

Subsequent to the surgery, the patient received no further treatment and two years later, he shows no evidence of recurrent disease.

Final diagnosis

Pseudolymphoma of the lung

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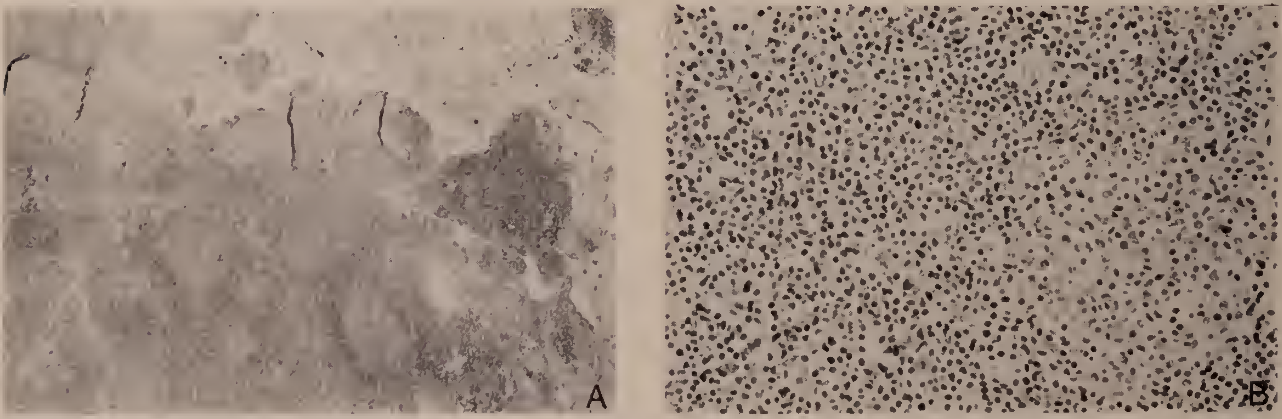

FIGURE 3. (A) Low-power magnification of edge of mass showing tumor with adjacent normal parenchyma. Germinal centers are evident. (B) Higher magnification showing mixed population of normal lymphocytes. Germinal center is at right.

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Computer technology makes x-ray easier

Computer technology is making it easier and safer to obtain x-ray images of arteries clogged by arteriosclerosis, according to a team of California radiologists.

By combining electronic x-ray detection methods and digital computer techniques (similar to those used in CAT scanning) radiologists can cancel out x-ray shadows made by bones and soft tissue to obtain clear images of underlying arteries.

Writing in the *Journal of the American Medical Association*, William R. Brody, M.D., associate professor of Radiology, Stanford University School of Medicine, and colleagues say that the new way of obtaining x-ray images, called digital subtraction angiography, is useful for evaluating major vessels such as the aorta, the carotid arteries supplying blood to the brain, the iliac and femoral arteries serving the legs, and the renal arteries nourishing the kidneys. The technique will have to be improved before it can be used to study the coronary arteries and intracranial vessels, according to Brody.

In digital subtraction angiography, dye that allows the blood vessels to show up in the final x-ray image is injected into a vein rather than an artery. However, it quickly circulates into the arteries. The risk of bleeding and discomfort is minimal with intravenous injection in contrast to catheterization, in which a tube is threaded through an artery, Brody said. For outpatient studies, digital subtraction and angiography may provide diagnostic images at lower cost.

While catheter studies will continue to be necessary where increased image detail is needed, digital subtraction angiography has led to a resurgence of interest in injecting dye into the veins, a procedure that had essentially disappeared from routine clinical use.

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1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension, 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn. b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes A precipitous elevation of blood pressure may accompany hypoglycemic attacks

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia, congestive heart failure, intensification of AV block, hypotension; paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura *Central Nervous System* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress *Respiratory* bronchospasm *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase lactate dehydrogenase

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Left Atrial Myxoma

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The annals of medicine are replete with examples of clinical conditions which were considered pathologic curiosities at one time, only later to become amenable to cure. So it is with left atrial myxoma (LAM), the foremost primary cardiac neoplasm. Until three decades ago this tumor was thought of as exceedingly rare, seldom was diagnosed intra vitam, and defied treatment.

How drastically matters have changed in this regard is reflected by the medical literature of the past five years alone, which contains more articles about LAM than in the preceding 150 years since its histologic features were first described.[1,2] This upsurge of interest is accounted for just partly by increased awareness of the entity; in fact, it owes more to recent advances in diagnostic methodology, and to echocardiography above all others.

A survey of this subject therefore is appropriate to serve for reminder that LAM is not as rare as was once believed, and that its recognition offers the opportunity to achieve complete cure through timely surgery.

Pathology

Incidence. LAM is encountered in from 0.009% to 0.015% of random necropsies.

I have been able to retrieve 584 documented cases of LAM from the medical literature through December 1981, and their analysis has yielded the statistical information cited in the present review.

The age span is from three months to 95 years, median 44.5 years. Overall, females outnumber males threefold.

Topography. In 88.6% of cases the mass tenants only the left atrium, is solitary, and issues exclusively from the septum, most often within the confines of the fossa ovalis. Biatrial myxomas exist in 3.4% of cases. In three fourths of them a lone mass in each chamber shares a common septal bridge with its fellow; in the others there is no such anatomic continuity.

In 83% the tumor is attached by a single stalk of variable length and width. In the remainder, the mass is sessile, joined to the septum by either a narrow or broad base. Of the tumors which arise at nonseptal locations, two-thirds are pedicled.

Macroscopic appearance. The dimensions of LAM range from minute nubbins, barely a few millimeters in diameter, to gigantic growths which occupy most of the atrium and a good deal of the ventricle besides. The heaviest LAM of which I have read weighed 466 g. The average LAM is roughly 5 cm long, 3 cm broad, and weighs 60 g.

The particular configuration of individual tumors probably is the circumstantial outcome of a multitude of factors, including collagen content, location, rate of growth, and cardiac kinetics. In 64% LAM assumes a pedunculated shape, with cauliflower- or fern-like villous boughs that are gelatinous and fragile. In 19% the neoplasm is globular, denser, has scanty or no bosselations and usually a stouter pedicle. In the remaining 17% the mass is squat, sessile, and either polymorphous or ovoid.

In about one seventh of all LAM which are long enough to have traversed the mitral orifice there is a furrow or indentation where they have been squeezed by the valve leaflets. In all instances the external surface is glistening smooth, but may be coated here and there with shaggy clot, fibrin, or platelet aggregates, especially in crevices between fronds. The color is very heterogeneous.

The tumor is nourished through its base by radicles of coronary atrial or septal arteries. The strongest portion of the neoplasm is its point of anchorage to the endocardium, due to the concentration therein of muscular-walled blood vessels and of other nonmyxoid elements. Ordinarily, the brittleness of papilliferous tumors is such that their free-floating extremities can avulse with very little force. But on

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occasion even stockier, compact lumps may become totally separated by spontaneous severance of a weak or thin stalk.

Microscopic appearance. Cardiac myxoma is endowed with somewhat peculiar yet generally distinctive histologic aspects. Its greater part is made up of a plentiful, amorphous, mucoid substratum or fibrillary ground substance, on a loose framework of collagenous, elastic and reticular fibers, with thin-walled vessels ranging from capillary-size acini to cavernous clefts irregularly scattered about. Embedded throughout the acellular stroma, singly or in clusters, are myxoma neoplastic cells. These cells possess different kinds of morphology, are mononuclear, and have varying amounts of cytoplasm. They sometimes amalgamate into multinucleated cells, but never disclose mitoses.

Tumor cells seldom permeate past the elastic lamina of the second endothelial layer of endocardium, but sometimes they pierce the basement membrane and proliferate beyond it.

Oncogenesis. The descriptive term "myxoma" is a misnomer perpetuated by traditional usage, for in fact the cardiac tumor has no kinship to peripheral connective tissue myxoma of mesenchymal origin.

Among the proofs establishing the neoplastic identity of cardiac myxomas are those garnered from: (1) electron microscopic studies; (2) histochemical analysis; (3) reproduction of tumor by tissue culture; and (4) demonstration of specific cell and tissue markers by immunocytochemical techniques.

Although there is near-unanimity of opinion about LAM being factually a neoplasm sui generis, its histogenesis has yet to be categorically defined. According to one postulate neoplasia is engendered by *primordial mucoid cell rests* sequestrated in the area of the fossa ovalis, which aggregates last during cardiac embryogenesis. A more contemporary theory, founded largely on electron microscopy studies, ascribes the genesis of cardia myxoma to *pluripotential mesenchymal cells* that are able of differentiating into several kinds of tissue. Two principal reserve cells are thought to participate in the process: (1) a "myxoma" cell with Golgi apparatus and secretory vacuoles; and (2) a myoendothelial cell having properties of both smooth muscle and endothelium. The latest hypothesis resurrects a former notion about an *endothelial histogenesis.*

Histochemical reactions. The demonstration of tumor tissue in histologic sections is based on the tinctorial properties of mucins, specifically acid mucopolysaccharides. Thus, the standard periodic acid-Schiff reaction is unsatisfactory because this dye is useful mainly for staining neutral glycosaminoglycans.

The best reagent for exhibiting LAM stroma is alcian blue. Metachromatic staining is also achieved with toluidine blue. The tumor cells in LAM are demonstrated best by means of the peroxidase-antiperoxidase staining procedure for factor VIII-related antigen.

Ultrastructural appearance. The majority of electron microscopy studies have focused more on the body of the tumor rather than on its roots.

Myxoma tumor cells depicting all manner of stages of differentiation have been described, together with immature and mature smooth muscle, endothelial cells, and fibroblast-like cells. Examination of the organelle content of tumor cells has not furnished sufficient evidence for precise identification of their stem cell; nevertheless, it has reinforced the concept that the genesis of myxoma is via embryonic mesenchymal remnants with multipotential capabilities for cellular differentiation.

Among the most interesting findings of ultrastructural studies are prominent Golgi cisterns and vesicles in some tumor cells. The implication is that they may actively synthesize and secrete stromal material rich in acid mucopolysaccharides.

Scanning electron microscopy has revealed the surface of intracardiac myxoma to be made up of sheets of endothelial cells. This endothelium cloak has many corrugations and gaps, which may foster deposition of platelets, fibrin, and clot.

Concomitant cardiac lesions. By far the majority of hearts which harbor LAM are otherwise normal. Coexisting lesions such as a rheumatically altered heart valve are chance occurrences, the entire incidence rate of which amounts to less than 5%.

On the other hand, LAM can be verifiably incriminated in 4.2% of cases for architectural damage to valves. Ordinarily this is due to a calcified tumor repeatedly battering a mitral valve, causing abrasion, fibrous induration, and/or perforation of leaflets. In more extreme instances chordae tendineae may be lacerated from such a "wrecking-ball" mechanism.

Histological behavior of tumor emboli. Pieces of tumor which break off from LAM and are swept into the bloodstream may exhibit continuing independent growth within some tissues where they are caught. Thus, they can behave like "metastases," the histologic benignity of LAM notwithstanding.

Once ensconced in suitable terrain the tumor emboli invade the arterial or arteriolar tunics. After breaching the intima they penetrate the subintimal zone, distend the internal elastic lamina, and multiply in the media. Whenever proliferation remains subendothelial, vascular obstruction or occlusion eventuates, with ischemia or infarction of tissue beyond. In muscle, for instance, the outcome of the consequent focal deprivation of blood is patchy myolysis and necrosis. However, tumor invasion which encroaches onto adventitia usually ends in pseudoaneurysm, whose unpredictable rupture entrains hemorrhage and infarction in the affected viscus.

Myxoma microaneurysms have been described principally in connection with cerebral arteries. The eye seems to be spared from this nefarious conversion of tumor microemboli, because these tend gradually to disappear after landing in the central retinal artery, although blindness may be permanent from the initial occlusive process.

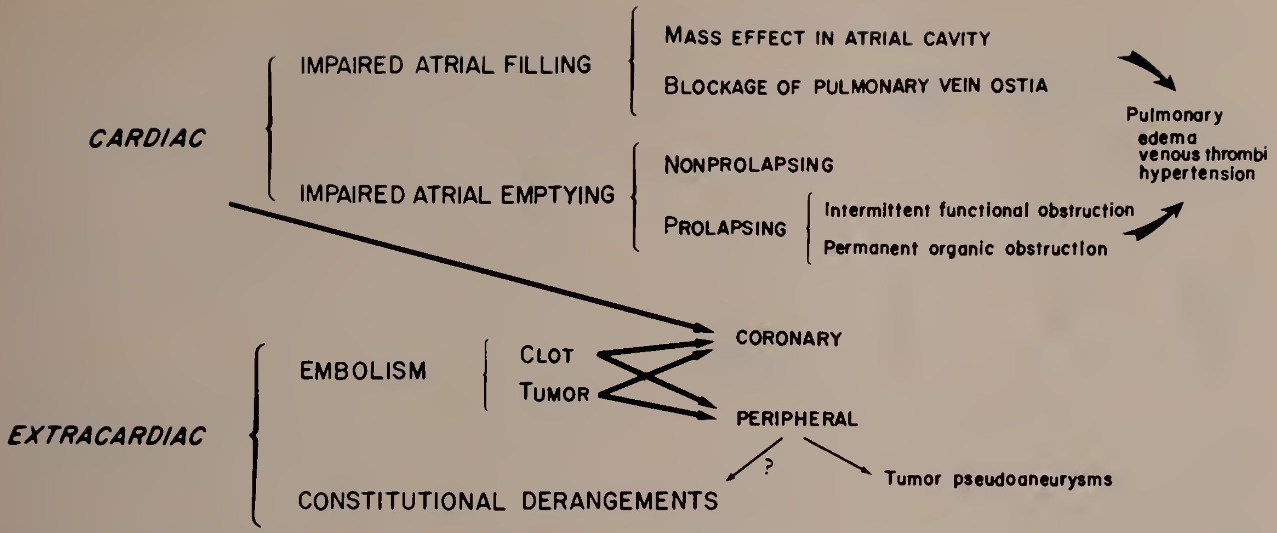

FIGURE 1. Major pathophysiologic manifestations of LAM. Constitutional derangements possibly may derive from tumor microembolism to diverse organs.

Pathophysiology

Traditionally, the effects of LAM have been viewed in terms of a triad: (1) mitral valve malfunction; (2) peripheral embolism; and (3) constitutional derangements. It is more convenient, in my opinion, to consider the pathophysiology according to broader classes of cardiac and extracardiac consequences (Fig 1). Each may occur by itself, but more often they overlap at some time during the course of disease.

The cardiac consequences of LAM generally are those of reduced left ventricular output. Infrequently they are the outcome of coronary embolism.

The extracardiac consequences of LAM principally are those of tumor embolism. Less common are those reflected in systemic disturbances, some of which in fact probably are emboligenic. Least frequent are those attributable to distant "metastases."

Cardiac effects. The size, consistency, and mobility of LAM, as well as its orientation to portals of atrial inflow and outflow determine its influence on cardiac kinetics. A small sessile tumor situated away from the atrioventricular orifice may be hemodynamically silent, whereas one of similar size that straddles the mitral valve and interferes with its motion may instigate major hemodynamic upheavals (Fig 2).

Diminished cardiac output, the mechanical end-result of myxoma inhabiting the heart, is due to the resistance which the tumor imposes to atrial filling and/or emptying.

Hindrance to atrial *filling* is caused by (1) relative reduction in atrial chamber capacity, or "mass effect," from the space-occupying tumor; or (2) blockage of pulmonary vein ostia.

Impeded atrial *emptying* is due to intermittent or sustained partial obstruction of the mitral valve orifice. This may take place whether the tumor (1) stays entirely in the atrium throughout the cardiac cycle (ie, is nonprolapsing); (2) herniates across the valve orifice during ventricular diastole, but goes back into the atrium during systole (ie, is intermittently prolapsing or functionally obstructive); or, (3) juts partly into the ventricle during both diastole and systole (ie, is perpetually prolapsed, or organically obstructive).

Whether a tumor prolapses at all, and when it does so, is correlated with several factors: (1) its size, shape, firmness, and site of attachment; (2) the length of its stalk; (3) the cardiac rhythm; (4) changes in the patient's posture.

As would be expected, with hampered inflow the left atrium enlarges hardly or not at all. Conversely, with impeded forward flow there is greater likelihood of atrial chamber enlargement. The minimal degree of atrial enlargement together with absence of in-

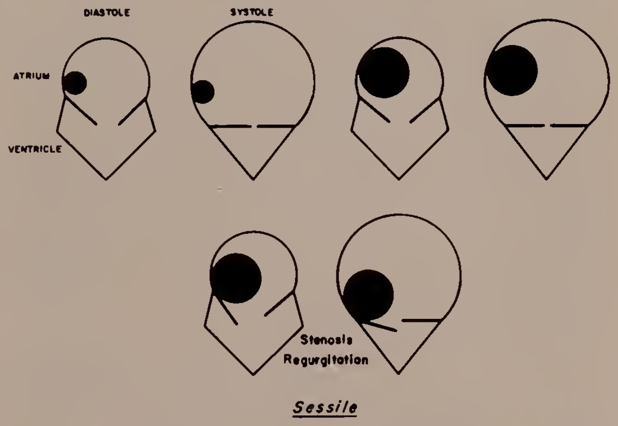

FIGURE 2. Sessile LAMs when small usually cause no hemodynamic disturbances. Large LAMs situated away from mitral valve interfere with optimal atrial filling; if adjacent to valve they also may produce stenosis as well as regurgitation during cardiac cycle.

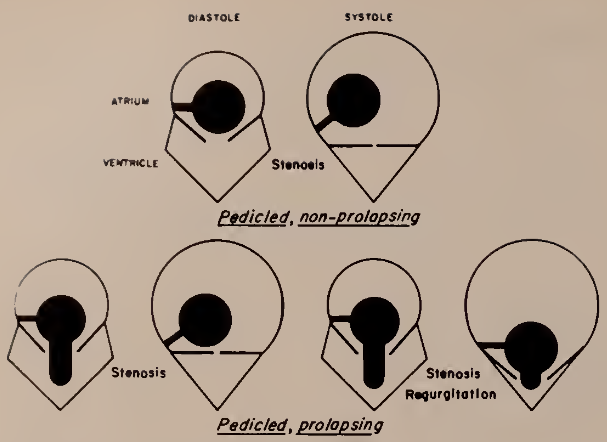

FIGURE 3. Pedicled, nonprolapsing LAMs, by their bulk, may impede atrial emptying. Prolapsing ones either may cause mitral stenosis alone during atrial systole, or regurgitation too during ventricular contraction if they do not return entirely to the atrium.

trinsic myocardial disease probably account for the low incidence of atrial fibrillation with LAM.

A pedunculated, noncompressible LAM smaller than the valve orifice may prolapse periodically through it, causing variable mitral stenosis and/or regurgitation (Fig 3). A like mass that is bigger than the orifice and incapable of entering the ventricle ordinarily causes stenosis exclusively. On the other hand, a pedicled malleable mass that is squeezed to and fro between the atrium and ventricle tends to deform mitral opening and closure, and engenders both orificial obstruction and incompetence. Irrespective of whether curtailed atrial inflow or outflow is at fault, the ultimate sequels in the lungs correspond to those typical of primary mitral valve disease.

In general, obturation at atrial ingress or egress advances inexorably. On occasion, fragmentation of the tumor paradoxically may allow respite from obstruction—although at the price of peripheral embolism. Or, if perchance the mass shifts in such a way as to become fully wedged in the valve orifice, the resultant total occlusion brings about cessation of cardiac output, ending life.

Extracardiac effects. As stated earlier, some extracardiac manifestations of LAM either may present in unison with cardiac ones, be temporally separated, or not appear altogether. In order of decreasing frequency, they comprise: (1) embolism; (2) constitutional derangements; and (3) distant "metastases."

Embolism. Embolism is the second major jeopardy from LAM, next to cardiodynamic derangements. Sometimes it is from loosely bound blood clot or granular fibrin swept off the surface, but much more often it stems from either actual crumbling of part(s) of the mass or even complete severance at its base. Overt embolism occurs in 63% of cases; this figure doubtless is an undercount because it does not take into consideration instances of occult microscopic particles sown to peripheral soft tissues.

Ninety-seven percent of cases of embolism are from tumor itself. Nine-tenths are pieces that have broken off from the main body of the mass; the rest consist of the neoplasm in toto separating from its moorings.

Embolism generally is spontaneous and unheralded. Nearly three fifths of embolic events occur just once; in the remainder, iterative embolism takes place in fairly brief succession, or after variable intervals of weeks or months.

No organ in the body is exempt from the peril of embolism. About two thirds of embolic accidents concern the abdominal aorta and lower-limb arteries. Next in frequency rate, 47%, is the intracranial vasculature. Different organs may be stricken singly, severally, or successively. Embolism is to a solitary organ in one third of cases, and simultaneously to different structures in the others. Since the majority of patients are not in the age range when peripheral obliterative atherosclerosis plays an important role, embolization is unselective, can occur over a wide swath throughout the body, and seldom strikes the same target twice in succession or ever again.

The pathophysiologic aftermaths of embolism are directly dependent upon the magnitude of morphologic damages induced in the affected organ(s) and vascular reserve of the latter. It should be noted, in passing, that the coronary arterial tree is involved in just 1.9% of all instances of embolization, which is why myocardial infarction is a very unusual accompaniment of LAM.

Constitutional derangements. Constitutional derangements varying in frequency, severity, and duration sometimes are associated with LAM. Manifestations such as asthenia, anorexia, fatigue, weight loss, and low-grade fever are accompanied by biophysical and biochemical abnormalities such as accelerated erythrocyte sedimentation rate, leukocytosis, anemia, thrombocytopenia, raised immunoglobulin levels, depressed complement levels, and reversed albumin-globulin ratio. That these alterations have direct nexus to the presence of LAM is unequivocal since they are dissipated completely either right away or very soon after ablation of the tumor, but the pathways responsible for their production are obscure.

Diverse hypotheses have been proffered to explain how the constitutional disorders are incited. They have been variously attributed to: (1) elaboration of a hormone by the myxoma; (2) microembolization of tumor to muscle, liver, and other tissues capable of eliciting systemic reactions when disturbed; (3) hemolysis due to the liberation into the bloodstream of a toxic polysaccharide by-product of carbohydrate-rich tumor stroma; (4) immune response to antigenic particles of tumor released into the circulation; and (5) initiation and maintenance of an autoimmune state analogous to that seen after cardiotomy or myocardial infarction.

Distant "metastases." These have been pointed out by some authors as evidence of the malignant potentiality of LAM. More reasonable interpretations are that either (1) the parent tumor was misdiagnosed as a myxoma whereas it was really a sarcoma to begin with; or (2) "metastases" are the product of tumor emboli thriving in favorable surroundings, but not spreading therefrom by lymphatic or other vascular channels.

Diagnosis

Comparison of publications of the last decade with those of previous epochs yields the startling revelation that the diagnosis of LAM, while arrived at sooner and more often, is increasingly fortuitous and based on technologic adjuncts rather than on semeiologic grounds.

The incidence of "classical" cataclysmic presentations which were recounted vividly in the literature of yesteryear has declined precipitously. Either patients nowadays are not left to deteriorate to such arrant depths, or the evolution of their illness is so slow as to allow scope for the implementation of comprehensive cardiologic and ancillary studies.

However, inasmuch as misdiagnosis, no diagnosis, or belated diagnosis can prove to be equally disastrous, in the long run the patient's interests are safeguarded best by the physician's alertness to the possible nexus of a spectrum of clinical developments, albeit infrequent, vague, or fleeting. Ultimately, therefore, the physician's acumen is kept honed by his remembering the exceptional situations, disguises, maneuvers, or tests which have been described as typifying intracardiac myxoma.

The following outline is a summation of clues, many admittedly of a low order of sensitivity or specificity, which should invite further investigation for LAM.

I. Semeiology

A. *Interference with atrial inflow or outflow*

1. Bouts of abrupt and overwhelming cardiac decompensation in someone lacking an anamnesis of congenital, rheumatic, or ischemic heart disease.
2. Congestive heart failure irregularly but rapidly progressive, and refractory to conventional therapeutic measures.
3. Preference of a dyspneic patient for bizarre postures, such as face down or with the head below the trunk, to alleviate breathlessness.
4. Palpitations, together with lightheadedness or syncope, not instigated by emotions or exertion.
5. Erratic clouding of consciousness in the presence of sinus rhythm. There may be no uniformity about which position produces distress or gives ease, even for the same patient.
6. A sense of impending death (angor animi), together with hypotension and marked contraction of the pulse pressure, when some patients who are recumbent turn sideways or sit up.
7. Degree of invalidism not in keeping with cardiologic findings.
8. Fixed atrial fibrillation missing among physical signs otherwise concordant with mitral valvopathy.
9. De novo precordial murmurs in formerly murmur-free heart.
10. Lack of an opening snap in the presence of a long, loud diastolic murmur, prominent first heart sound, and uncalcified mitral valve.
11. Lack of a presystolic murmur in the presence of a mid-diastolic murmur and normal sinus rhythm.
12. Temporal changes in auscultatory aspects, with discrepancy in timing or loudness of murmurs being noted at successive examinations, or sometimes even beat-to-beat.
13. Positional changes in heart murmurs; for example, an apical diastolic murmur heard only or heard loudest in the upright position.

B. *Embolic events*

1. Peripheral arterial embolism in a young individual without a history of arteriosclerotic or rheumatic heart disease, but who exhibits signs consistent with mitral valvopathy.
2. Myocardial infarction in a young adult with a seemingly normal heart.
3. Transient ischemic attacks or stroke without clear evidence of carotid atherosclerosis.
4. Central retinal arterial occlusion, associated with repetitive multifocal neurologic disturbances of an ischemic category, in a young person without local vascular disease of the eye.
5. Peripheral arterial embolism without atrial dysrhythmias or recent myocardial infarction.
6. Peripheral arterial embolism followed by spontaneous remission in cardiac symptomatology.
7. Stigmata of Raynaud's phenomenon unprovoked by exposure to cold.

C. *Constitutional illness*

1. A picture suggestive of bacterial endocarditis, but without splenomegaly or positive blood cultures, and unresponsive to antibiotics.
2. Manifestations evocative of "collagen disease" or of one of the generalized vasculitides.

II. Laboratory abnormalities

A. *Chest roentgenogram*

1. Incongruously trivial or modest atrial enlargement in the presence of marked symptoms of mitral valve malfunction.
2. Discrepant vascularity between both lung fields.

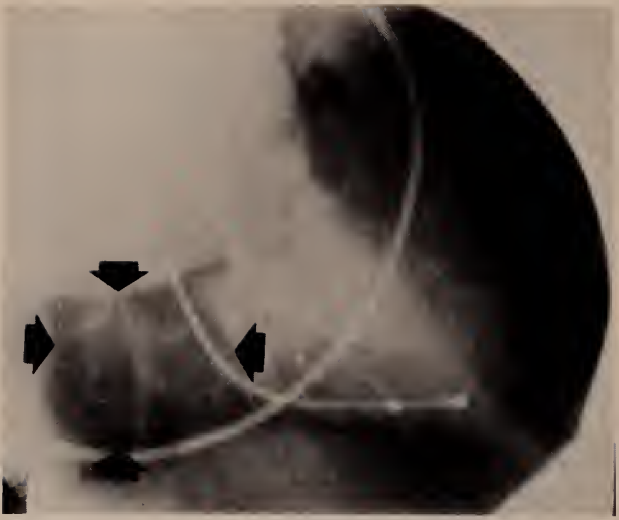

FIGURE 4. Large, prolapsing LAM outlined by cineangiocardiography.

B. Electrocardiogram

Absence of atrial fibrillation, left atrial dilation, or P-mitrale despite signs of apparently severe mitral stenosis or regurgitation, with pulmonary hypertension.

C. Cardiac catheterization

1. Wide oscillations in intracardiac pressures unrelated to respiration or altered body position.
2. Conspicuous V wave and Y descent, accompanied by notches on the upslope and downslope, with disproportionately small left atrium and normal dye dilution clearance.
3. A diastolic pressure gradient across the mitral valve that changes with position, reflecting a variable rather than fixed obstruction.

D. Cineangiocardiography

1. Demonstration of a negative filling defect in the left atrium, especially one that shuttles between atrium and ventricle (Fig 4).
2. Paradoxical excursions of the catheter in the ventricle.

E. Gated radionuclide cardiac imaging

As with dye cinecardioangiography, the outlining of an atrial mass, especially one that migrates back and forth through the mitral orifice.

F. Cardiac ultrasonography

Dense echoes behind the anterior leaflet of the mitral valve, especially when they persist on arc scan into the atrium.

III. Biopsy information

The diagnosis is made with certainty from fortuitously detached bits of tumor which have embolized to the lower or upper limbs, been retrieved, and examined microscopically. It is inconclusive or misleadingly "false-negative" if the embolus consists of blood clot only. Unfortunately, specimens are unobtainable when embolism is to inaccessible organs.

In a couple of patients myxomatous emboli have been revealed in small arteries and arterioles of intramuscular septa, accompanied by focal muscle necrosis and secondary inflammatory changes. These cases suggest that muscle biopsy, heretofore not considered worth bothering with, may be a neglected diagnostic procedure for unmasking LAM.

Diagnostic shortcomings

Because of its extraordinary semeiologic variability and mimicry of other entities, LAM is liable to defy discovery for a long time. Depending on its manifestations, the condition may be mistaken for any of a host of diseases—acute rheumatic carditis; bacterial endocarditis; myocarditis; mitral valve prolapse syndrome; cardiomyopathy; mobile left atrial thrombus; idiopathic hypertrophic subaortic stenosis; other intracardiac neoplasms; generalized inflammatory arteriopathy; and polymyositis or other connective tissue diseases.

Several shortcomings, clinical ones as well as others related to laboratory methodology, may detract from the diagnosis of LAM.

Clinical tableau. Notable "red herrings" comprise:

1. Antecedent rheumatic fever.
2. Coincidental mitral and/or aortic valvopathy.
3. A background of longstanding cardiogenic disability.
4. Protracted asymptomatic intervals between bouts of congestive heart failure.
5. Dyspnea, syncope, or constitutional symptoms in the absence of obvious pulmonary hypertension or a mitral murmur.
6. Presence of atrial fibrillation.
7. Coexisting coronary, carotid, or lower limb obliterative arteriosclerosis.
8. Concomitant connective tissue disease.
9. Radiographic appearance of the lungs resembling interstitial fibrosis.
10. Spotty calcification in the neighborhood of the mitral valve apparatus.
11. Emboli showing histologic features only of blood clot, not tumor.
12. Blood cultures positive for bacteria or fungi.

Cardiac catheterization. The drawbacks of cardiac catheterization are as follows.

1. This undertaking is not without hazard in patients with LAM, even when the correct diagnosis is suspected and the procedure planned accordingly. It may provoke acute pulmonary edema, embolization, or death.
2. The yield of false-negative results may be as much as 33%.
3. None of the hemodynamic findings categori-

cally enables segregating LAM from non-neoplastic types of mitral valve obstruction.

Cineangiocardiography. Six points to remember about angiographic methods of detecting LAM are:

1. Nonprolapsing and small tumors may not be visualized; nor may multiple lesions in the same chamber or different chambers.
2. The incidence of false-negative results exceeds by far false-positive ones. False-negative results usually are due to insufficient quantity of contrast medium. Conversely, false-positive results usually are due to "phantom" filling defects elicited by injection of contrast material directly into the left atrium. Very occasionally, a facsimile of LAM is created by atrial thrombus,[3] atrial septal hematoma, or congenital septal dysplasia.
3. Tumors which are invisible in posteroanterior view frequently become distinct on lateral projection. Hence, accuracy is increased by recourse to biplane filming.
4. Angiocardiography by the transseptal route is potentially perilous, and contraindicated when LAM is suspected beforehand. Cases are on record of disasters being instigated thereby—either embolization to diverse organs, or cardiac arrest and death from LAMs being impaled on catheters and thrust through the mitral orifice.
5. Retrograde left ventriculography is somewhat safer than transseptal angiocardiography. Its usefulness is limited, however, to outlining tumors which cause mitral regurgitation or project into the ventricle. Also, pendulous LAMs are no less vulnerable to fragmentation by the injection catheter in this approach than in the transseptal technique.
6. The safest angiographic method is levophase pulmonary arteriography, but it is more liable to false-negative interpretations. These derive chiefly from problems with streamline flow, overlapping shadows, and so forth, when filming is done in one plane only. Misinterpretations are appreciably less when simultaneous biplane filming is done. Moreover, since low cardiac output may cause poor mixing of contrast medium, and consequently delayed uniform opacification of the atrial cavity, it is imperative to procure late films whenever pulmonary arteriography is resorted to.

Cardiac ultrasonography. The advantages of echocardiography over cardiac catheterization, cinecardioangiography, and radionuclide cardiac imaging are several. It is: (1) noninvasive; (2) accurate; (3) less costly; (4) less time-consuming; (5) if necessary, can be repeated ad libitum from multiple views and planes; (6) is without discomfort or danger to the patient; (7) yields bright positive images, unlike the negative filling defects which may be obscured by superimposed x-ray contrast medium or nuclear radiation; and (8) can furnish quantitative data regarding tumor size.

Nevertheless, echocardiography is not infallible. Irrespective of the ultrasonography method used, problems to contend with are those pertaining to resolution, acoustic dropout or "shadowing," spurious echoes, and the influence on reliability and reproducibility of differences in gain control settings, patient position and transducer location, and interobserver and intrapatient variability.

M-mode ultrasonography. The limitations of standard M-mode (unidirectional) ultrasonography are:

1. It may not distinguish LAM from extracardiac masses which can produce confusing abnormal echoes behind the mitral valve. Differentiation of such artifacts from LAM can be achieved, however, by modulating the gain setting on the recorder.
2. It does not enable recording of the posterior wall of the left atrium, so that nonprolapsing tumors are likely to be overlooked. To surmount this pitfall the sound source needs to be placed at the cardiac apex so that the beam travels across the long axis of the left ventricle, through the mitral valve and into the LAM. Another useful transducer position is suprasternal, with the beam aimed caudally.
3. It will not uncover the right atrial partner of a bilateral myxoma, especially if (as is usually the case) the LAM dwarfs the tumor on the right side.
4. False-positive echocardiographic diagnosis of LAM is uncommon. The few conditions most apt to produce images resembling the ultrasonogram of LAM include: mobile ("ball") atrial thrombus; marked mitral valve prolapse; nonbacterial thrombotic encrustations over the mitral valve; mitral stenosis with a heavily calcified leaflet; and ruptured chordae tendineae.

Cross-sectional ultrasonography. Cross-sectional (2-D) ultrasonography, although greatly enhancing the delineation of anatomic features of LAM and its spatial relationships, has drawbacks of its own:

1. Stop-action scanning is a cumbersome technique because of the need for gating with multiple complexes. For the display of beat-to-beat cardiac dynamics it is necessary to resort to the more intricate real-time scanning method.
2. Inordinate amplification degrades lateral resolution, predisposing to imprecise estimates of tumor dimensions.
3. Structures parallel to the ultrasonic beam create fuzzy echoes.
4. The ultrasonic window enlarges with cardiomegaly and shrinks with pulmonary emphysema.

Treatment

Survey of the literature discloses that the great majority of unoperated patients die within three years of the onset of symptoms.

The only effective and definitive treatment for LAM is surgical exeresis (Fig 5). This must be undertaken urgently when the diagnosis is made—not just to put a halt to continuing disability, but also to forfend the omnipresent threat of sudden death from

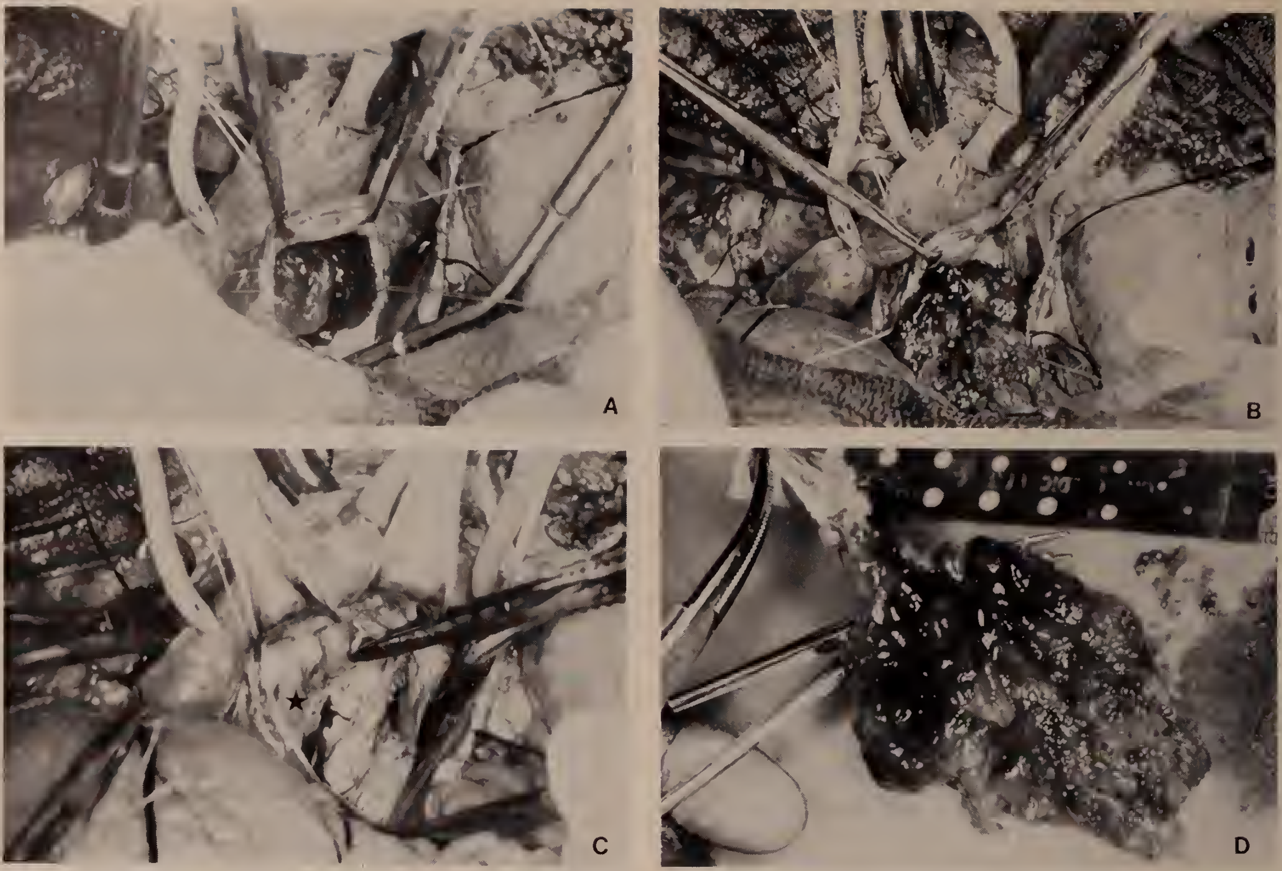

FIGURE 5. (A) Appearance of neoplasm through atriotomy. (B) Mass delivered outside heart. (C) Atrial cavity after ablation of LAM. Forceps points to septal defect subsequent to wide excision of tumor base. Mitral valve (star) is seen below. (D) Resected specimen. In the fresh state its gelatinous and friable consistency is readily evident.

embolization or from irrevocable cardiac arrest due to incarceration of LAM in the mitral orifice. The literature, in fact, reveals a dismayingly inordinate incidence of cerebral embolism or sudden death in patients with known LAMs awaiting scheduled surgery.

Postponement of operation is unwise even when LAM is infected because the risks inherent in the tumor exceed those entailed in doing surgery while bacteremia is present. The latter can be combated by massive doses of antibiotics, and is made more readily manageable by expeditious ablation of the intracardiac nidus of sepsis.

Factors that adversely affect surgical risk are: (1) advanced hemodynamic deterioration, with severe morphologic changes in the pulmonary vascular bed; (2) sepsis in LAM; (3) operation for recurrent tumor; and (4) previous cerebral embolism, because of possible bleeding in the infarcted or aneurysmal areas of the brain resulting from anticoagulation during extracorporeal circulation.

The surgical mortality rate has ebbed steadily during the past decade, and now averages 3%. Much of this statistical improvement has come from earlier operation, the general adoption of indispensable open cardiotomy methodology, and better postoperative support. Most of the deaths are related to intraoperative embolism and therefore should be largely preventable through application of the technical principles and tactics which have been detailed elsewhere.[4]

Attesting to the urgent indication for operating on LAM and the relative safety of surgery are two recently described cases of pregnant young women who underwent successful surgical intervention and later gave birth to healthy infants.[5,6]

There are still no totally satisfactory answers to the dilemmas posed by tumor recurrence and by the embolic sequel of aneurysm. In some series the former complication is nonexistent, but in others it ranges from 4% to 14% within three years of the initial operation. The cause for this discrepancy is enigmatic.

At one time a few authors argued that, since LAM usually does not penetrate beyond the elastic fibers of the endocardium, it was sufficient to cut the stalk flush with the septum, and then curet or fulgurate the area without practicing wide excision of the tumor base unless a broad attachment existed. The current policy of including wide and full-thickness resection of the septal base to prevent recurrence is favored by the majority of surgeons (Fig 6). The perplexing aspect of this question is that a fairly high percentage of recurrences either arise at the same site, irre-

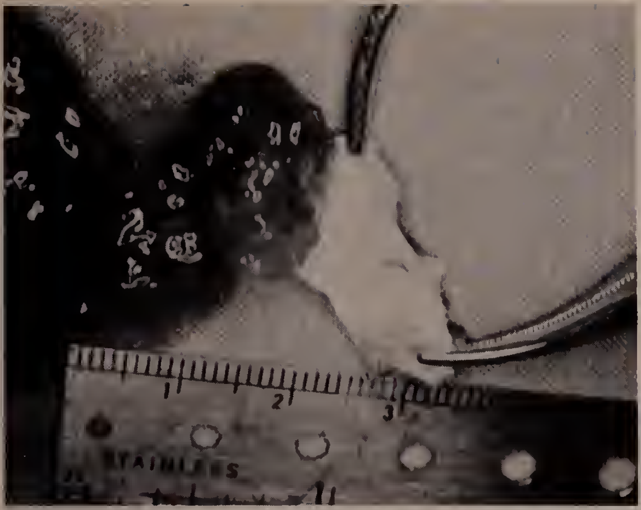

FIGURE 6. Demonstration of tumor base and its origin from atrial septum.

spective of the expanse of the first resection, or they develop elsewhere. It is often impossible in those situations to be certain about whether one is dealing with growth of: (1) an incompletely excised tumor; (2) a previously unrecognized tumor; (3) a hitherto dormant satellite; or (4) accidentally implanted bits of the primary tumor far from its original place.

Data about recurrent LAMs are sparse, but seem to indicate that:

1. Chances of recurrences are greater when more than a single tumor is present, whether unicameral or polycameral.
2. Extraseptal tumors are more likely to recur than septal tumors. They do so faster, often are multiple, and tend to be more invasive.
3. Recurrent tumors usually are sessile.
4. Reoperation on recurrent masses at extraseptal locations is less successful than on those at the septum.

The prognosis is influenced to an appreciable degree by the factor of precardiotomy embolism. Patients with emboli to large, accessible arteries usually do quite well after embolectomy and removal of the intracardiac fountainhead(s) of embolism. Those who have suffered showers of emboli to several organs generally fare poorly, even after extirpation of the instigator LAM. In between these extremes are patients in whom embolism has been to solitary but surgically inaccessible structures, such as the brain, and whose destiny accordingly depends in part on the behavior of the resultant infarct, or, if they survive, on that of subsequent aneurysm formation.

Far less common than local recurrences are so-called "metastases" to regions remote from the parent neoplasm. As has been discussed before, those are (unless misdiagnosed) in all likelihood really tumor emboli, not previously recognized, which have managed to continue growing in extracardiac locales. There is merit in attacking surgically, whenever feasible, such "metastases" after they are discovered.

The specter of intracardiac tumor recurrences and lack of knowledge about the natural history of myxomatous aneurysms and "metastases" make long-term postoperative follow-up of patients vitally important. Sometimes recurrences are heralded by renewed symptoms, heart murmurs, or abnormal laboratory findings, but their presence may be suspected sooner by echocardiography. Serial echocardiography therefore is an obligatory step in follow-up examination.

In some circumstances patient follow-up has to be especially frequent and attentive. Thus, periodic angiography is justifiable to observe what is happening to demonstrated cerebral or coronary myxomatous aneurysms. Particularly with regard to the former, in a patient who develops a stroke months or years after excision of a LAM, cerebral arteriography may be critical for determining whether this catastrophe is due to rupture of the established aneurysm, or, instead, to a bona fide fresh cerebral embolus from a recurrent intracardiac tumor.

Last, since LAM occasionally may be familial, any time that a child is discovered to have the tumor, one should endeavor to screen siblings and other close relatives by physical examination and echocardiography.

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Radiologic Problem of the Month

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Editor

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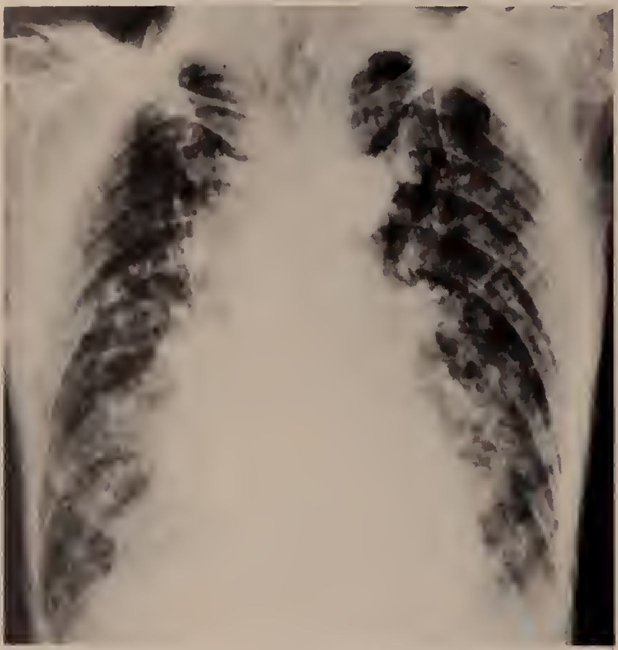
Diffuse Lung Infiltrates



A 72-year-old man reported progressive dyspnea in the previous few months. The patient also has mild lower urinary tract problems.

Elucidation

The posteroanterior view of the chest reveals the cardiovascular silhouette to be within normal limits for the patient's age (Fig). Bilateral, diffuse, interstitial type of infiltrates are present, confluent at the perihilar and basal regions. A small pleural effusion is present blunting the left costophrenic angle. In the differential diagnosis, there are several considerations. These include congestive heart failure, chronic interstitial pneumonitis, collagen disorders, broncho-alveolar cell carcinoma, and lymphangitic carcinomatosis. Although congestive heart failure may be present without cardiomegaly, the upper-lobe veins are generally distended and in the absence of this finding, congestive heart failure is a remote possibility. Since interstitial pneumonitides are chronic and since the patient presented for the first time, the usual interstitial pneumonitis or a collagen disorder is unlikely. Lymphangitic carcinomatosis is a strong consideration at this age. Carcinoma of the breast (more common in women), lung, gastrointestinal tract, thyroid, and prostate are some of the primary cancers that lead to lymphangitic metastasis.[1] When the patient's history of mild lower urinary tract problems is taken into consideration, this radiologic appearance of the chest should represent lymphangitic carcinomatosis from adenocarcinoma of the prostate.

Prostate carcinoma is regarded as a disease of old age, with the highest incidence in the seventh decade (from 70 to 79 years). Osteoblastic type of bone metastasis is more commonly observed than metastasis to lung. About 6% of cases of carcinoma of the prostate spread to the lung.[2] Generally, the lymphangitic type of distribution is encountered although calcific and noncalcific spherical nodular patterns are noted on occasion.[3]

Pathologically, it has been proved beyond doubt that lymphangitic metastatic spread results from tumor microemboli to the pulmonary arterioles with subsequent invasion of the interstitium and lymphatics, and not through retrograde extension from enlarged lymph nodes. In fact, in many instances of lymphangitic metastasis, gross hilar lymph-node invasion is rare irrespective of the primary site of carcinoma.[4] There is no clear-cut explanation as to why some tumors spread into pulmonary interstitium and lymphatics, while others spread through the same arterioles and produce spherical nodules in the lung.

Radiologically, in early cases, the lungs may look normal.[4,5] Radionuclide study may help by outlining the bronchopulmonary segments, ie, contour mapping of the segments, and this is distinguishable from the usual pulmonary emboli. The classic pattern of lymphangitic metastasis includes increased, coarse, irregular and reticular striations, more pronounced in the lower two thirds of lungs. Hilar lymphadenopathy is not identified radiologically. Pleural effusion may be present but not a significant amount. In instances of bronchogenic carcinoma, the lymphangitic spread may be localized to a lobe or lung and is unilateral. Bronchoalveolar cell carcinoma may occasionally simulate lymphangitic metastasis, although the appearance in this entity is that of multiple patches or nodules.

Although the prognosis is grave in the presence of lymphangitic metastasis, the patients may live up to six years and the progress of the spread is averted with combination of surgery, interstitial irradiation, and chemotherapy.

Diagnosis

Lymphohematogenous metastasis to lungs from adenocarcinoma of the prostate

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Electrocardiograms of the Month

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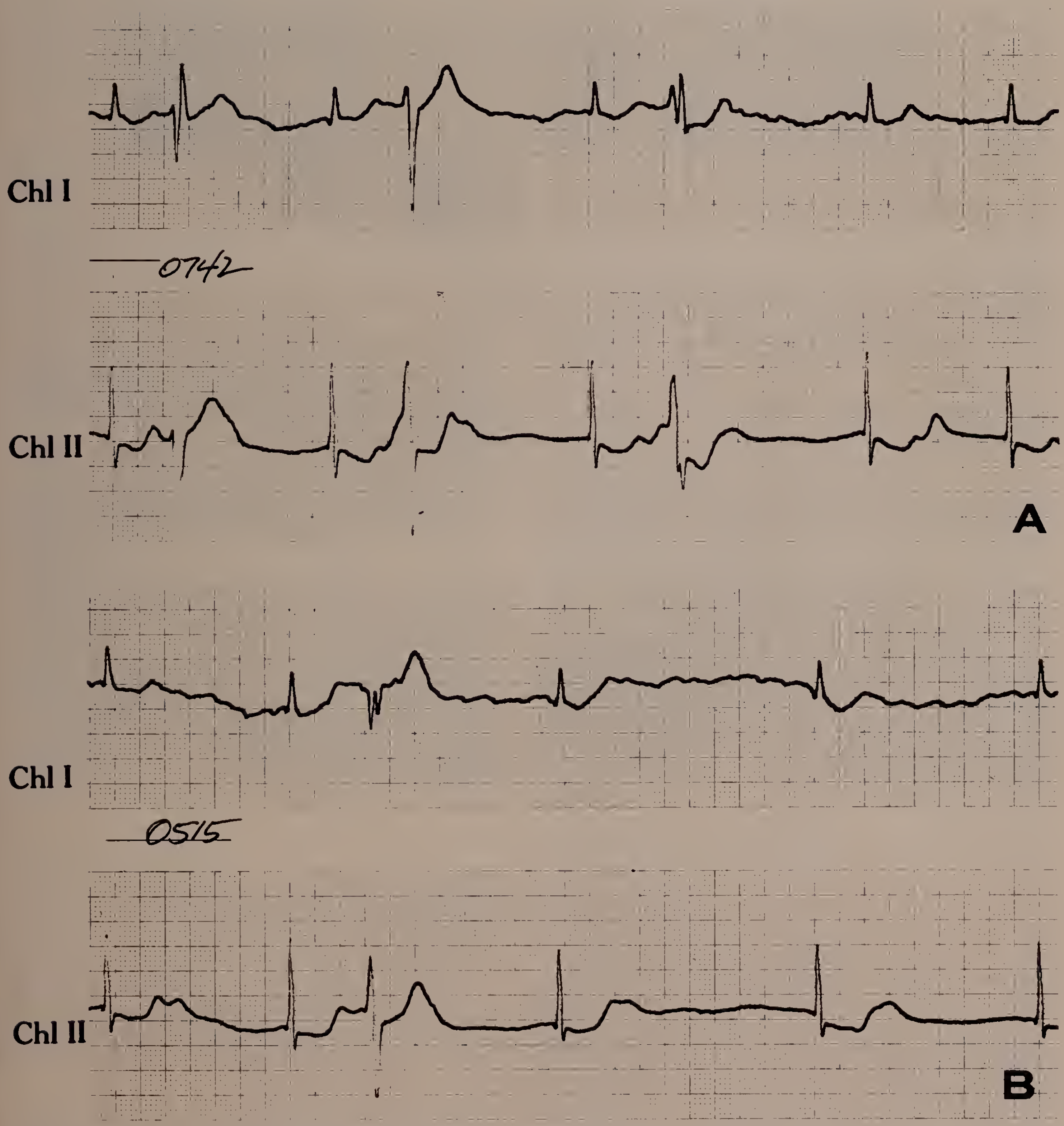
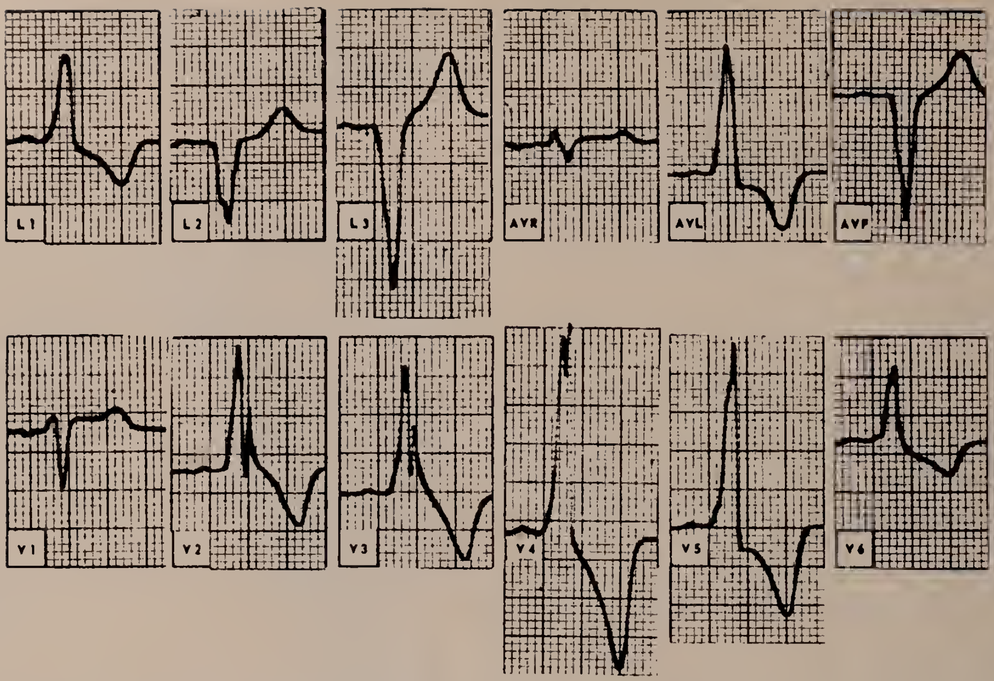


QUESTION 349. Representative strips from a Holter monitor recording obtained from a 74-year-old woman with advanced rheumatic heart disease receiving digoxin. What is the interpretation?



QUESTION 350. A 68-year-old woman with a history of previous myocardial infarction was admitted in congestive heart failure. The electrocardiogram was obtained on admission.

Electro-
cardiograms
of the Month

ELUCIDATION

Answer 349. The basic rhythm is atrial fibrillation; the ventricular rate is irregular. Multifocal ventricular premature depolarizations are present coupled to normally conducted complexes. The coupling interval is slightly variable.

In strip B the ventricular rate slows markedly with an interval of up to 1.9 sec between ventricular complexes. This interval is similar to the interval between the normally conducted QRS complexes when the ventricular premature depolarizations are present (see strip A).

The slowing of the ventricular rate in this instance may be due to concealed ventricular premature depolarizations which block the A-V node but are not conducted to the ventricle.

Answer 350. The rhythm is regular sinus. The QRS is widened to 0.14 sec. Q waves are absent in lead I, aV_L and V_2 to V_6 with delay in the onset of the peak of the R wave. The T waves are deeply inverted and the ST depressed in leads with upright QRS complexes. These findings indicate left bundle branch block. The ST and T wave abnormalities in the presence of left bundle branch block do not necessarily indicate myocardial ischemia or infarction.

A QS with positive T wave is present in II, III, and aV_F. These changes may represent either marked left axis deviation in left bundle branch block or the residue of a previous inferior wall myocardial infarction.

Whereto the Medical Staff

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Past President of the Medical Society of the State of New York; Past Member of the House of Delegates of the American Medical Association

The American hospital is now in the throes of evolutionary change that, to the casual observer and indeed to the uninspired practitioner, may well be not at all evident.

Historically, the hospital was originally the place for the poor to die. Within our memory it became next a place in which to be operated, and, finally, a place to go to survive.

Within the last two decades the tremendous technologic advances have made the hospital a prime point of referral not only for therapy but also for day-to-day diagnosis and posttherapy control and follow-up. Each private physician now uses the hospital support services in the ambulatory care of his patients. He looks more and more to the institution to meet the needs of his patients that he cannot supply through his own efforts within the confines of his office.

This trend will continue to a greater degree as new advances with enormous costs and of vital significance make their appearance on the diagnostic and therapeutic scene. The private sector, individually or collectively, will never be in a position to afford these newer advances and will continue to look to the regional institution for these services.

This places the hospital in a growing role in the delivery of medical care. This growing role demands our closest scrutiny.

Structure of hospital

The American hospital, even with its expanding influence within the community, still consists of the same conceptual triumvirate power structures that it always had, that is, the governing body, the administration, and the medical staff.

The governing board traditionally has been composed of the wealthy with a hope for their benevolence, along with the successful business leaders of the community, for their administrative knowledge and regional influence, and last, with a very few others for their particular skills and abilities. All were oriented to the institutional needs and its management as espoused by the administrator with the result that they looked on him as the right hand of God, this of course frequently being in violation of their fiduciary responsibility. Their primary function was a 100 percent loyalty to the institution, which at times was at the expense of the community. This was closely related to their fiduciary responsibility. And last, they had to select the administrator to manage the organization in a satisfactory manner.

Hospital administrators, too, come from a wide variety of backgrounds, so much so that it has been almost impossible to describe a typical hospital CEO (chief executive officer). Widely divergent training such as accounting, law, construction and building, psychology, personnel management, and salesmanship were not at all unusual in the background of a successful CEO.

Quite in contrast is the medical staff which is composed of a very homogeneous prototype characterized by the medical school experience—a narrow area of training but with great depth—permeated with a dedicated philosophy of curing disease, come hell or high water.

Is it any wonder that the institution with the so very different power structures was often the scene of conflict and adversary action?

The governing board, by law responsible for all hospital activity including patient care, willingly and perhaps of necessity abdicated these functions in reality to the administrator.

The administrator, who had all the stresses of running this crazy organization, found that his income and indeed many of his expenses were created by the medical staff, a group of independent and free-thinking individuals over whom he had little control and a rather insignificant influence. This was a fertile field for conflict.

Growing stresses

Whatever the formula for conflict in the past, it is now being accelerated by the growing stresses on the institution, namely, inadequate financial reimbursement, markedly increasing costs because of inflation and technologic advances, personnel demands for a greater number of highly qualified technicians dispersed in a medium of growing unionization, a growing demand for service by the community, and an era of consumerism in which the public is demanding and looking at the intramural decisions of the institution and the impact thereof on the community. An increasing competition between regional institutions for the limited health dollar has reduced hospital planning to planning for survival, this being much more acute in areas where there is a surplus of hospital beds.

---

* Currently Chairman of the Advisory Committee on the Hospital Accreditation Program of the Joint Commission for Accreditation of Hospitals and completing a three-year term on the Council of Physicians in the American Hospital Association.

The results of these stresses are many.

First of all, the trustees are becoming much more aware of their liability in serving on a hospital board and as a result they are becoming much more involved in the operation of the institution. They are also becoming more knowledgable in the activities of the medical staff. Nationally, there has been in existence for some two years an organization of governing boards for American hospitals. Indeed, for the past year a new regional and similar organization has existed in New York State. Both these bodies were primarily organized for political action but it is not surprising that they are now beginning to assume educational orientation for trustee leadership.

Hospital administrators also have a national organization that serves them as a source of referral for both information, education, and coordinated action. The typical CEO today is far more sophisticated than in the past. He frequently has advanced degrees in hospital management. We now find him creating external corporate structures and foundations to add stability and security to the institution.

With the increased sophistication in hospital management together with the various strategic planning maneuvers plus a more informed and participatory board of trustees, the medical staff is finding its previous stature questioned, examined, and put to the test of change initiated from without.

Need for staff leadership

If the medical staff is to continue as a significant power structure in the institution, then physicians must recognize that staff leadership must be far more sophisticated, knowledgeable, and willing to participate in all aspects of function, in the institution. There can be no other way in which a healthy and happy hospital can function. Physicians must be willing to admit that at the present time a vacuum exists in the area of medical staff leadership. If organized medicine fails to recognize and satisfactorily fill this vacuum, then some one else will do it. There was a very similar situation with the growth of the specialty societies right after World War II.

Now there are some reassuring sources of comfort to physicians in these times of trouble.

For example, have you ever heard a hospital administrator make the statement that his greatest asset was his medical staff? Well, I have and it was like a breath of fresh air.

There are new and educated voices among administrators out there who want their medical staffs to be happy and to be successful. Not only do they want that to happen, but they will go out of their way to see that it happens. They will do this to build loyalty to their institution. And a loyal and successful medical staff will make an institution survive and thrive.

These same voices are also saying that they want the medical staff leadership to become involved in all aspects of the institutional decision-making process, but—and this is a big but—so far the medical staff leadership has not been knowledgeable enough to make a valued and constructive contribution at the top level.

This is the vacuum that I mentioned earlier and it must be addressed if physicians are to be involved in the continuing evolution of the hospital.

The AHA (American Hospital Association) recognizes this vacuum and has sought to address it by restructuring its Council on Physicians to devote a major portion of their activity to the hospital medical staff. For some eight years the AHA has issued a monthly journal entitled *The Hospital Medical Staff*. The long-range planners at the AHA have suggested that a national organization of medical staff leaders be founded. The AHA has also instituted a bimonthly news letter called *Medical Staff Forum* to address the issues of medical staff problems.

Belatedly but competently, the AMA (American Medical Association) has had a task force dealing with this issue whose report is not available at the time of this writing. I do know that the subject is on the agenda of the Leadership Conference to be held in Chicago in February.

Be that as it may, the vacuum will be filled. It is most important that organized medicine address these issues.

There is another and perhaps even more vital aspect of the medical staff issue. The practitioner is now looking to his hospital more and more because that is where the action is. His needs in practice and education no longer find their solution with the county medical society but will be addressed through the medical staff organization. Therefore, if organized medicine is to speak for him and act for him, it must establish a firm and active two-way relationship with the regional hospital medical staffs with adequate cross-representation. This is already in existence in one state where hospital medical staffs send delegates to the state society.

For education purposes, perhaps state medical societies should set up a foundation for medical staff leadership. Perhaps there should be a section on hospital medical staffs within the AMA and the respective state societies. Perhaps medical staffs should have voice and vote within all the councils of organized medicine. Perhaps there should be a federation of hospital medical staffs. Perhaps a medical staff should have a direct membership in state societies or in the AMA.

Summary

In summary, let me say the following:

1. Hospitals will continue to expand their role in the delivery of medical care.

2. The stresses now on individual hospitals will compel them to try new and innovative techniques for survival.

3. With proper cooperation, strategic hospital planning can be compatible with a healthy and happy medical staff.

4. If the medical staff is to continue to function in a dynamic and positive way, its leadership must be markedly upgraded and willing to devote time and energy in the decision-making process.

5. The education of medical staff leadership should be offered by organized medicine.

6. Medical staffs in the United States should be an integral part of the Federation of Organized Medicine with voice and vote in the councils at all levels.

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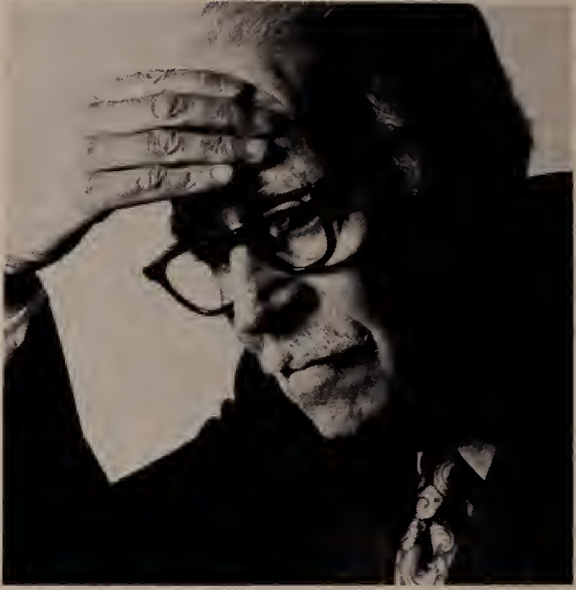

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PRECAUTIONS: Use with caution in patients with glaucoma. Tolerance to this drug, and cross-tolerance to other nitrates and nitrites may occur.

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache may commonly occur, and may be both severe and persistent. Transient dizziness and weakness, in addition to other signs of cerebral ischemia associated with postural hypotension may occasionally be seen. ISO-BID can act as a physiological antagonist to norepinephrine, histamine, acetylcholine and many other medications. An occasional patient may show marked sensitivity to the hypotensive effects of nitrite; severe responses (nausea, vomiting, weakness, restlessness, pallor, excessive sweating and collapse) can occur, even with the usual therapeutic dosage; alcohol may enhance this effect. A drug rash and/or exfoliative dermatitis is occasionally seen.

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Pharmacotherapy of Depressions

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Drugs with a specific antidepressant action were first developed in the 1950s, and until quite recently could be categorized as belonging to one or the other of two classes: the inhibitors of the enzyme monoamine oxidase (MAOI) and the tricyclic antidepressants (TCA). Historically, the MAOI preceded the TCA, but their use is restricted by concerns about toxicity and interactions with certain medications, foods, and beverages. The TCA, which in controlled trials have proved consistently effective in 60% to 70% of depressed patients, constitute a more important, extensively used, and versatile group of drugs. Over the years many new TCA entered the market alongside the prototype drugs imipramine and amitriptyline hydrochlorides, but they have tended to be chemical analogs of existing compounds rather than completely original substances. The Table lists the nine TCA and the three MAOI available in the United States.

Recently it has become necessary to consider a third group of antidepressants which differ from both the MAOI and the TCA. These "second-generation" antidepressants include bupropion, mianserin, trazodone, zimelidine, and maprotiline, and nomifensine; only maprotiline is currently marketed in this country, and the others are investigational drugs.

Clinical pharmacology

Although little is known about MAOI pharmacokinetics, information about TCA distribution and metabolic fate is more extensive.[1] The disposition of the TCA is summarized as follows: rapidly absorbed after ingestion, these drugs are extensively metabolized by the liver; certain metabolites formed during this process such as desipramine and nortriptyline, derived respectively from imipramine and amitriptyline, retain clinical activity. Wide variations in TCA blood levels (up to 36-fold) are found in different persons taking the same drug dose, and the tissue concentrations of these highly lipid-soluble substances are ten to 20 times greater than in the blood. The biologic half-life ($t^1/_2$) of the TCA is a critical parameter since it markedly influences the duration of drug action and the degree of drug accumulation in the body on repetitive dosing. The $t^1/_2$ varies from approximately 15 hours for imipramine and amitriptyline to approximately 70 hours for protriptyline. The final step in TCA metabolism is the formation of water-soluble compounds excreted in the urine.

Indications

The estimated lifetime expectancy of depression in the general population is 10% to 20%, making this illness a major public health problem. Most reports of antidepressant pharmacotherapy refer to hospitalized patients treated by psychiatrists, but a much larger proportion of depressive morbidity is represented by less severe forms. Family physicians have an important role in the pharmacotherapy of depressions, since they are likely to see patients early in the course of the disorder and often remain in charge of the treatment. They are particularly apt to see depressed patients who have misleading somatic symptoms masking an underlying affective disturbance.[2] Antidepressant pharmacotherapy is indicated when a depression has lasted more than one or two weeks, customary family, social, and occupational functioning is impaired, and relief has not been obtained with pharmacotherapy or nonspecific pharmacologic treatment. Environmental stress or neurotic personality traits associated with a depression do not preclude pharmacotherapy. When used jointly, antidepressant pharmacotherapy and psychotherapy enhance each other's effectiveness and regardless of whether or not formal psychotherapy is used, antidepressants are used to their best advantage in a supportive physician-patient relationship.

Optimum Dosage Range (Adults)

Drug	Dosage—mg/24 h
Tricyclics	
Amitriptyline (Elavil)	75–150
Amoxapine (Asendin)	150–300
Desipramine (Norpramin)	75–150
Doxepin (Sinequan)	75–200
Imipramine (Tofranil)	75–200
Nortriptyline (Aventyl)	30–100
Protriptyline (Triptil)	15–30
Trimipramine (Surmontil)	75–150
Tetracyclic	
Maprotiline (Ludiomil)	75–100
MAOI	
Isocarboxazid (Marplan)	10–30
Phenelzine (Nardil)	15–75
Tranylcypromine (Parnate)	20–30

Presented at the Continuing Medical Education Assembly of the Medical Society of the State of New York, Niagara Falls, New York, Section on Family and General Practice, Sunday, June 28, 1981.

Selecting an antidepressant

The decision to use a particular antidepressant is determined by physician and patient variables as well as by the intrinsic properties of the drug. Most often the initial choice falls on a TCA. None of these drugs shows a clear overall superiority in equivalent doses, and in practice it is often difficult to evaluate the claims, frequent among which are rapid onset of action and better tolerance, which accompany the introduction of new members of this drug class. However, each TCA has a characteristic pharmacologic profile, and individual patients exhibit variability in the response to and tolerance of different TCA.

An important physician variable influencing the selection of a particular antidepressant is experience with that drug. It is better to become thoroughly familiar with a small number of drugs than to try many sporadically. A useful repertory might include either imipramine or amitriptyline, one of the newer non-MAOI antidepressants, and phenelzine. The latter, an MAOI, is relatively less dangerous than other MAOI and may be effective in TCA-resistant patients. Although at this time none of the second-generation antidepressants would appear to qualify as a primary choice, as a group they have a weaker anticholinergic action and are less toxic on overdose than are the first-generation drugs.[3] Patient variables include age, cardiovascular status, and personal or family history of response to a particular agent. In case of previous favorable response, the same drug should be used again. The older drugs prescribed by the generic name and at the highest dose formulation compatible with the dosage schedule constitute the least expensive choice. Since elderly patients are at greater risk of toxicity, medical evaluation should be more extensive than in younger healthy individuals and should include an examination of the cardiovascular system, the eyes, and, in men, the prostate; an ECG is advisable in individuals over 40 years of age. Use of TCA for the treatment of depression in children below the age of 12 is not recommended. However, imipramine at a dose of 25 to 75 mg daily and other TCA have been used for enuresis and school phobia in young children.

In individual patients diagnostic labels such as "reactive," "endogenous," or "masked," qualifying a depression, offer only limited guidance in selecting a particular antidepressant. However, statistically the "endogenous" symptom cluster is predictive of a better response to the TCA than to other drugs. Psychotic depressions, characterized by agitation, delusions, and hallucinations, respond more favorably when an antipsychotic is associated with a TCA, and in these cases electric convulsive therapy (ECT) is a useful alternative to pharmacotherapy. The MAOI have been reported to be particulary beneficial in neurotic or atypical depressions.

Certain metabolic tests may predict response to a particular antidepressant, or assist in confirming the diagnosis of a depressive subtype particularly responsive to pharmacotherapy (endogenous depression). Thus it is reported that high or low urinary levels of MHPG, a norepinephrine metabolite, discriminate effectively between imipramine and amitriptyline responders.[4] Recently the dexamethasone suppression test has been validated as a biologic marker of endogenous depression, differentiating this disorder from nonendogenous (neurotic, reactive, or characteriologic) depressions.[5] These tests provide some tools for greater precision in the prescription of antidepressants, but their interpretation is quite complex and they are best reserved for use in settings with expertise in the area.

The antidepressants imipramine and amitriptyline, the prototype TCA, are the standard against which the others are measured. Desipramine and nortriptyline, respectively their active metabolites, are claimed to act more rapidly, but this is not always observed. Among the TCA, amitriptyline is the strongest and desipramine the weakest anticholinergic, with the others intermediate. Desipramine and protriptyline have the strongest stimulant action, and the latter is further characterized by an extended half-life and a tendency to accumulation, hence its use at comparatively low doses. Experimentally, doxepin interferes less with cardiac conduction,[6] but this drug is probably not quite as potent an antidepressant as are the standard TCA. Amoxapine, chemically analogous to the antipsychotic loxapine, is the most recently introduced TCA; maprotiline, a bridged tricyclic or tetracyclic, may be considered a "second generation" antidepressant. Clomipramine hydrochloride, an imipramine analog available in Canada, has an interesting effect on obsessive-compulsive disorders, apparently independent of its antidepressant action.[7]

The MAOI, which are considered second-line rather than first-line antidepressants, should be used in known MAOI-responders and are worthy of trial in TCA-resistant patients. In general, the toxicity and tendency to dangerous interactions of the MAOI have been overstated, and a reevaluation of this drug class appears timely.

Clinical use

Typically, treatment for a healthy adult might be initiated with a daily starting dose of imipramine, 50 to 75 mg (or equivalent), prescribed 25 mg two or three times a day. Increments of 25 or 50 mg every few days should then be ordered until a favorable response or a daily dose of 150 to 200 mg is attained. Dose adjustment takes place according to tolerance, incidence and severity of side effects, and response. Daily doses higher than 200 mg imipramine (or equivalent) are associated with an increased risk of toxicity and should be reserved for carefully supervised and physically healthy patients. The timing of doses is important. To diminish the anticholinergic and cardiotoxic action of TCA, divided doses should be given when initiating treatment or when large doses are required. In healthy subjects and when the dose is stabilized, antidepressants should be given in a single evening dose, since this method not only proves more convenient and exploits any TCA sedative effect but it also significantly increases compliance. Sustained-release preparations usually offer no particular advantage to offset their higher cost since the half-lives of the TCA are generally sufficiently long so that therapeutic levels can be maintained with a once-daily schedule. Although the parenteral route is rarely employed in this country, the use of TCA by infusion has attracted considerable interest in Europe.[8]

Side effects

The margin between the therapeutic and toxic doses of the TCA is limited, imposing a high degree of caution in using these drugs. The most common TCA side effects are extensions of their pharmacologic activities. The anticholinergic action is often manifestesd by dry mouth, sweating, and impaired accommodation; these symptoms are inconvenient rather than dangerous, and some degree of tolerance usually develops. More serious anticholinergic effects include the induction of glaucoma and paralytic ileus; men with prostatic hypertrophy are predisposed to urinary retention. At therapeutic doses in healthy subjects, TCA usually do not have serious effects on pulse rate, cardiac rhythm, and conduction, but they do tend to provoke orthostatic hypotension.[9] In overdose and in sensitive individuals TCA cardiotoxicity is attributed to their anticholinergic and quinidine-like effects. In patients at risk for myocardial infarction or stroke, TCA should be used with great caution; ECT modified by general anesthesia and muscle relaxation may be a safer alternative. According to the severity of intoxication, central nervous system toxicity may be manifested by symptoms ranging from restlessness and insomnia to a toxic psychosis resembling atropine poisoning. Physostigmine, 1 to 2 mg intramuscularly or intravenously, dramatically but transiently reverses TCA intoxication.

Overdose. The TCA are an increasingly common choice for overdose and the hazard is augmented by their use in depressed patients at high risk of suicide. Acute doses of several hundred milligrams of imipramine (or equivalent) produce severe toxicity in adults as well as in children; acute doses greater than 1,000 mg are invariably very toxic and acute doses above 2,000 mg are often fatal. When antidepressants are used, the suicidal risk should always be evaluated, and if this is high, or if with more moderate risk supervision by a reliable family member is unavailable, hospitalization is desirable.

Pregnancy and lactation. Since the TCA cross the placental barrier, the risk-benefit ratio of using these drugs in pregnancy should be weighed carefully. TCA are excreted in milk and although drug levels in the mother's milk and the infant's serum are minute, the cessation of breast feeding is recommended.

Drug interaction

Whenever possible an antidepressant should be used alone to diminish the chemical burden for the patient and to facilitate the evaluation of the drug's therapeutic action. The potential toxic interactions of TCA and MAOI ordinarily inhibit this drug association. However, in particularly refractory patients MAOI have been used in combination with TCA. This drug combination should of course be reserved for carefully monitored patients under specialist care; in the event imipramine, which increases the nonepinephrine pool, should be avoided, the TCA should be prescribed first and the MAOI added subsequently at especially low initial doses, which may be gradually increased.[10] In epileptic patients increased doses of anticonvulsants are required since the TCA lower the seizure threshold. The treatment of depression and hypertension in the same patient poses an especially serious problem. Antihypertensive medications like reserpine and alphamephyldopa provoke depression in some patients; the TCA antagonize the antihypertensive action of guanethidine by blocking its reuptake into postganglionic sympathetic nerve fibers; diuretics, beta blockers, and smooth muscle relaxants may be used somewhat more freely. Phenothiazines increase TCA blood levels by inhibiting TCA metabolism, while barbiturates stimulate TCA-metabolizing enzymes and consequently lower TCA blood levels. If hypnotic or antianxiety agents are required, benzodiazepines should be used since they do not interact metabolically with TCA.

Therapeutic monitoring of TCA

Interest in the clinical usefulness of TCA plasma levels arose in the late 1960s with reports of wide variations of level in different individuals on an identical dose of antidepressant. These observations suggested that the plasma level is more closely related to TCA clinical effects than is the dosage, and that plasma level variations could account for much of the variance in treatment outcome. Many studies were conducted to define the optimal plasma concentration ranges for the various TCA. A "therapeutic window" was delineated for nortriptyline, fixing a range of plasma levels with sharp upper and lower boundaries (50 to 150 ng/mL) outside of which treatment outcomes deteriorate.[11] Optimal ranges established for imipramine (150 to 250 ng/mL), amitriptyline (100 to 250 ng/mL), and other TCA are less sharply defined than for nortriptyline, but are also associated with better outcomes than are concentrations outside the limits.[12] It should be noted that imipramine and amitriptyline blood levels customarily refer to the total of parent drug and respective active metabolite, ie, desipramine or nortriptyline.

Recent advances in technique and instrumentation enable clinical chemistry laboratories capable of work of high standard to offer assays of TCA in biologic fluids.[13] However, the interpretation of blood-level data is rather complex and these tests should be used selectively rather than routinely given their high cost ($20 to $30 per analysis). TCA blood level monitoring is useful for the following purposes: (1) to adjust drug doses to attain therapeutic concentrations, (2) to assess treatment failure avoiding premature or unjustified drug switching, (3) to diagnose and evaluate toxicity and overdose, and (4) to identify compliance problems.[14]

Duration of treatment

A sufficient duration of pharmacotherapy is important to maintain improvement and prevent relapse. The ideal duration of treatment is difficult to estimate because on the one hand many depressions tend to improve spontaneously and on the other the natural course of depressive episodes is very variable. Although some patients evince subjective signs of improvement within the first week of pharmacotherapy, a delay of one to three weeks is more typical before the onset of antidepressant effect is noted. If no improvement is evident after three or four weeks of treatment with a therapeutic dose (or therapeutic blood levels) of a given antidepressant, persistence is usually fruitless and other options usually within the specialist's purview should be considered.

After initial symptom remission with a TCA, treatment should be continued at the full therapeutic dose for at least three months and the dose should then be decreased, gradually observing for symptom breakthrough. With severe depression or frequent depressive recurrences, treatment should be continued for at least one year. TCA have been administered safely for several years for the prophylaxis of recurrent depression, but the long-term effects of indefinitely extended TCA treatment have not been established. Long-term lithium prophylaxis has also been reported to be effective in recurrent depressions.[15]

Summary

The effective use of antidepressants requires considerable judgment, knowledge, and skill. A "second generation" of antidepressants is about to take its place alongside the "first generation" tricyclics and MAOI. Since many antidepressants are available, and none is clearly superior, it is better for individual physicians to become thoroughly familiar with several of these agents than to experiment with many. A particular drug should be selected on the basis of the physician's experience with that drug, its pharmacologic profile, and the patient's personal or family history of response to that drug. Antidepressants have a low safety margin; elderly and infirm patients are especially at risk for the cardiac, anticholinergic, and CNS side effects. Suicide risk must always be evaluated. A fair trial of treatment requires a full therapeutic dose (or therapeutic blood levels) for three of four weeks. Treatment should be prolonged sufficiently to prevent relapse; long-term treatment with TCA or lithium is indicated in severe or recurrent depressions.

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Asthma in Children

Evaluation and treatment

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Asthma is defined as generalized recurrent airflow obstruction associated with wheezing and often with dyspnea. There is variability in severity, and the whole process may be documented by pulmonary function tests. It is a very important condition, occurring in 4% of the population.[1]

One of the outstanding characteristics of asthma is irritable bronchi. The asthma patient's airways are readily irritated by a great many factors. This makes him very different from the nonasthmatic with so-called healthy airways, which may be irritated by the same substances but are much less affected by them. According to the threshold concept, there are multiple factors acting together that, at a certain point, may make a patient wheeze (Fig 1). Many patients with acutely irritable airways are frequently near their threshold and need more intensive care than those who are not. Other patients, who have only moderately or mildly irritable airways, are usually a long way from their wheezing threshold. The object of treatment is to raise the patient's threshold so high that he does not wheeze.

Many factors can lower the asthmatic's threshold. These include allergens, such as inhalants, epidermals, pollens, and molds, and viral infections, exercise, emotion, pollution, strong odors, cold air, and temperature and humidity changes. Allergy as a cause of bronchospasm is much more common in children than adults. Bronchial reactivity to at least one allergen can be detected in 98% of patients who acquire asthma between birth and ten years of age, but in patients who acquire asthma later, the incidence of demonstrable allergens producing bronchospasm becomes progressively less with increasing age of onset.[2] Consequently, one must pay more attention to allergens when treating children than when treating adults with asthma.

Pathophysiology

The pathophysiology of asthma is very complicated. Hogg and his co-workers at the University of British Columbia have demonstrated the importance of allergens in asthma pathophysiology.[3] They challenged *Ascaris*-sensitive Rhesus monkeys with antigen and noted an increased breathing frequency within seconds, probably as a result of a reflex mechanism through the irritant receptors. More than a minute later, bronchoconstriction occurred; this response appeared to be determined by the number of exposed mast cells either in the bronchial lumen or in the epithelium superficial to the tight junction. Although the histamine released from these mast cells was unlikely to be able to produce the bronchoconstriction itself, these authors found that it could allow the passage of proteins with large molecular weight into the bronchial wall. Thus, the antigen penetrating the bronchial wall reached the site of the largest number of mast cells and, with mediator release, resulted in bronchoconstriction. Hogg and colleagues showed further that if they challenged the animals with subthreshold doses of tritium-labeled histamine, prior antigen challenge markedly increased response to histamine in association with more rapid appearance in the blood, indicating increased permeability of the bronchial wall after antigen challenge.

There are also many nonallergic factors that can produce bronchospasm. For example, sulfur dioxide in a concentration of 0.03 to 0.06 ppm can cause bronchospasm in asthmatics, but much higher concentrations (possibly 10 to 15 ppm) are required to cause a similar effect in nonasthmatics.

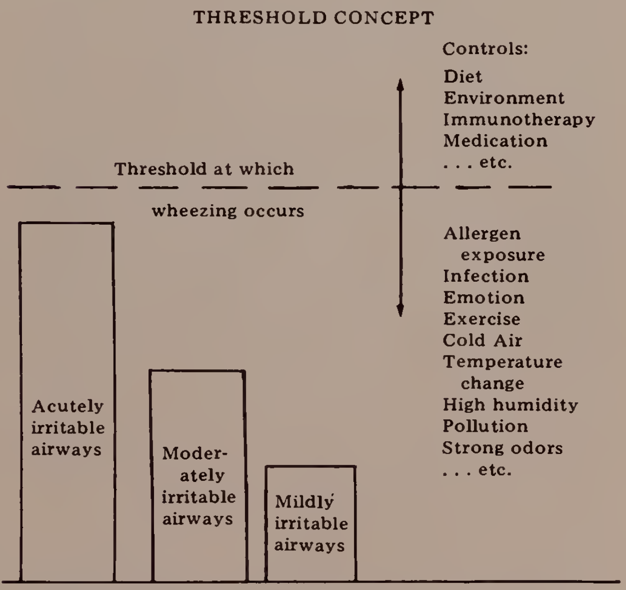

FIGURE 1. Multiple factors that affect irritable bronchi.

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The pathophysiology of asthma from different causes is variable. For example, in exercise-induced asthma, respiratory heat loss is a key factor in initial bronchoconstriction.[4] However, the cause of continuing bronchoconstriction after exercise is over is unknown; currently it is thought that the catecholamine levels fall as soon as the patient stops exercising. The pathophysiology of aspirin-induced asthma is different again.[5] Aspirin and related compounds inhibit the cyclooxygenase metabolic pathway of the prostaglandins, leading to excess production of the leukotrienes (previously called SRS-A), which are very powerful bronchoconstrictors.

Treatment

When I began treating asthma 30 years ago, the diagnosis and treatment were relatively easy. An allergy history was taken, the patient was given a physical examination, and skin testing was done. An allergy-free environment was then prescribed, along with the available asthma medications. If there were important allergens that could not be avoided, the patient was put on immunotherapy.

Today, with our increased knowledge of asthma, we know that the approach to treatment 30 years ago was inappropriate. Unfortunately, another equally inappropriate approach has been taken during the past 10 to 15 years, in which one must obtain a history of wheezing that fits the criteria of the definition stated earlier. The patient then has a physical examination and pulmonary function tests to confirm the history and physical findings. Following these, the patient is given asthma medications in an attempt to control his wheezing. This, too, is an inadequate approach to asthma treatment.

Treatment based on current knowledge requires a complete allergy and nonallergy type of history and physical examination. Further tests should be done as indicated, for example, chest and sinus x-rays, sweat chlorides, quantitative immunoglobulins, pulmonary function tests, and any other procedure required to confirm the diagnosis. Many patients, depending on their history, need skin testing. Relatively few need dietary restrictions; although food may be a component in asthma, this is not usually the case. Directions for controlling the environment are necessary. It is not enough simply to recommend a dust-free room. The patient's whole life-style must be considered, and in the case of teenagers, it may be necessary to suggest occupations that can protect them from undue exposure to precipitating factors of their asthma. Asthma medications are also extremely important. In some cases, immunotherapy is indicated. Adequate follow-up of the patient is essential, as is his education.

The role of drugs

I like to approach medications in asthma from the point of view of the pharmacologic pathways along which they work (Fig 2). If we think of stimulation of adenyl cyclase causing the breakdown of adenosine-triphosphate to form cyclic 3′5′ adenosine monophosphate (AMP) and then consider that the production of cyclic 3′5′ AMP causes smooth muscle relaxation, but cyclic 3′5′ AMP is itself broken down, and this breakdown is enhanced by phosphodiesterase, then we have only to add that cyclic 3′5′ AMP inhibits mediator release and that the mediators cause the opposite of smooth relaxation, ie, bronchoconstriction (Fig 2, dotted line). Antigen-antibody reactions can cause mediator release. Other factors already mentioned, such as emotion and exercise, can cause the opposite of smooth muscle relaxation, and then the parasympathetic nervous system, acting through cyclic guanosine monophosphate (GMP), also produces mediator release. The drugs can then be fitted into this pattern: the theophylline compounds, which act partly by inhibiting phosphodiesterase but have other methods of action, the beta agonists (eg, isoproterenol or the now more commonly used metaproterenol), the steroids (chiefly those administered by inhalation), and

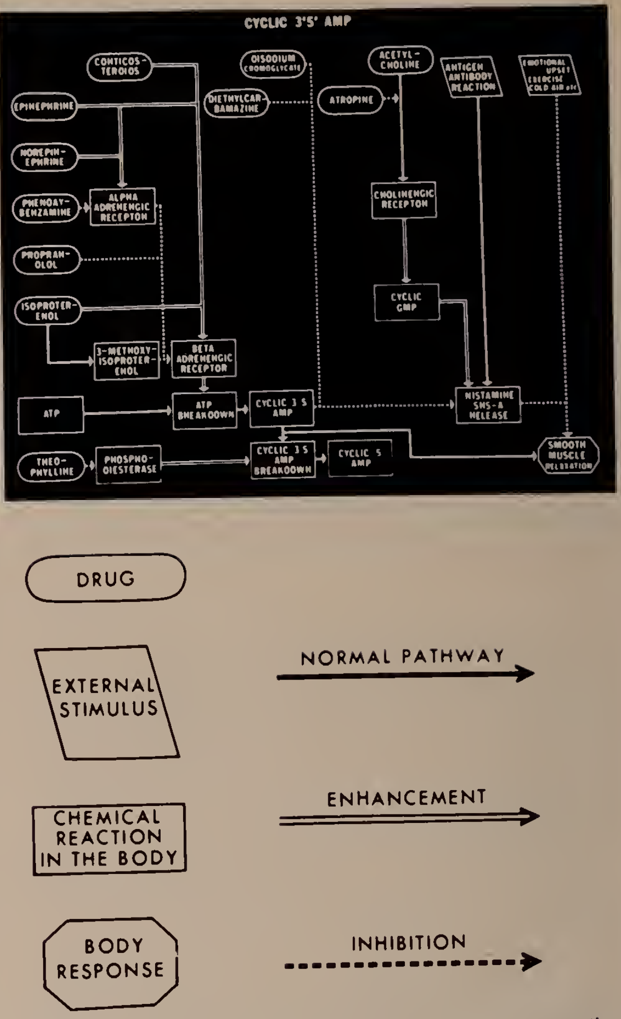

FIGURE 2. (Top) Physiologic and pharmacologic factors that affect the smooth muscle of the airways; (bottom) key.

cromolyn sodium (Intal). Soon SCH-1000, an atropine-like compound that inhibits the parasympathetic pathways, will also be available. Thus, we have four groups of drugs and another on its way, all of which act by different pathways. I should point out, however, that this is only a small part of the action of the corticosteroids, which act largely by direct action on the cell by increasing messenger RNA, which produces glucocorticoid effects.[6]

When using these drugs, we must consider the acute attack, which is treated largely with inhaled beta agonists, intravenous aminophylline, and intravenous steroids, chiefly Solu-Cortef. Acute attacks should be treated as medical emergencies, and in most cases they are well managed. However, the long-term treatment of asthma is often not so effective, due to inadequate medication. The theophylline compounds must be given in specific doses according to age and weight,[7] and their serum levels should be measured to ensure that they remain within the therapeutic range of 10 to 20 μg/mL.

It is extremely important for the physician to be aware of factors that affect the serum levels. They are increased by erythromycin, oleandomycin, some viral infections, cardiac dysfunction, hepatic dysfunction, influenza vaccination, and cimetidine, and they are decreased by phenobarbital and cigarette smoking. Sometimes the changes produced by these factors are significant and require an adjustment in dosage.

The beta agonists, either as liquid or tablets, in the hand nebulizer, or as respirator solution in the acute attack, are very important medications in the treatment of asthma. Beclomethasone can also be administered by hand nebulizer and has vastly changed the long-term treatment of asthma; I now rarely find it necessary to use oral steroids for a prolonged period. Cromolyn sodium given by turbo inhaler (Spinhaler, Fisons Corporation) is also very useful.

An asthmatic is not getting proper care unless he has enough of these medications in the correct dose and combination to control his asthma sufficiently to allow him to lead a reasonably normal life, carrying out activities in the same manner as his nonasthmatic peers and protected from the ever-imminent acute emergency of having to be rushed to hospital. While it is true that we cannot accomplish this objective in all cases, I do believe that we can accomplish it in a much higher percentage of cases than is now being done. If the patient needs three of these medications to control his asthma, he should have three.

There is some difference of opinion as to which drugs should be used first. My preference is to start with theophylline and then add a beta agonist, either orally or by hand nebulizer, and then to add chromalyn sodium (Intal) in some cases and beclomethasone dipropionate in others, depending on the characteristics of the individual case. However, the important point is that the patient's asthma be controlled, not whether one starts with theophylline or a beta agonist. Prolonged therapy with oral steroids should be avoided except in patients whose asthma is not controlled by adequate doses of the other four groups of drugs. In other words, prolonged oral steroids are a last resort.

Of great importance in the long-term care of the asthmatic is patient education. The patient should understand his disease, why he requires medication, and how the medication acts. He must appreciate the fact that the theophylline preparations and beta agonists relieve symptoms, in contrast to beclomethasone dipropionate and cromolyn sodium, which prevent symptoms and are therefore useless if given intermittently when symptoms are more severe. Unless the patient is well educated in how to administer his drugs by inhaler (Spinhaler), he is not likely to benefit from them.

Early and late asthmatic reactions on antigen challenge

Too often the difference between early and late asthmatic reactions is forgotten.[8] The early reaction begins within 10 minutes of an antigen challenge, whereas the late reaction begins four to six hours after challenge. The early reaction reaches its peak within 20 to 30 minutes, clears within one to three hours, and is IgE mediated. The late reaction reaches its peak within 8 to 12 hours, clears within 24 hours, and is also IgE mediated. Cromolyn sodium inhibits both reactions. The beta agonists inhibit the immediate reactions as well as the late reactions when they are mild; however, if the late reactions are more severe, the patient responds slowly to the beta agonists, epinephrine, and theophylline preparations. The early reaction is not inhibited by corticosteroids, whereas the late reaction is; this is true also of inhaled beclomethasone dipropionate.[9] On antigen challenge, the patient may experience only an early reaction, or he may have both an early and a late reaction.[8] By observing the effect of drugs on these reactions, it may be demonstrated which drugs prevent the late reaction and which ones prevent the early reaction.[10] This distinction has great practical significance in treating the asthmatic patient.

If the patient has been in an acute attack for a long time, he is probably in a late reaction and, therefore, it makes sense to start intravenous steroids early rather than waiting to see if the patient will respond to intravenous aminophylline. Furthermore, if the patient does not respond to inhaled beta agonists, it is imperative to proceed with other forms of treatment before he suffers incipient respiratory failure.

Immunotherapy

Some asthma patients benefit greatly from immunotherapy, but they have to be carefully chosen. The criteria for patient selection are as follows: (1) A potent allergen preparation is available; (2) the allergen cannot be avoided or is very difficult to avoid; (3) there is a significant amount of allergen in the patient's environment; and (4) there is evidence that the patient's symptoms are produced by this allergen and are IgE mediated. Many patients, particularly children and younger adults, have asthma that is produced by demonstrable allergens and fit these criteria well; these patients should have the benefit of immunotherapy, along with all the other modes of therapy mentioned. Immunotherapy by itself and without other treatment is almost useless.

Immunotherapy produces many immunologic changes. For example, serum IgG antibodies are increased, IgG and secretory IgA antibodies in the secretions are increased, and IgE antibodies in the serum are reduced but not eliminated. Also, several measures of lymphocyte function in the presence of specific antigen are reduced, and the mediator-containing cells at times show reduced sensitivity or reactivity.[11] When immunotherapy is properly prescribed in the appropriate patients, the benefit of these immunologic changes is apparent.

Follow-up

Treatment of the asthma patient is of little value without adequate follow-up. This includes encouraging the patient to report any problems. However, I find that one of the best ways of following the asthmatic is to provide him with a mini-Wright peak-flow meter (Clement Clarke International Ltd, [England]) for a period of time so that he can measure his peak flow three times daily at the same time each day and report back to the physician, who can then put normals on his chart and determine whether he is getting adequate therapy.[12] Usually, a physician who is experienced in treating asthma can evaluate a patient's initial therapy without the peak-flow meter. However, the peak-flow meter is often very useful in evaluating the effect of medication in more difficult patients and is particularly useful in convincing the patient or parent when more medication is necessary. Many parents are very reluctant to have their child taking two or three drugs regularly, and often a demonstration of how deficient the child's breathing is by the peak-flow meter is sufficient to convince them that the medication is necessary. The peak-flow meter is also very useful for achieving compliance in our most difficult group of patients, teenagers, who are often very reluctant to follow directions. Usually, they can be convinced if they have a visual demonstration of what their inappropriate therapy is doing to them.

Comment

There is much that can be done for the asthmatic. Nevertheless, it is my experience that at least one half of the asthmatics I see in consultation are on totally inadequate treatment programs. They are not receiving the correct drugs, and they have not been educated about their disease. Consequently, they do not understand what they are doing or why they are doing it and, therefore, are not compliant with treatment. One of the most satisfying things about treating these patients is showing them how much better they feel when they are on a suitable program, and this is the easiest way to convince them to follow that program.

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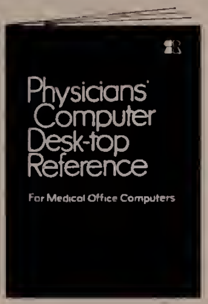
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Ability to Work

The Social Security viewpoint

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The Federal Social Security Disability program is 27 years old this year.

The original Social Security Act (SSA) sought simply to provide a source of supplementary income to those too old to work. However, even then there was an awareness that loss of income due to disability could be as devastating as loss of income because of old age and, on occasion, just as permanent.

In 1939, the Advisory Council on Social Security took note of the social desirability of providing benefits to those who became totally disabled. Nothing substantial was heard on the subject until 1954. In that year the Social Security Act was amended to create a disability freeze program that called on state agencies to make medical determinations of disability. From that time to the present, the categories of people covered and the benefits available have been progressively expanded.

1980 amendments

Critics have said that not enough effort has been made to encourage people to return to work once a disability allowance has been granted. As physicians, we all appreciate that work is an important aspect of a satisfying life. Congress, too, accepts this concept. It has always been its intention that vocational rehabilitation and return to work should be major objectives of the disability insurance program. This part of the program has not received as much attention as, perhaps, it should have. The Disability Amendments of 1980 reflect changing public attitudes toward the ability to work despite disability, and more recognition is now placed on motivation as an aid to recovery. Incentives are provided which are designed to aid and stimulate disabled people to return to work. Some of the more important changes are:

1. Benefits can now continue to medically recovered people in vocational rehabilitation programs if it is determined that continuance will increase the likelihood that the beneficiary will go off the disability rolls permanently. A "trial work period" has been increased from nine to 24 months.
2. Extension of the "trial work period" has also now been granted to widows and widowers, who previously had been excluded.
3. Medical protection under Medicare has been extended for three years after cash benefits cease, but only for recipients who are working and who have not been determined to have recovered medically.
4. In a small number of cases, family benefits paid to disabled workers had been actually greater than previous employment income. This is considered to be a work disincentive and, consequently, this situation has been eliminated.
5. To assure that all regulations are accurately and uniformly applied throughout all states and territories, the new legislation mandates that 65% of all allowances be reviewed by SSA by 1983. Accuracy in the evaluation of claims is critical, especially considering how costly errors may become.

The country, as a whole, experienced a steady increase in the number of disability claims filed from the late 1960s to the early 1970s, perhaps because of the public's growing awareness of the program. Today about 90 million workers and their families are protected by Disability Insurance in the event the wage earner becomes disabled because of long-term illness or accident. About 2.9 million disabled people are already receiving benefits, and *over $1.5 billion* in benefits is paid out in any given month. The State of New York Office of Disability Determinations received over 280,000 applications in 1980. Each had to be decided as quickly and accurately as possible.

Unique program

Essentially, the adjudication of a claim consists of the solving of a series of problems. The ultimate question is whether or not a claimant is disabled within the meaning of the law. The legal definition of disability is strictly defined as "The inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of *not* less than twelve months."

This definition has a profound affect on determinations of disability: in 1980 our office allowed approximately 25% and denied 75% of all claims processed. The definition also presents certain challenges both to the agency adjudicating claims as well as to the public.

The chief challenge to the public is to understand

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[*] *By invitation.*

this relatively strict definition. "Inability to work" means that the total evidence as presented by the applicant must lead to the conclusion that . . . he or she can do no economically significant work. This means that our greatest concern is not with disorder or disease per se, but with the impairment of function resulting from the disease. This approach is substantially different from that taken by other organizations that deal with medical disorders.

For instance, it is possible to get a 10% Veterans Administration Disability pension based on a certain degree of neurosis, which may, nevertheless, permit the individual to do some type of work. Under some programs it may also be possible to obtain benefits based on the inability to do one's usual work. This would be called an occupationally oriented disability program, as in Workers' Compensation. These situations cannot occur in our program. Benefits are payable only if there is proved inability to engage in any economically significant work activity.

The process

A fair question would be just how, exactly, one can assess whether or not someone is incapable of doing any work. First, we look at all the relevant medical evidence. This usually involves contacting the claimant's treating sources, which may be private physicians, hospitals, clinics, or even schools or other agencies. And this brings us to one of the major problems faced by our office every day. That is, to gain the cooperation and support of the medical community in submitting information.

Unfortunately, for our particular program, when physicians think of disability, they tend to think of Workers' Compensation. This creates a knotty problem because the reporting requirements with respect to the type of information required are quite different for the two programs. Under Workers' Compensation, it is the physician's responsibility to the worker as his patient to decide on treatment and to advise him whether or not he can return to work and, if not, for how long. In most instances, the treating physician's opinion alone usually provides the basis for rendering a decision and is rarely challenged by the insurance carrier. For example, when the physician submits a C-4 form, it does not have to contain all the available medical information. Our program, on the other hand, has very rigid reporting requirements. A quote from the manual under which we operate will make the reason clear.

> Medical evidence should contain the following elements: a history, course of the condition, treatment and response, objective findings, physical examination, clinical and laboratory tests, diagnosis and functional limitation, dates of treatment, factual data upon which the diagnosis and prognosis are based.

The evidence must be sufficiently complete to enable any independent reviewer who does not examine the claimant to determine the nature, limiting effects, and duration of the impairment based on written reports alone.

As an example, let us take the case of a claimant who alleges that he or she cannot work because of angina pectoris. This diagnosis alone would be insufficient for evaluation purposes, even if obtained from the individual's treating physician.

To confirm it, we would need to know such things as the character, location, and duration of the pain, as well as how it is brought on, what relieves it, and how quickly. The diagnosis would also have to be confirmed by objective laboratory tests, which, in this case, might be in the form of resting or exercise electrocardiograms or angiography. A history of the impairment, the results of physical examinations, and the treatment and response to therapy would also be important for the accurate assessment of the severity of the condition, and its effect on functional capacity.

Aside from the variation in the standards of evidence on which decisions of entitlement to benefits can be made, there are important legal differences as well. For one, to be eligible for Workers' Compensation, the injury or illness must have arisen out of, or in the course of, employment. This need not be the case under Social Security Disability. For another, the problem may be of a temporary nature and still qualify for compensation benefits. As stated previously, in our definition of disability, it must have lasted, or be expected to last, a year, or be expected to result in death.

The struggle to obtain factual evidence is ongoing. One of our major projects in this connection is the continuing education of the medical community as to the type of information necessary for claims evaluation. To this end, a Medical Advisory Committee has been formed which acts as a liaison between our bureau and the medical community, and whose constituents include prominent physicians. However, even with this assistance, it sometimes takes great ingenuity on the part of our disability analysts and review physicians to secure needed information. Of course, we can order and pay for consultative examinations on our own, provided the information to be obtained is essential to the evaluation of the impairment and unavailable in the records of the claimant's own medical sources.

As can be seen, the gathering of information is an essential and major part of our job; it must be very specific to be useful to the program.

Evaluating claims

Much of the collecting of evidence is done by the disability analyst. Perhaps it would be a good idea, at this point, to discuss the backgrounds of the people who process claims. He or she is a college graduate who has received extensive training by our bureau in the medical evaluation of claims, as well as in many other substantive, technical, and administrative aspects of adjudication. The analyst has major responsibility for assisting the claimant in presenting appropriate and relevant medical evidence, for all the nonmedical components of the decision-making process, and for concluding a sound decision along with a staff physician. The analyst's responsibility extends, of course, to the taxpayers by making sure that benefits are granted only to those who are entitled to receive them.

However, evaluating claims is also a team effort, and as mentioned previously the second member of the adjudication team is the review physician. Ultimately the final responsibility for the verification of the severity of an impairment, as documented by the medical evidence, rests with our program physicians.

As already mentioned, we look at the evidence, not in terms of the illness by itself, but from the point of view of how it affects functioning. In doing so, we have many aids. These are memoranda issued by the SSA which help us to resolve specific disability issues. However, the primary source assisting us in this endeavor is known as the "Listing of Impairments."

This listing provides the basic framework against which we can measure just how much a particular illness or injury has reduced an individual's ability to work. It is divided into 13 body systems under which most major disorders, which have the potential to severely limit functioning, have been classified. Each system is divided into separate categories of disorders. Every category consists of one or more criteria, which, if met by the illness in question, would indicate that the claimant is incapable of working on the face of the medical evidence alone.

At this point an illustration would be helpful: A disability application from someone alleging he cannot work because of a stroke is received. After obtaining all the necessary evidence, we would use the appropriate body system (in this case the neurologic) to help us evaluate the impairment. The criteria for a central nervous system vascular accident call for sensory or motor aphasia, or the inability to use the arms or hands effectively. Either of these findings must be present at least three months after the onset of the illness. Of course, both of these criteria are basically conclusions and must be supported by a detailed description of clinical findings. If the claimant's stroke is as severe as expressed in this "listing" category, the claim would be allowed.

The requirement that the abnormalities persist for three months after the initial stroke is crucial to the decision. This relates directly to that part of our definition of disability which states that the condition must be expected to last for a continuous period of not less than 12 months. Inherent in all our standards is the idea of chronicity. Transient or acute conditions, although they may be severe for short periods of time, would not provide the basis for granting benefits under our program. The idea behind the three-month requirement under this particular category is that if severe residuals of a stroke have not improved three months after the initial insult, we can reasonably presume that no significant improvement is expected.

To summarize briefly, the inability to do any work, the need for objective medical evidence, and the chronicity of the impairment are all key factors in our definition of disability. These criteria are the principal elements used in arriving at a decision. Another is the listing of impairments just discussed. Any impairment, if it is as delineated in our listings, is presumed to leave the claimant without the ability to function in any work situation. Such an individual would be entitled to a benefit providing the person is not working despite the impairment.

Residual functional capacity

"Impairment" is not the same as "disability" in our program. The term "impairment" is a medical term, whereas "disability" is a legal term and takes into account not only the medical data but age, education, work history, and other factors. On this basis if we have a condition that does impair the claimant to some degree, but not to the extent called for in our listings, an assessment of what is called residual functional capacity is needed. Stated simply, with what capabilities does the impairment leave the claimant, and what can he or she do with them? The residual functional capacity (RFC) is derived from the medical evidence and is, once again, the responsibility of the agency review physician to determine.

The procedure of assessing functional capacity is one that is uncommon to most disability programs. It comes up often in our program, however, and is one of the features that makes it so different from other programs. As a matter of fact, it is practically a new branch of medical science and, as such, presents us with continual challenges.

Course of a claim

At this point a few brief comments about the actual processing of claims and some of the issues that may arise in the course of development, and which can sometimes affect the outcome, would be useful.

One of the many unique factors involved in the administration of the disability program is the state/federal relationship. Our State agency makes determinations of disability for a federal benefit program. This has many implications, which cannot be discussed here; however, it does bring about the handling of claims by both federal and state offices at various points in the career of an application.

After the application is taken in a federal district office, the disability portion is sent to us (the State) for a medical determination of disability. The disability analyst gathers all the evidence, medical and otherwise, needed to evaluate the claim in terms of the Social Security definition of "disability" and the

Disability Guidelines. This may involve sending requests for records to hospitals, physicians, or various agencies, calling physicians to obtain information by phone, or contacting the claimant. In adjudicating a claim, the analyst must keep in mind such considerations as the period of time covered by disability insurance, the date of onset of severity of the impairment, and its expected duration. All administrative and technical aspects of a disability claim are handled by the analyst.

After all the evidence has been received it is evaluated by the disability team (ie, the review physician and the analyst), and a formal determination is prepared. The determination is signed by both parties involved in making the decision. The last substantive step is the screening of claims by the Office of Vocational Rehabilitation. Every case processed in a disability determination service, whether it has been allowed or denied, is looked at by a rehabilitation agency to see whether or not a program of rehabilitation may be offered. If so, the claimant is obligated to enter such a regimen or no disability benefit will be paid. After completion of all our actions the folder is sent back to the local Social Security district office, if it is not selected for review by the SSA, and the claimant receives either a check or a denial notice in the mail.

When a claim is allowed and benefits are granted, we have not always seen the last of it. By their very nature some conditions are expected to improve; these cases we diary and reexamine. Therefore, it is sometimes necessary to reinvestigate claims at periodic intervals to insure that the claimant is still prevented from performing substantial work activity due to the impairment.

Examples of impairments that are generally selected for diary are: epilepsy, mental disorders, obesity, rheumatoid arthritis, and cases in which surgery is contemplated or takes place near the time the claim is adjudicated.

Of course there are cases we do not diary for future medical review, but this is now becoming much more rare. These involve chronic or progressive conditions in which the chance of any improvement would be very small.

In this connection, it would be interesting to note the most prevalent types of impairments with which we deal: Mental disorders account for 24.7% of all cases, followed by cardiovascular disorders at 18.1%, and musculoskeletal disorders of 17.25%. About 40% of all claims filed involve the other ten body systems under which impairment categories are grouped.

The past 27-year history of the Social Security Disability Insurance program has seen a continual honing of our regulations, processes, and employee skills, which insures that the needs of society and the disabled are always met.

Summary

The Social Security Disability program has experienced enormous growth since its inception in 1954. Over $18 billion a year is now paid out in disability benefits. Vocational rehabilitation and eventual return to work are an integral part of the program. Many incentives have been provided by the disability amendments of 1980 to further this goal.

The program's approach differs substantially from occupationally oriented programs. The definition of disability is strict; there must be proved inability to engage in any economically significant work, and the decision must be supported by objective clinical findings and test results. Medical evidence and vocational facts are gathered by a disability analyst and a physician, both of whom are responsible for the final determination.

There are several aids that can be utilized in the evaluation of evidence. These are the definition of disability itself and a guide to severe disorders called the Listing of Impairments. A unique feature which comes up often in considering impairments is called "Residual Functional Capacity." This is the assessment of what the claimant can do despite his impairment.

The disability program is a federal one, but decisions are made by state agencies. Claims are taken in local Social Security district offices and are forwarded to state agencies. If a claim is denied, there are several appellate levels to which it can be taken. Some claims that are allowed are periodically reviewed to ensure continued eligibility.

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(*continued from page 1660*)

Downstate Medical Center Appointments and promotions

Carl I. Cohen, M.D., has been appointed associate professor of Psychiatry.

John P. Curran, M.D., has been appointed clinical associate professor of Pediatrics.

Bernard Shulman, M.D., has been promoted to clinical professor of Pediatrics.

Milton M. Berger, M.D., has been promoted to clinical professor of Psychiatry.

Sidney Katz, M.D., has been promoted to clinical professor of Psychiatry.

Sameer Rafla-Demetrious, M.D., has been promoted to clinical professor of Radiation Oncology.

Norma Perez Veridiano, M.D., has been promoted to clinical associate professor of Obstetrics and Gynecology.

Kurt E. Gerstmann, M.D., has been promoted to clinical associate professor of Pathology.

Haskel Elis, M.D., has been promoted to clinical associate professor of Rehabilitation Medicine.

Gulf & Western elects a director

The Board of Directors of Gulf & Western Industries, Inc., has elected James A. Nicholas, M.D., a director. Dr. Nicholas is a preeminent authority in the field of sports medicine and was a member of the President's Council on Physical Fitness and Sports under President Carter.

New appointments

Cheryl H. Gainer of Spring Valley, New York, has been appointed associate hospital director for Nursing Service and Education at the Westchester County Medical Center in Valhalla.

Melvin B. Weiss, M.D., has become director of the Cardiac Catheterization Lab and associate chief of the Cardiology Division of the Department of Medicine at Westchester County Medical Center in Valhalla. He also is professor of Medicine at New York Medical College.

National Science award winner

Dr. Norman Sutin, of Brookhaven National Laboratory, is the 1983 winner of the American Chemical Society's Award for Distinguished Service in the Advancement of Inorganic Chemistry.

(*continued on page 1762*)

Rejuvenation: Brown-Sequard to Brinkley

Monkey glands to goat glands

JOHN R. HERMAN, M.D.
The Bronx, New York

Clinical Professor of Urology, Albert Einstein College of Medicine

Charles Edouard Brown-Sequard, the very well-known and highly thought of neurologist, physiologist, and endocrinologist, started the great explosive search for rejuvenation that blossomed around 1900 (Fig 1). In the 1890s he published his experiments, wherein he injected himself with the aqueous extracts of testicular tissue. He and his associate, D'Arsonval, made extracts of the testes of dogs and guinea pigs, passed them through a special filter to eliminate bacterial organisms, and then injected the fluid subcutaneously. He reported ebulliently: "Today all has changed and I have regained at least all of the 'force' which I possessed a number of years ago—I have established that there has been an uncontestable increase in the force of my limbs." [1,2]

He tried this experiment only on himself after he had seen the results of many years of animal testing, and after he had first noted the inescapable evidence of aging in his own body. He continued, until his death, to report the beneficial effects of the injections. The publications of Brown-Sequard[3] in 1892[2] of the rejuvenation of his body, and of the wonderful effects of the testicular extracts, resulted in a predictable surge of reputable physicians, as well as charlatans, to utilize the materials for their own advantages. The extract was counterfeited, bootlegged, and manufactured in many "laboratories." Its chief value was, to most, financial. The cult of injections spread like wildfire, and the fountain of youth had been relocated. His work was not substantiated by other scientists experimenting in the same field.

Although his extracts were discarded, his theories and plans were the basis for numerous youth cults in the years ahead, thus giving the respectability of the name of Brown-Sequard to the schemes of many. Numerous and varied were the blueprints for rejuvenation once Brown-Sequard declared it to be possible.

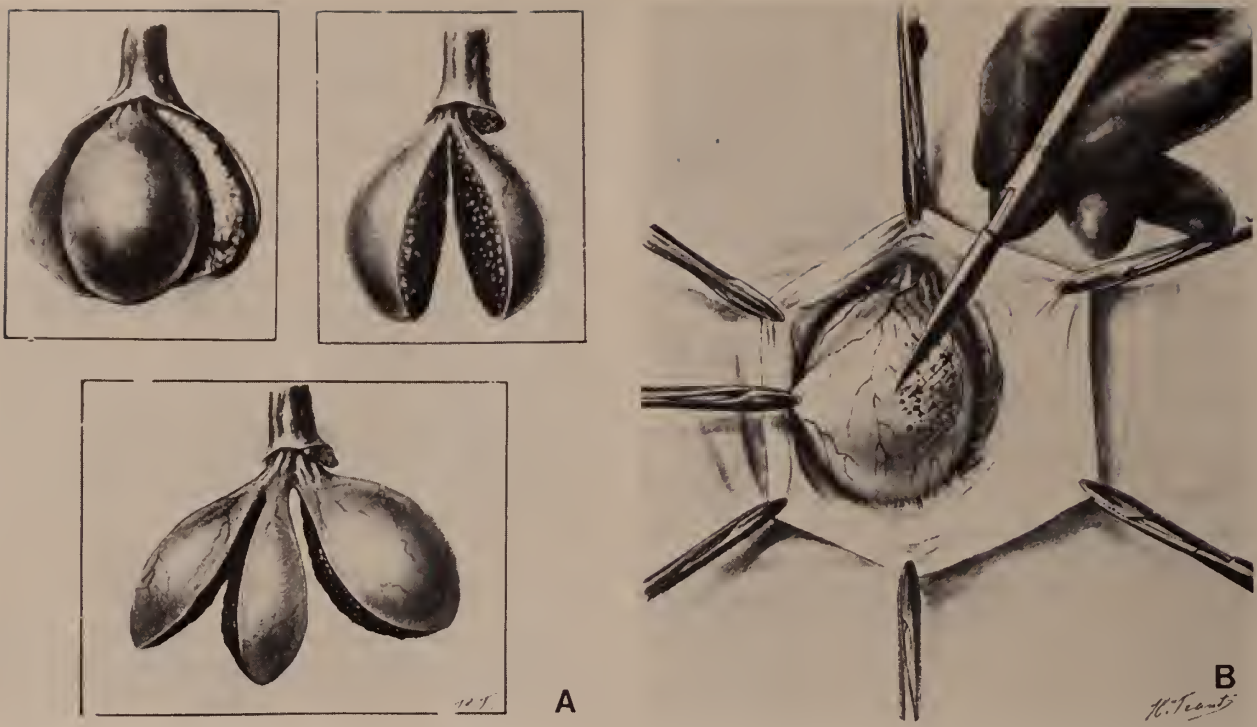
Longevity with maintenance of physiologic youth has been, and will continue to be, a desideratum of all people. From the Egyptians of 5,000 years ago to the vitamin faddists of today, favorite waters, rare plants, parts of scarce animals, and esoteric exercises have all been proposed as a means to attain rejuvenation and long-lasting youth. All seem to have had beneficial effects on some of the proponents; none has been rewarding to all.

Voronoff

Serge Voronoff,[4,5] early in the 1900s, achieved worldwide fame for his monkey-gland surgery. Accepting the work of Brown-Sequard, showing that the testes are the source of the hormone that controls the vigor of life, Serge Voronoff, of Paris, believed that Brown-Sequard's method failed only because the living portions of testicular secretions, the "active element," could not be extracted and thus would always be deficient. Voronoff "knew" that the entire testis was needed, not for formation of spermatazoa, but for hormonal function. Therefore, he grafted many segments of ape testes into the scrota of men in search of rejuvenation (Fig 2). His argument for this procedure included the "facts" that the anthropoid ape "most nearly approaches the human species in the highly perfected development of its tissues and in its intimate humoral chemism." [4,5]

Voronoff felt grafting from ape to man was not really a heterograft, but a graft between two closely related species. It could be termed "homeograft, the organs of one species finding identical conditions of life in the organism of a nearly allied species." He outlined in sharp detail how the testicular portions were to be implanted into the recipients' scrotum; he further described how these implants appear when removed several years later, proving that hormonal functions were intact, usually for one or two years, until the numbers of reproducing cells become reduced by increasing fibrosis.

The main drive of Voronoff's operations seems to have been aimed at producing more "sex hormones" for males, and, therefore, more vim, vigor, and vitality, ie, rejuvenations (Fig 3). Voronoff claimed many results from his surgery. A short primary period of physical and sexual excitation is followed by two to three months of disappointing discouragement. Then, says Voronoff: "In the course of two or three months, marked improvement in the psychic functions occurs, especially in physicians and other individuals who are highly developed intel-



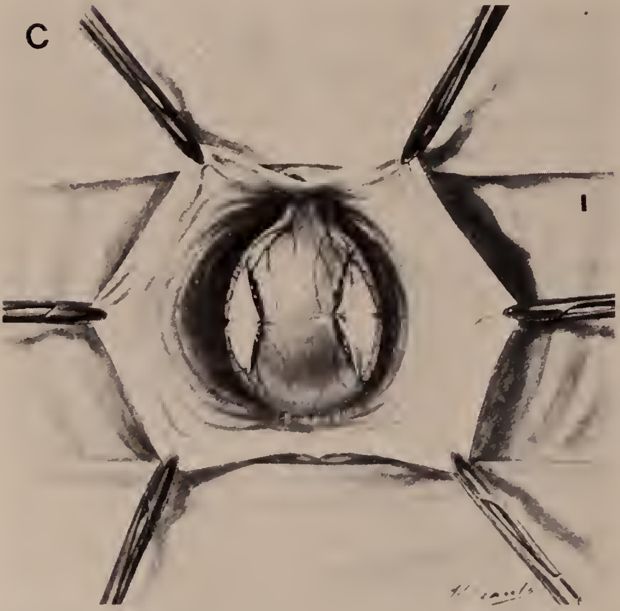


FIGURE 1. Voronoff's operation for simian testes graft. (A) Operation on simian donor: division of simian testicle into four grafts. (B) Operation on human receiver. (C) Two grafts, on human receiver, finally attached on external surface of tunica vaginalis.

lectually." "There are improvements in memory, greater aptitude for mental labour, and greater facility for intellectual effort. At the same time the genital functions become more active and a general condition and sensation of well-being occur."

There are many more beneficial results described by Voronoff, and indeed they seem quite exciting. Who, for instance, approaching old age, would not like to find in himself the general attitude and appearance of becoming more youthful, the enfeebled body becoming more vigorous, tonus and muscular force increasing, and movement more supple and sure? "With respect to the circulatory system, the most surprising effect is the constantly observed lowering of blood pressure in individuals affected with hypertension"! As an added bonus, cholesterin and urea diminish and glycemia and glycosuria decline. These effects usually last for three to five years. Then one could, and should, have another ape testis implant.

Voronoff modestly described his goals and results as follows: "The renewal of our source of energy, when about to become exhausted, by incorporating in our organism a young gland to replace one which age has enfeebled or destroyed, would mean a solution of the agonizing problems of our precocious decline, or our death at an age when life still retains all its charms." Man himself is worth whatever his sex glands are worth."

The cost of obtaining sex glands was high, and surgical grafting of "monkey glands" became a mark of the elderly wealthy male across the civilized medical world. Once the flood gates had been opened by Brown-Sequard's work and pushed farther apart by Voronoff's experiment, the overwhelming waves of reports on hormones and rejuvenation swamped the newspapers, and even many medical journals. The "gold rush" toward rejuvenation gathered momentum.

Ancel and Bouin

Ancel and Bouin in 1904[6] were studying the effect of vas ligation in rabbits. They noted that the

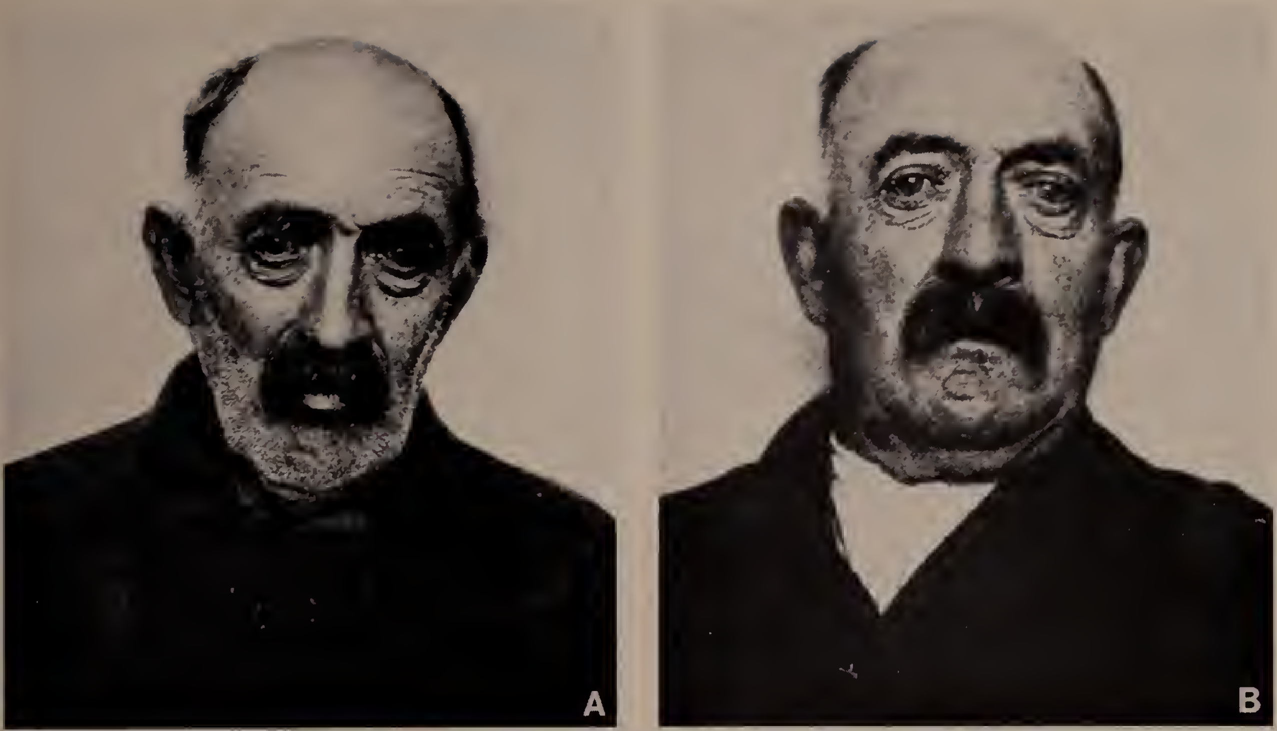


FIGURE 2. (A) Before (age 73) and (B) After (age 76) Voronoff procedure. Classical examples of "rejuvenation."

seminal epithelium degenerated but that the Leydig's cells remained without change and indeed, in some cases, may have hypertrophied. Besides the changes in the Leydig's cells, the suggestion that caused the loudest repercussion was that there seemed to have been increased sexual activity in some of their animals after vas ligation. This one dubious comment was later magnified by the hopeful, as well as the conniving, into an indication that Steinachs'[7–10] procedure would work.

Massaglia

Aldo C. Massaglia[11] repeated the study, using

FIGURE 3. (A) Steinach (right) injecting cow with female sex hormone. (B) At microscope.

roosters instead of rabbits. He also demonstrated that Leydig's cells remain normal or increased in number following vas ligation.

Lydston

In the early 1900s G. Frank Lydston[12,13] was experimenting with glandular transplantation, actually implantations. He was a urologist, well known in the academic world, and his bibliography is long and varied. He was well respected by his peers. The testicular implantation work was first done with fowl, and then with dogs and other mammals. In animals, he implanted sex glands from both sexes into both sexes. He was pleased and fascinated by hormone-induced changes that he noted in the animals. He also attempted to follow the histologic changes in these implanted glands after different intervals.

He had no doubt that seminiferous tubules with all spermatogenic functions perished, but that the interstitial cells lived and did function to produce hormones.

In humans, Lydston's procedures offer a considerable difference from modern transplant techniques. He was proud to be able to state that he obtained testes from otherwise healthy young men within six to eight hours after their deaths. The testes were then placed in iced saline where they might be held for 24 to 48 hours, or even longer, prior to implantation into human recipients. Apparently no effort was made to anastamose vessels or vasa, although Lydston did mention that Stanley, in the California prison systems, had accomplished one such "transplant" with vas anastomosis. Lydston did his procedure for hormonal and "psychic" results and described himself as satisfied that implants in humans could modify hypertension, retard senility, increase longevity, and help psychopaths as well.

Lydston reported nine cases of human implants. Lydston, unlike many others in this field, was not one for publicity. Although his work was a true contribution, it never excited the imagination of the public sufficiently to result in great numbers of men requesting testicular implants.

Steinach

Eugen Steinach, M.D., Ph.D., professor of physiology and later head of the department of physiological studies at the Biological Institute of the Academy of Science of Austria, produced evidence[7] tending to show that the interstitial cells of the testes were hormone producing (Fig 4). He named these cells the "puberty gland," [8] and his subsequent work produced a landslide of men anxious for reactivation of sexual potency.

In 1920 Steinach startled the scientific world by his book: *Rejuvenation by Experimental Revitalization of the Aging Puberty Gland.*[9] This long book, with many illustrations included, told of the author's animal experiments and of his experimentation with the method on humans (Fig 5). His successful "Reactivation of the male interstitial cells," to form more male hormones, was to become the focus of many angry discussions in the years to follow (Fig 6).

Steinach felt that ligation of the vas would result in reexcitation of the puberty gland, and so would renew the body to the youthful prowess associated with high hormone levels. His theory seemed realistic to many men who, filled with hope, underwent either unilateral or bilateral vas ligations.

In his 1940 book *Sex and Life—Forty Years of Biological and Medical Experiments*, Steinach[10] details the stody of his experimental work. Some of the chapter headings might still stimulate interest: "The Relations between Sex and Life: Experiments in Explanation of Erotization; Transplantation of Sex Glands in Human Beings; and Surgical Reactivation, Animal Experiments and the Steinach Operations; (Vasoligation)." In this book, Steinach goes on to explain: "It has frequently been said that a man is as old as his blood vessels. One may have

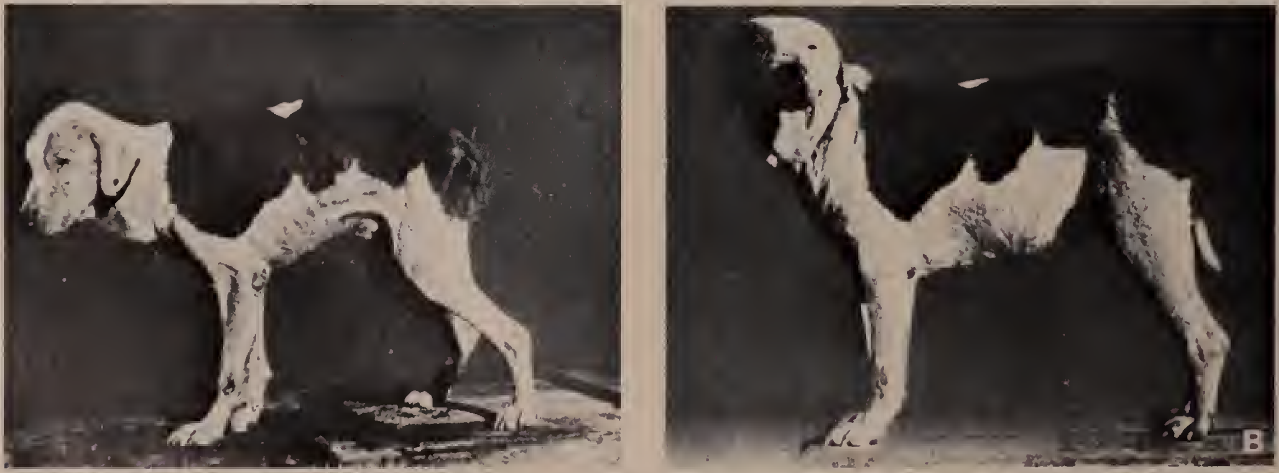


FIGURE 4. Eighteen-year-old dog. (A) Before vasoligature. (B) After vasoligature.

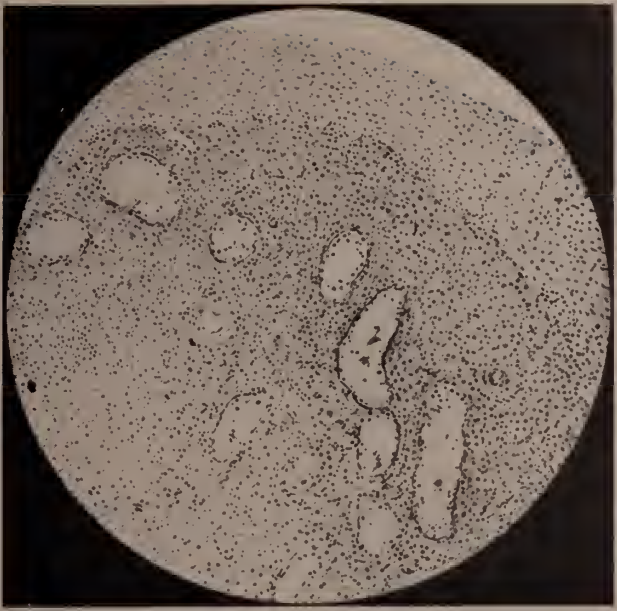


FIGURE 5. Microscopic section of implanted testis after 12 months. Note extensive growth of Leydig's cells. With exception of a few remnants, seminal tubules have disappeared.

greater justification for saying that a man is as old as his endocrine glands."

Based on the theory that an organ will atrophy if its activity is obstructed, ligation of the vas deferens would cause atrophic changes in the procreative portion, the seminal canals of the testes. This atrophy would then be consequently followed by multiplication of the interstitial or hormone-producing cells.

Steinach claimed excellent results in successfully reactivating the "puberty gland." To quote a few of his postoperative results: "Not withstanding his inadequate nutrition, the man recovered rapidly, beginning the third month after the operation. Excellent appetite, rapid increase in weight, hale appearance, visible changes in skin texture, which was smooth and no longer dry . . . ."

"His muscles have developed extraordinarily. The hair on his head is thicker and the beard more strongly developed." Another: "His disposition improved towards the middle of December. He slept well, he also noted an increase in libido. Since the operation there have been no further attacks of angina pectoris . . . ."

Another: "I find that I have become stronger. I eat well and sleep well. My memory is better. I live now like a man about 40 or 50 years old and am in such good spirits that I find myself going about singing."

Another: "The object of the operation, namely renewed mental vivacity, has been fully attained." And yet one more, 16 months after operation: "Improvement has been continued. Patient feels young, energetic, and cheerful. In contrast to former years, he is now at the end of the theatre season, as fresh as he was at its beginning . . . . Complexion, formerly pale, is now pink and fresh. He now wears weaker glasses for his far-sightedness. His hair grows more rapidly. Digestion better than in former years. The increased potency has been maintaned. Weight and blood pressure remain normal."

Many cases, with good postoperative evidence of reactivation of the interstitial cells and rejuvenation of the subject, were presented. It is important to note that testosterone had not been isolated and analyzed at the time of this work. Later Steinach was to say ". . . injections of synthetic male sex hormone produce results similar to those achieved with renewed hormone secretion by means of vasoligature; in comparison with which, this injection treatment offers the further advantage that it can be repeated whenever required."

The publicity resulting from Steinach's announcement in 1920 was tremendous. Both laity and scientific persons became excited and, of course, polarized. There were those who spoke against Steinach and his procedure; he was termed a rejuvenation faker and a misguided man. When the details reached the United States, it was mostly through the work and publications of Benjamin.[14–19]

Benjamin

Harry Benjamin, M.D., one of Steinach's more prominent and prolific students, is a New Yorker. He returned to the United States convinced of the validity of Steinach's work and proceeded to write and talk about it. He produced many papers on this topic,[14–19] and did not tout it as a cure-all, or as a rejuvenation procedure, but merely as an operation that in about 77% of 300 of his patients produced "reactivation" of the interstitial cells or "puberty gland."

Fishbein

Morris Fishbein, editor of the *Journal of the American Medical Association* (*JAMA*), became a vociferous opponent of the "Steinachian miracle." Fishbein was a very verbal gentleman who did not hesitate to castigate work that he felt to be improper or false. He refused to print articles by Benjamin about the Steinach procedure.

In *Medical Follies*, Fishbein[20] had this to say about Steinach's work, "In the latter half of 1920 a publisher in Berlin printed a volume by Prof. Eugen Steinach of Vienna, *Rejuvenation through Experimental Revivifying of the Senescent Puberty Glands*. It may be taken as the opening gun in the great international scramble for priority recognition in the alleged discovery of the profound secret of restoring lost youth and youthful vigor." Further along, Fishbein states: "To the uncritical reader they carry conviction that the goal for which Faust traded his immortal soul, and for which Ponce de

Leon sought unsuccessfully, has been found. Again, however, when one begins to analyze carefully, to separate the proved from the unproved, the impression from the evidence, the psychologic from the physical, one finds that far more proof is necessary before even a hope can be offered that a method of rejuvenation has been found."

So the battle waged. In *Fads and Quackery in Healing*,[21] Fishbein went further to put Steinach into scientific limbo. "Now the finding of a substance or a system of rejuvenation is much like the finding of gold. Whether it is there or not, all of the unsuccessful, romantic, and adventurous experimenters rush in on the trail, and all of the aged and worn out capitalists come in as soon as convenient to take advantage of the discovery.

"The elderly gentleman who prefers blondes is hardly likely to be deterred by the details of technical experiments on mice, rabbits, chickens, or dogs. For him, therefore, one presents the facts regarding man. For many years the operation, now called the Steinach rejuvenation operation, was performed on old men who suffered from enlargement of another organ closely associated with the sexual tissues. This gland, the prostate, first received newspaper respectability when its enlargement in the case of a noted holder of public office (President Wilson), gave it great diplomatic importance.

"But in not one of the hundreds of cases of cutting of the ducts reported previous to the time of Steinach did any of the meticulous surgeons who reported the cases mention any restoration of youthful vigor or anything resembling rejuvenation. This fact has been called to the attention of Steinach and of all his followers again and again in reputable medical publications. To the proof of the scientific laboratory investigators that the Steinach method is founded on fallacy, the Steinach adherents and the surgeon who performs the Steinach operation reply with the sort of cynical shrug of the shoulders that such practical men use in answering laboratory evidence. They point with none too reluctant pride to their records of cases operated on and to the letters of testimony. Here is a simple gesture but hardly the sort of things one expects from a scientist. The same testimonials—in fact much stronger ones—can be found for all of the nostrums and contrivances that have invaded this fertile field."

While this battle of giants was in process, many favorable articles appeared in the foreign press and in journals other than *JAMA*.

Schmidt

In 1922 Peter Schmidt,[22] one of Steinach's earliest and most prominent students, published *Theorie und Praxis de Steinachschen Operation.* This was translated into English in 1924 by J. Johnston Abraham and published in London by William Heineman. Schmidt was able to report on 100 cases of vas ligation, and was most enthusiastic about the results. He was of course speaking as a devoted follower of Steinach, as well as an independent surgeon and investigator.

Corners

George F. Corners[23] wrote the popular book *Rejuvenation: How Steinach Makes People Young.* Some of the chapter titles of this 1923 book reveal its trend: "The Fountain of Youth," "The Endocrine Mystery," "Male and Female Made to Order," "The Second Blooming," "The Secret of Death," and, among others, "When to be Steinached." This was the type of publicity that irritated Fishbein.

Wolbarst

Wolbarst,[24] another well-known New York urologist, wrote about his results with the operation of vas ligation: "One would be justified in saying that the operation has been distinctly advantageous to the patients who have been subjected to it. In the prematurely senile cases there is reason to believe that sexual function has been stimulated materially by this operation." This article was also read at the American Urological Convention in Atlantic City in 1922.

West

There were many articles corroborating the works of Steinach and his disciples. One statement of West's[25] puts an interesting perspective on this effort. West says: "The original work was performed by the Vienna scientist, Steinach. So startling and so incredible are his reports that, if it had not been for his undoubted high standing in medicine, his rank as professor and incumbent of the chair of physiology in Vienna, and, furthermore, for the additional fact that his results have been corroborated by such men of note as Roux, the anatomist, and Holzknecht, the great radiologist, we might well have relegated his statements into the realm of fancy and fiction."

Chetwood

Charles H. Chetwood,[26] well-known American author on urologic topics, wrote in 1922 "Vasoligature and Steinach's Investigations," after "long follow up . . . I can state emphatically that as exemplified by the cases reported herewith, there exists definite indications for the operation of vasoligature in certain well defined conditions, involving the testicles on one hand and the prostate on the other . . . ." I would antagonize vigorously the notion that the chief consequences of vas ligation are within the sexual sphere and would denounce the purpose of resorting to the operation solely with this end in view . . . . As to the effect upon the general vitality, there can be no doubt that there is preponderating evidence that a large number of the cases operated upon show remarkable response to some favorable influence, psychic, antitoxic or endocrinic .... To this may be added the further conviction, after critical survey of the experience of those of high intelligence who have contributed to this experimental field, together with my personal observations, that senium praecox, an indefinable state of the organism, induced by psychic or physical wear and tear, has, as a result of vasoligature, been succeeded by a reawakening of physical activity and an improvement in physical vigor that, previous to this operation, seemed beyond reasonable expectation."

Hanak

Hanak,[27] a French physician, was satisfied that Steinach's operation was successful, but worried that the whole organism might be endangered by the new reexcitation of the interstitial cells of the testes. Youthful hormones in an aging body might be dangerous?

Fountains of youth

So the argument waxed and waned and no one did much to convince anyone else. The isolation and subsequent use of testosterone, used also by Steinach in his later work, made the question moot. Injections were easier, better controlled, and could be repeated as desired.

To understand properly why there were all these searches for a source of youth, one must be aware of the atmosphere of the times. World War I was just over; great numbers of our youth had been killed in their prime, and many of the aged were left to do the work of those who would never come back. Also, in the 20s, inflation was rampant, "Jazz was King," and the entire world was riding high headed for the great depression in a Cadillac! This then was the time when many of these pseudoscientific fountains of youth became the lodestones about which many lives revolved. Let only one or two physicians speak highly of one or another rejuvenation technique, or let a well-known actor claim his permanent youthful bloom was due to such and such, and these methods became popular beyond belief. Patients were soon found to be queuing up to be operated, injected, or whatever.

Those who modestly signalled to go slowly were overwhelmed and left behind the tremendous waves of vociferous patients, each claiming better results than the other. Self-hypnosis played no small part in the "Fountain of Youth" phenomenon.

The search for the source of vim, vigor, and vitality continued in the United States. Although, until World War I, the European "Professors" dominated the field, the United States became preeminent shortly thereafter.

Lespinasse

Lespinasse,[28,29] a urologist at Northwestern University, found that impotentia was caused by failure of the internal secretions in the testicle. He also found that oral administration of testis or testicular extracts was of no avail. Therefore, he utilized testicular "transplantation" to attain his desired results. Lespinasse was able to obtain fresh testes from the cadavers of suicides and criminals executed in his area. The fresh testes would be rushed to the hospital, sliced with sterile technique, and inserted into the rectus muscle of the recipient within a matter of hours. Needless to say, only the testes of young, husky, and healthy males were wanted. Lespinasse found that he had indeed obtained results in the direction he wanted, but found them to be only transient; the donor testis grafts were absorbed or rejected in two to three months. One patient was reported by Lespinasse as follows: "The man has regained his sexual powers and says that sexually he is now normal." This was of course without data as to hormone levels, mental status, etc, that might have tended to act as controls on this experiment.

This procedure did not become popular, at the time, chiefly because of its short-term action and because of the difficulty in obtaining fresh young human testicles.

Stanley

Stanley,[30] resident physician at the California State Prison at San Quentin, California, in 1922, felt that Brown-Sequard's testicular injections had not been thoroughly investigated. "Because of the activities of quacks and charlatans in the time of Brown-Sequard, the complete investigations of this extract were not fully carried out, as they should have been." His interest was further stimulated by Voronoff's work and by the revelation shortly thereafter that Lydston in Chicago had been doing similar research utilizing human materials.

Stanley's plan utilized convicts for this purpose. He decided against using human testis—they were too hard to obtain for his massive experiment. Goat, ram, boar, and deer testes were obtained, triturated carefully, and injected underneath the abdominal wall skin. One thousand of these injections were done on 656 inmates, including 13 physicians. Stanley[30] noted that there were relatively few sloughs.

Stanley found his results to be excellent. "The injections have a decided effect on conditions of general asthenia—acne is helped—impotentia is not (that might be difficult to determine in jailed patients?) and senility is helped as well." Vision was improved, also. This research was an effort based on large numbers, rather than controlled experimentation.

Brinkley

John R. Brinkley, M.D., was indeed a genius. He owned a radio station in the early 1930s when the output of a station was in no way controlled by any governmental group. Brinkley utilized his ability as a high-powered salesman to diagnose the ills of those who called or wrote into the station for medical advice. He would rarely see the patients, but from their complaints he could and often did tell them over the air what was wrong and how to cure it. For some he prescribed medications, always by number, that could only be filled at pharmacies that carried the Brinkley line of drugs. Others were given words of advice, and many others were advised to see the physician for goat gland implantation. The goat gland therapy was usually done at the "Brinkley Institute of Health." He advocated and performed thousands of goat gland transplantations in an effort to obtain rejuvenation in aging men. Men with cancer, with prostatic obstruction, with impotency, and with myriads of other unrelated diseases were found suitable for goat gland surgery by Dr. Brinkley.

In 1930, Brinkley was brought before the Kansas State Medical Board in an effort to have his license revoked. The trial of the "goat gland doctor" was accompanied by tremendous publicity. Many were the juicy tidbits that emerged from the court-room fighting. Patients were interviewed and many records of satisfied patients were read; patients relieved of their prostatic problems, their advancing senility, and even of their high blood pressure were jubilantly quoted by Brinkley's attorneys. The Mayo Brothers, the president of the American Medical Association, and numerous other prominent medical personages reported that the entire operation and results were fraudulent. The newspapers jumped to publish these stories, which were avidly consumed by the interested public.

Brinkley did have his license revoked, his radio station was not relicensed, and his "Health Institute" was closed. Goat glands, popular though they were, and related to the work of Voronoff as had been reported, ended in the discard heap, but only after having enriched their advocates. Brinkley, as a result of the proceeding against him, was forced to file bankruptcy papers. It may be of interest to know that this affair set other precedents. Following his official "unfrocking," Brinkley took his case further, to the Supreme Court of Kansas, which refused to restrain the Medical Board. The California Board of Medical Examiners and the U.S. Post Office Department were involved in cases against Brinkley; the Federal Court also reviewed the Kansas Medical Board's action and refrained from acting. Brinkley sued Morris Fishbein, editor of *JAMA*, for libel in a "Hygeia" article about the goat gland physician. Brinkley lost this action as he did most of the others. Organized medicine tried its muscles, showed off its strength, cleaned its own nest, and turned John R. Brinkley out.

Brinkley then moved to a location in Mexico close to the U.S. border. There he resumed his broadcasts and goat gland therapy, drawing more men from across the border for implantations. Goat gland surgery became even more infamous.

Eternal Youth

The eternal search for rejuvenation still continues. The very fact that more and more we utilize the Small-Carrion prosthesis, the new "pump up" insertions, and various other types of equipment shows that we have not moved very far away from the day when the penis engorgers and enlargers were selling like hotcakes and any procedure that might tend to restore the lost powers of youth was much to be desired. True, the emphasis today seems to be rightly directed toward the young man who has lost his virility due to accident or illness, yet we see these operations being attempted on older and older patients as well. Ponce de Leon would feel right at home in today's world; we are still searching for the fountain of youth!

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Medicine's microscopic missiles

Ricin, a toxic agent isolated from the seeds of the castor oil plant, gained notoriety in 1978 when the self-exiled Bulgarian Georgi Markoff was murdered with the potent poison shot from the tip of an umbrella. In a turn of events worthy of a James Bond plot, the "assassin's drug," as it is often called, has been chemically coupled to laboratory-crafted antibodies, which have then been used to home in on such elusive targets as cancer cells.

As reported in the Medical News section of the *Journal of the American Medical Association*, three researchers at the University of Texas Southwestern Medical School of Dallas used just such a combination to eliminate leukemia cells in mice.

The technique uses an old idea: find a chemical substance that will selectively search out and destroy a specific cause of a disease, such as a bacterium or virus, without harming normal cells, and you'll have what a medical investigator some hundred years ago called a "magic bullet." The theory has already found practical application with the design of antibiotics and antiviral drugs, as researchers identified chemicals that would impair bacterial or viral function without hindering normal cells.

Translating the theory to the destruction of cancer cells, however, has proved to be one of the most frustrating efforts in biomedical research. In all too many ways, cancer cells minic normal cells, leaving researchers with very little to choose from when designing chemical agents to selectively attack abnormal tumor cells.

The first real break — although it wasn't recognized as such at the time — came nearly eight years ago when Georges Kohler, Ph.D., and Cesar Milstein, Ph.D., at the Medical Research Council's Laboratory of Molecular Biology in Cambridge, England, devised a technique to fuse an antibody-producing cell with a type of cancer cell. The result: a hybrid cell that produces antibodies but is "immortalized" because of its cancerous parentage.

Such hybridomas, as they are called, give researchers a way to reap a virtually limitless supply of specific antibodies that are preprogrammed against specific foreign targets.

The preprograming takes place before the antibody-producing white blood cells are harvested from a laboratory animal that has been injected with a specific foreign substance in a technique identical to ordinary immunization. The animal's white blood cells then produce antibody against the foreign substance, known as an antigen.

It is these white blood cells, which are producing a specific antibody the researchers have induced through immunization, that are harvested and fused to cancer cells to create the hybridoma.

The resulting hybridoma thrives in a laboratory culture, spawning off identical clones that produce specific antibody. Normal white blood cells, without the genetic heritage of a cancerous parent cell, have no such immortality in laboratory conditions (or otherwise), and they cannot yet be cloned and maintained in cell culture.

With the advent of a technique to supply the keys that could be cut in the laboratory to fit any foreign lock in the body, researchers had in their grasp the most powerful tool yet devised to identify substances that coat every cell in the human body, including those associated with cancer cells.

The antibodies made in the laboratory by hybridomas, technically known as monoclonal antibodies, could function in one sense like tracers, carrying radioactive markers to the antigenic sites on cancer cells in a sophisticated scientific version of the classroom tattle-tale who points out the culprit to the teacher. Monoclonal antibodies, in fact, already are being used in research situations for cancer diagnosis and to monitor the efficacy of certain cancer therapies.

But the impact of monoclonals may be greatest, according to *JAMA* Medical News Associate Editor Catherine Macek, when they are used as guided missiles to carry toxic "warheads" directly to the appropriate target cell in an updating of the magic bullet theory. Such was the case when Jonathan Uhr, M.D., Ellen Vitetta, Ph.D., and Keith Krolick, Ph.D., at the University of Texas Southwestern Medical School of Dallas, combined ricin with monoclonal antibodies to wipe out leukemia cells in mice. (Their findings were published in the February 18/24, 1982 issue of *Nature*.)

Others are working on finding and producing specific antitumor antibodies to be used to attack cancer cells in the same way the body's own immune system fights invading bacteria or viruses.

Monoclonal antibodies also are proving useful in the diagnosis and treatment of viral diseases, such as influenza and rabies, and they may have potential as birth control agents.

Nontypable *Haemophilus influenzae* Meningitis in an Adult

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***Haemophilus influenzae* meningitis** is uncommon in adults, and virtually all reported cases have been due to encapsulated (typable) strains. We report a case of meningitis and septicemia due to nontypable *Haemophilus influenzae* in a 19-year-old patient.

Case report

A 19-year-old black woman was hospitalized for fever, vomiting, and grand mal seizures of one day's duration. Past medical history was significant for fracture of the right temporal bone in childhood and recent chronic alcoholism. On physical examination the patient was stuporous and had blood pressure of 160/70 mm Hg, pulse 100/min, temperature 39.8°C, and respiratory rate 16/min. The neck was rigid, and lumbar puncture disclosed cloudy cerebrospinal fluid with an opening pressure of 150 mm H_2O, and WBC count of 200/mm^3 with 70% polymorphonuclear leukocytes and 30% lymphocytes. The protein concentration was 72 mg/100 mL and glucose concentration 50 mg/100 mL. Gram stain revealed no organisms. The WBC count was 21,000/mm^3 with 4% band forms, 82% polymorphonuclear leukocytes, 7% lymphocytes, and 2% eosinophils. Skull roentgenograms revealed an old fracture of the right temporal bone. Computerized axial tomograms of the brain were consistent with cerebritis.

The patient improved initially following treatment with intravenous crystalline pencillin G, 3 million units every three hours for 24 hours, followed by chloramphenicol 50 mg/kg/day. Cultures of blood incubated in thioglycollate broth revealed short gram-negative bacilli after 18 hours. The organism required nicotinamide adenine dinucleotide (V factor) and hemin (X factor), grew on chocolate agar, and was catalase-positive. Serotyping with coagglutination reagents types A to F (Pharmacia Diagnostics, Piscataway, NJ) gave negative results. Cerebrospinal fluid was inoculated onto blood and chocolate agar plates and cooked meat glucose broth media, and incubated in 5% CO_2 at 35°C; after 18 hours an organism identified as a nontypable *Haemophilus influenzae* biotype 3 was recovered. (Both isolates were confirmed by City of New York Department of Health, Bureau of Laboratories.)

The isolate was sensitive to tetracycline, chloramphenicol, clindamycin, methicillin sodium, erythromycin, amikacin sulfate, gentamicin sulfate, tobramycin sulfate, and sulfonamides. A repeat lumbar puncture on the 14th hospital day revealed clear sterile fluid which contained two lymphocytes per cubic millimeter, glucose concentration of 50 mg/100 mL, and protein of 7 mg/100 mL. The patient was discharged following 14 days of intravenous chloramphenicol therapy.

Comment

Stein et al[1] found that 2.7% of 2,162 patients with *Haemophilus influenzae* meningitis were adults. In 1933, Fothergill and Wright[2] had described a relationship between age, the occurrence of meningitis due to *Haemophilus influenzae* type B, and the type-specific bactericidal activity of blood. The latter was present at birth due to passive immunity acquired from the mother, declined at the age of two months, and remained low until three years of age. By age six, individuals acquire immunity by clinical or subclinical infection with this organism. There was an inverse relationship between the presence of circulating bactericidal antibody and the incidence of meningitis.

Norden[3] reported a case of *Haemophilus influenzae* meningitis in an adult who lacked bactericidal antibodies against *Haemophilus influenzae* type B. He also found no bactericidal activity for the same organism in sera of eight out of 29 normal adults and suggested that perhaps early and frequent use of antibiotics in childhood might have been responsible for this lack of bactericidal activity in adults. Grant et al[4] found no underlying disease among nine such cases. The most frequent predisposing factors were otitis, sinusitis, head injury or cranial surgery, diabetes mellitus, agammaglobulinemia, chronic alcoholism, and splenectomy.

Of the six *Haemophilus influenzae* serotypes (A through F), type B is responsible for nearly all cases of meningitis. Snyder and Brunjes[5] found that three out of 97 *Haemophilus* meningitis isolates from adults were nontypable.

Kilian et al[6] studied biochemical characteristics of *Haemophilus* meningitis isolates in 128 children and two adults; all possessed capsules of serotype B, except for one strain from an adult which was noncapsulated biotype I. Berk and McCabe[7] studied 30 cases of meningitis due to gram-negative bacilli in adults; of four *Haemophilus influenzae* isolates two were nontypable. Wallace et al,[8] in his nine reported cases of *Haemophilus influenzae* meningitis, found three to be nontypable.

Nontypable strains of *Haemophilus influenzae* have been considered important in causing sinusitis and bronchitis in adults. However, with the advent of careful serotyping nontypable strains are being identified more frequently in adults. Very little is known about what constitutes the immunity of these strains. The present case occurred in a setting of alcoholism and prior skull fracture. Both factors may have contributed to the development of this unusual infection.

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Finicky cat strikes back

Researchers at the Centers for Disease Control (CDC) in Atlanta have traced a bacterial infection, which in this instance had stricken a single patient, to an apparently healthy adult cat.

The bacterium in question, called *Campylobacter jejuni*, has been implicated recently as a cause of enteritis, an inflammation of the small intestine, in humans. But it was thought to be transmitted by direct contact with infected animals or by consumption of contaminated water.

The researchers, led by Martin J. Blaser, M.D., write in the *The Journal of the American Medical Association* of their first experience with the disease, which had been transmitted by an apparently healthy adult cat. (Dr. Blaser, Epidemic Intelligence Service Officer at the CDC when the report was written, currently is Acting Chief of Infectious Diseases at the Veterans Administration Medical Center in Denver.)

The patient, a 23-year-old woman, had been treated symptomatically for gastroenteritis before Dr. Blaser's group was called for consultation. Specific antibiotic therapy with erythromycin was begun after a stool culture grew *C. jejuni*. The patient's symptoms resolved after a seven-day course of therapy.

The investigators could find no source for the infection other than the patient's pet cat. The animal had been defecating on the patient's apartment floor in rebellion against an unfamiliar brand of cat-litter gravel, forcing the patient to clean the feces from the floor.

Stool cultures from the cat yielded *C. jejuni*. Further laboratory studies revealed that the patient's blood serum reacted to *C. jejuni* isolated from her cat. The cat may have been infected by its owner, the researchers speculate, but they found no evidence to support that hypothesis.

Domestic cats represent a reservoir of *C. jejuni*, but if there is no direct contact with contaminated feces, the researchers advise, transmission of the infection to human owners is unlikely.

Cats also carry other disease organisms that are transmittable to humans, according to previous articles in *JAMA*. The most significant of these is *Toxoplasma gondii*, the protozoan parasite that causes toxoplasmosis. In most people, the infection is mild, often without symptoms. However, in pregnant women who have not previously been exposed to the parasite, infection can lead to severe congenital abnormalities in their unborn children.

Hepatitis Following Nonhalothane Anesthesia

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Liver dysfunction following anesthesia and surgery continues to be a difficult diagnostic problem especially when a large number of pharmacologic agents are used.[1]

We present a patient who underwent two anesthetic and surgical procedures with marked liver dysfunction following the first procedure. We discuss the possible etiologic factors which are possibly implicated in the patient's liver dysfunction and the anesthetic management.

Case report

The patient was a 59-year-old, 104.5-kg man who was admitted to the hospital with a ten-day history of pain in the right flank and dysuria. A diagnosis of right ureteric stone was made on intravenous pyelography. The patient was treated with analgesics without improvement. He had had a pilonidal cyst excised 20 years ago and a cholecystectomy 6 years previously. All laboratory tests gave normal results including a 12-channel profile. A drip intravenous pyelogram showed a stone in the right ureter. The following day he underwent a cystoscopy, retrograde pyelography, and prostatic needle biopsy under general anesthesia. Sodium thiopental, nitrous oxide, oxygen, meperidine, fentanyl, succinylcholine chloride, and tubocurarine chloride were employed. Following an uneventful surgery and anesthesia, the patient was treated with tetracycline 250 mg intravenously four times a day and propantheline bromide 15 mg three times a day. The urinary catheter was removed three days later. Subsequently the patient developed marked dysuria and frequency in urination. Phenazopyridine HCl was started on the third postoperative day, but dysuria, bladder spasm, and frequency continued, without temperature elevation. The liver enzymes were noted to be markedly elevated: SGPT 1,605 mU/mL, SGOT 575 mU/mL. Ampicillin, 500 mg orally, was substituted for tetracycline. The patient remained on phenazopyridine. On the fifth postoperative day, the SGPT fell to 1,225 mU/mL and SGOT to 477 mU/mL while the gamma GTP was 477 units. The liver enzymes gradually decreased (SGPT 304 mU/mL and SGOT 42 mU/mL). The patient felt well and had no urinary symptoms. The urine culture was negative at all times, as were the Hb_sAg and hepatitis A antibody. Liver consultation concluded that none of the medication received by the patient could be directly implicated, but drug interaction was a possibility. The patient was discharged home.

Twenty days later the patient was readmitted. The liver enzymes were normal with the exception of SGPT which remained at 80 mU/mL. The patient had lost 7 kg body weight through diet. The patient underwent right pyelolithotomy under general anesthesia. Sodium thiopental, nitrous oxide, oxygen, fentanyl, ketamine hydrochloride, and pancuronium bromide were the agents used. His recovery from anesthesia and surgery was unremarkable. The following day cephalexin, 1 g intravenously every eight hours, was started. The same evening he developed a temperature of 101°F and generalized itching. Cephalexin was discontinued, the itching disappeared, and his temperature returned to normal. There was a mild elevation in SGPT of 20 mU/mL from the preoperative level which returned to normal. The patient made a good recovery and was discharged home.

Comment

In the decade 1964 to 1974, almost every case of liver dysfunction following anesthesia and surgery was attributed to halothane, if this agent was used. At that time halothane, a far superior agent, had virtually displaced all other anesthetics and while the incidence of hepatitis remained approximately the same, it now occurred following one anesthetic agent. Recently halothane has been displaced by the less metabolized and more chemically stable enflurane. A 17-year-old patient with fatal massive hepatic necrosis following enflurane anesthesia might have been the first case of "enflurane hepatitis."[2] However, extensive ultramicroscopy studies proved the cause of the hepatitis to be Herpesvirus hominis. Perhaps many cases of halothane hepatitis reported in the past were not well diagnosed because accurate liver biopsy requires laparoscopy and experienced interpretation.[3] In addition, pathologists expert in hepatic microscopic studies have failed to differentiate between patients with viral or posthalothane hepatitis.[4] Although liver dysfunction following enflurane has been reported,[5] other more likely factors were present. Neither halothane or enflurane were used in our patient The liver plays a vital role in the transformation and detoxification of different drugs and is vulnerable to drug-induced damage.

Zimmerman[6] listed over 200 agents producing liver dysfunction.

In the present case, the preoperative liver function test results were normal. On the third postoperative day, they became markedly abnormal and remained so for the following three days, then declined.

Thiopentone has been reported to produce hepatitis.[7] The reported cases of thiopentone hepatitis are few considering its extensive daily use, for many years. Experimental work has proved it to be a safe anesthetic providing its dose is not higher then 850 mg.[8] Our patient receive thiopentone, maximum dose 400 mg twice at two-week intervals. The liver enzymes showed minimal changes following the second procedure. The patient never received tranquilizers,[9] diazepam, methyldopa, or phenytoin.[10]

General inhalation anesthetics with the exception of nitrous oxide are hypotensive and compromise liver blood flow.[11] Although the liver is resistant to hypoxia,[12] hypoperfusion with mild hypoxemia[13] can lead to reactive metabolite production, if halothane is used, and adverse effects on the liver.[14] No congestive heart failure, myocardial infarct,[15] shock, or hypotension[16] occurred in our patient.

Tetracycline was given intravenously following the first operative procedure. It has been shown to produce liver dysfunction.[17] Tetracycline intolerance is certainly possible in our patient since liver function tests returned to normal when the medication was withdrawn.

The patient underwent genitourinary instrumentation. This has been reported to produce liver dysfunction manifested by fever, jaundice, and enzyme elevation. It is believed due to cryptic septicemia or endotoxemia.[18] Bradfield and Wells[19] suggested that the Kupffer's cells clear endotoxin and immune complexes and in doing so, themselves are damaged with the release of lysosomes. If there is preexisting liver disease and a deficiency of normal lysosomal enzyme antagonists, it would tend to increase enzyme-induced liver damage. The blood and urine cultures in our patient were negative. The fever appeared four days after surgery and the elevated temperature returned to normal after the tetracycline was discontined. These facts tend to discount the possibility of septicemia.

The decision to proceed to the second operation 20 days later came when the hepatic functions (SGPT, SGOT) and metabolic activity (serum bilirubin, albumin, and prothrombin time) returned to normal. Some authorities[20] advocate liver biopsy and evaluation of mitochondrial respiratory enzymes to determine the metabolic status of the liver and its ability to withstand the surgical stress of another operation. However, our patient's mental status, physical condition, and liver functions had returned to normal.

In view of this, morphine[21] was given as premedication and sodium pentothal in permitted doses as an induction agent. Ketamine was used to avoid hypotension during induction. Ketamine is reported to produce a mild, unexplained increase in liver enzymes attributed to a hepatocellular effect.[22]

Reduction of liver blood flow during maintenance of the second anesthetic procedure was prevented by using fentanyl and pancuronium.[23] The use of inhalation anesthetics were avoided. Halothane, although it improves liver blood flow, was not used because of the possibility of recurrence of hepatitis which would be attributed to halothane.

The anesthetic machine was fitted with a halothane vaporizer, and inadvertent contamination of the circuit[24] was suspected as a possible cause of liver dysfunction. This was eliminated because the patient received a second anesthetic with the same machine within a short interval.

Transfusion hepatitis is excluded in our patient as our patient received no blood or blood products.[25]

The presence of cholecystitis with ascending cholangitis and hepatitis on preexisting cholelithiasis or postoperative acute acalculous cholecystitis was ruled out in our patient on the basis of history and clinical and laboratory examination.[26]

Slight changes in liver function as manifested by liver-function tests are said to be no more dangerous than fluctuations in blood sugar with and without food intake, after different types of surgery.[27] These changes are attributed to increased sympathetic activity, cortisol, free fatty acids, blood sugar, and diuretic hormone.[28] However, in this patient, enzymatic changes were more than minimal.

The adverse effect on the liver of the intravenous pyelography dye during the operation was questioned. The patient had had an intravenous pyelogram one week before admission, followed by a normal 12-channel profile.

In summary, we present a patient with a history negative for alcohol intake, and hepatitis and normal preoperative liver enzymes. We believe the cause of his hepatitis was either tetracycline intolerance or cryptogenic endotoxemia. The level of the liver enzyme elevation signifies drug-induced hepatic dysfunction,[29] and the normalization of the enzymes following withdrawal of tetracycline indicates that the insulting cause was most likely the tetracycline.

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On the trail of ancient earaches

How far back in time can disease be traced? The question is often problematic because signs of disease in human tissues often vanish with the process of decay after death. But when diseases leave their mark on durable human bones, scientists can read the evidence like road signs along an evolutionary path.

To determine whether the course of otitis media, a common ear infection, has changed over the past thousand years, South Dakota physicians John B. Gregg, M.D., and James P. Steele, M.D., compared x-rays of the mastoid bones from ancient and modern populations for evidence of the indelible patterns left by the spread of the infection into the bony cavity.

Gregg and Steele, professors of otolaryngology and radiology, respectively, at the University of South Dakota School of Medicine, report their findings in the July 23/30 issue of the *Journal of the American Medical Association.*

Exceeded only by the common cold, otitis media is the second most frequent infection occurring in Indian children in central South Dakota. The authors examined x-rays of the mastoid, the bony ridge at the back of the ear, from 296 children aged 10 to 15 years attending an Indian school; 795 patients aged 20 to 92 years, most of whom were white males, from a Veterans Administration (VA) hospital; and the remains of four Indian cultures dating from 800 A.D. to the late 19th century.

Gregg and Steele found that the school children and the Indians who lived before European colonization had the highest percentages of normal mastoid bones and the lowest percentages of abnormalities compared to the VA hospital patients and the Indians who lived after European contact.

The lower incidence of mastoid abnormalities in the Indian school children suggests that mastoiditis has largely been eliminated in central South Dakota and that otitis media does not result in mastoid complications as frequently as in the past, say the authors.

The increased frequency of abnormalities seen in the remains of Indians who lived after European colonization may have resulted from contact with virulent infectious agents to which the Indians had no immunity, brought to the Americas by immigrants, Gregg and Steele speculate.

Their findings offer evidence that either the effect of otitis media on mastoid development is being altered, or the patterns of ear infections are changing, or both. Better nutrition and health care and the availability of antibacterial drugs are the most likely factors to credit for the change, the authors say.

Allopurinol Hepatotoxicity Potentiated by Tamoxifen

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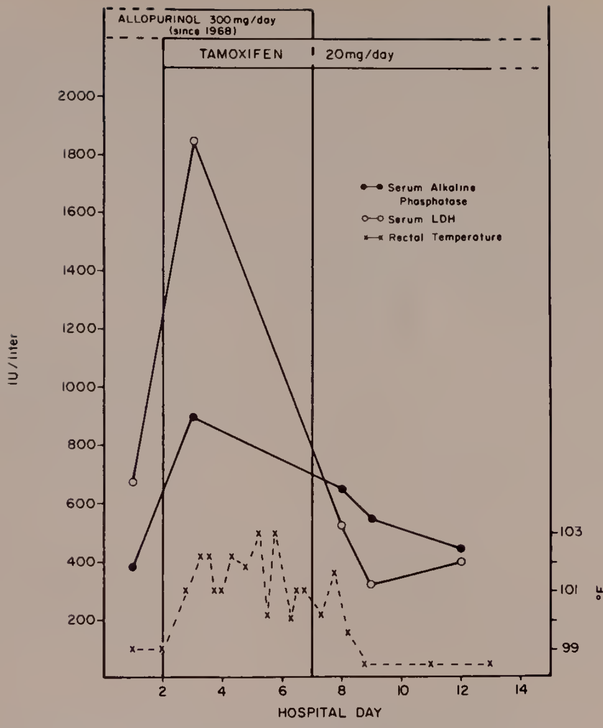
Allopurinol and tamoxifen have many adverse effects.[1-5] Although both drugs have been used concomitantly, no drug interaction has been reported. A possible drug interaction, in which mild chronic allopurinol-induced hepatotoxicity was exacerbated by tamoxifen, is reported here.

Case report

A 69-year-old white man was admitted to the clinical research center of Montefiore Hospital for palliative treatment with tamoxifen of his advanced prostatic carcinoma. He had a history of gouty arthritis and had been receiving allopurinol, 300 mg per day, for the previous 12 years.

Laboratory work-up revealed a mild normocytic, normochromic anemia. The leukocyte count was 12,000 per cubic millimeter, with a normal differential. Serum electrolytes, urea, and creatinine were within normal limits. Serum lactic dehydrogenase (LDH) was 690 IU, alkaline phosphatase 376 IU, serum glutamic-oxaloacetic transaminase (SGOT) 74 IU, and serum glutamic-pyruvic transaminase (SGPT) 79 IU per liter; total bilirubin was 0.18 mg per deciliter. Serum prostatic acid phosphatase level was 42.5 IU per liter.

The patient was started on tamoxifen, 10 mg orally (PO) twice a day (BID): 16 hours later his rectal temperature rose abruptly to 102°F. There was no skin rash, myalgia, or arthralgia. Sputum, blood, and urine cultures were negative. Purified protein derivative (PPD), intermediate strength, was negative. Hematocrit was unchanged. The leukocyte count increased to 14,400 per cubic millimeter, with 74% polymorphonuclear neutrophils, 18% lymphocytes, and 9% monocytes; there was no eosinophilia. Serum LDH increased to 1,850 IU and alkaline phosphatase to 900 IU per liter; SGOT and SGPT remained unchanged. Serum protein, bilirubin, urea, and creatinine also remained unchanged and were within normal limits. The hepatitis B surface antigen test findings were normal.



Potentiation of allopurinol hepatotoxicity by tamoxifen.

The fever and enzyme elevations persisted over the next four days, and, since no other cause for the fever was found, allopurinol toxicity was suspected. On discontinuing this drug, while continuing tamoxifen, the fever subsided over the next 24 hours and the LDH and alkaline phosphatase levels declined rapidly, but remained slightly elevated as they had been prior to tamoxifen administration, probably as a result of the patient's underlying metastatic disease. The leukocyte count declined to 10,400 per cubic millimeter. The patient remained afebrile subsequently. The course of events is depicted in the Figure.

Comment

Several cases of allopurinol-induced hepatotoxicity have been reported.[1-3] The underlying mechanism has been suggested to be an immune-mediated reaction to allopurinol or its metabolites. An increased incidence of adverse reactions has been noted in patients with renal impairment, or when thiazide diuretics were given concomitantly.[2,3] Since renal impairment and thiazide diuretics are known to prolong the plasma half-life of allopurinol and its metabolite oxypurinol, adverse drug reactions could be due to increased serum levels of these compounds.[2,3]

Tamoxifen, normally considered an antiestrogen,[4] also has estrogen agonist effects, as indicated by its ability to raise the blood levels of cortisol-binding globulin (CBG) and sex-hormone-binding globulin (SHBG).[5] Since estrogens can cause a reduction in hepatic excretory function,[6] the estrogen agonist effect of tamoxifen may alter the metabolism of allopurinol, thereby resulting in an increased blood level of either the drug itself or its metabolites, and thus potentiating its hepatotoxic effect.

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Diet pills implicated in kidney and muscle injury

Three Oregon physicians call for a reappraisal of phenylpropanolamine, a drug found in more than 70 over-the-counter diet pills and nasal decongestants.

Two patients suffered acute kidney failure and muscle tissue injury after each took different brands of phenylpropanolamine-containing diet pills, report Robert D. Swenson, M.D., Thomas A. Golper, M.D., and William M. Bennett, M.D., from the department of medicine at the Oregon Health Sciences University and Veterans Administration Medical Center, Portland. In both patients, concurrent medical conditions precluded proof that phenylpropanolamine was directly responsible for their illness. However, acute kidney failure associated with the drug has been previously reported.

The authors speculate that phenylpropanolamine can have a direct toxic effect on both kidney and muscle cells. The drug may also increase muscle cell metabolism to a point at which the delivery of nutrients is insufficient, resulting in cell injury or death, they say.

In the medical literature to date, the authors add, there are three reported cases of acute kidney failure associated with phenylpropanolamine ingestion and several cases of other serious toxic complications, including sudden central nervous system stimulation and hypertension. Based on these reports, a reappraisal of the drug's role in over-the-counter preparations is warranted.

New diseases

In the wake of Video Game Epilepsy, described several months ago in the *British Medical Journal*, comes a brand new disorder — Space Invaders Obsession.

Three Duke University physicians, writing in a letter to the editor of the *Journal of the American Medical Association*, coined the term to describe the actions of three engaged men who sharply increased their playing of the Space Invaders video game — up to fifteen times per week — immediately before their marriages. One man even delayed his honeymoon for an hour to "get in a few more games."

"Each man's obsession with playing Space Invaders was a means of handling his anger over the recent commitment to marriage," writes Donald R. Ross, M.D., Douglas H. Finestone, M.D., and Gordon K. Lavin, M.D. Because the game player is ultimately defeated, they add, guilt over expressing the anger is relieved.

Soon after marriage, each man returned to his preobsessional frequency of playing Space Invaders (zero to three times per week).

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Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

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Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

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Books Reviewed

Willis's Oxford Casebook (1650–1652). Introduced and edited by Kenneth Dewhurst, TD., M.D., D.Phil., F.R.C. Psych. Oxford, Sandford Publications, 1982. Hardcover. Illustrated, 199 pages, £12.

Following his edition of *Willis's Oxford Lectures* (1980), Kenneth Dewhurst has presented us with a transcription of the extant casebook Thomas Willis kept when he was a young physician starting out in practice at Oxford after the Civil War. This precedes Willis's *Cerebri anatomae* of 1664, his *Hystericae et Hypochondriacae Pathologia* &c. of 1670, and *De Anima Brutorum* of 1672, on which his claim as the father of neuroanatomy, neurophysiology, and neurology can be based. These case histories show Willis making the tentative transition from Galenism to early iatrochemistry at the time he was an active member of the Oxford Experimental Club. The cases are the first steps of the man who later became a Fellow of the Royal Society and a brilliant London practitioner. But we can see the matrix from which his crystalline ideas developed and took shape.

Dr. Dewhurst has provided fine introductory material: a short sketch of Willis's early life, his career at Oxford, the impact of the Civil War, his relationship with the Oxford virtuosi. The annotations are thorough, scholarly, and serve to explain just those items in the manuscript that would be obscure to 20th century readers. With this second book on Willis, plus his monographs on Sydenham, Locke, and Dover, plus his survey of *Oxford Medicine*, Dr. Dewhurst can rightfully be acknowledged as England's leading medical historian for the Restoration and the 18th century. It is a pleasure to read a work of scholarship that is so informative and so meticulously executed. **William B. Ober, M.D.**

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* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

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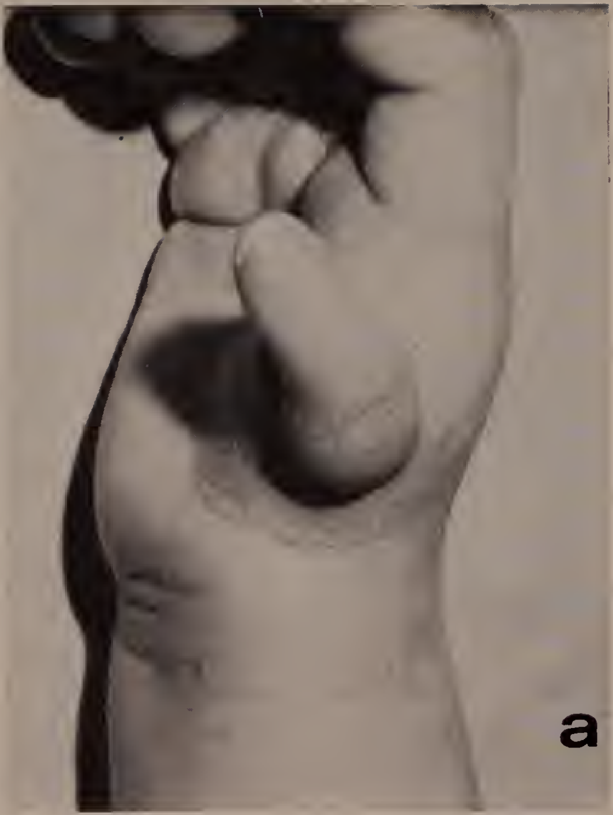
The pouce floutant is the functionless underdeveloped thumb that may or may not be associated with a hypoplastic radius. When it is small, tradition dictates that it should be removed shortly after birth. When the pouce floutant is relatively large, however, the hand surgeon may elect to lengthen and motor it in order to provide a functional thumb. The condition may be unilateral or bilateral and requires a comprehensive plan of management.

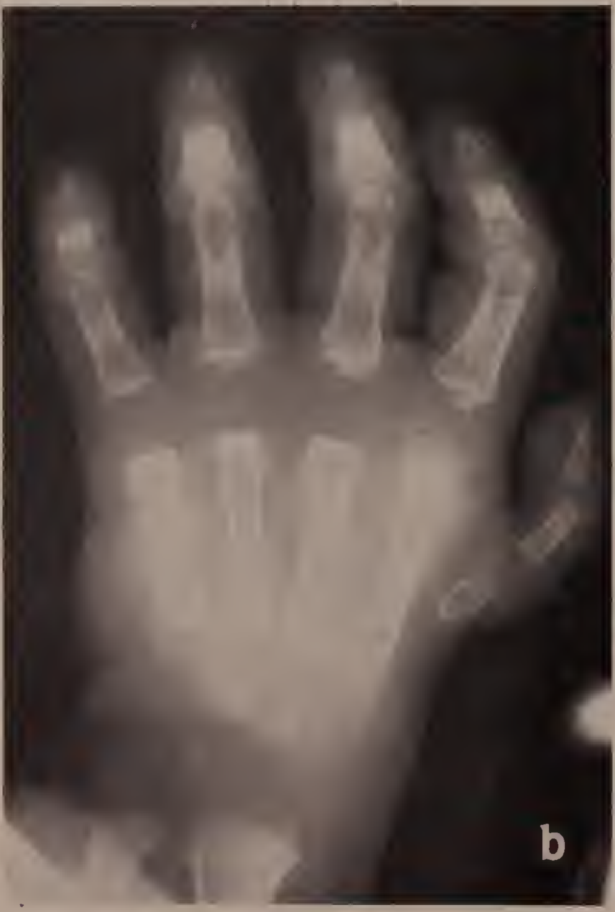
A review of the literature indicates that most authors have limited experience with this problem. Barsky[1] reports broadening the skin base with a skin graft and z-plasty and then bone grafting the underdeveloped thumb into a reasonable size. In 1965, Edgerton[2] reviewed three cases similar in management to Barsky's cases and found the results unsatisfactory. The problem with this management was that the enlarged thumb had not been provided with adequate motors. R.E. Carroll believes that the lengthened and motored floating thumb can be functional, but the appropriate tendon transfers are essential.

Seven cases of the pouce floutant have been reviewed and the following case report illustrates many of the details of management.

Case Report

The patient was first seen at the age of 1 year and was found to have congenital bilateral hypoplastic thumbs (Fig. 1a,b) and cleft palate and lip. A first-stage lengthening of the larger pouce floutant on the right was performed by interposing the proximal phalanx from the left fifth toe between the remnant of the first metacarpal and proximal phalanx (Fig 1c). Eleven months later, the patient underwent a second-stage lengthening in which the proximal phalanx of the right fifth toe was placed into an osteotomy of the first metacarpal. Cleft palate surgery delayed further hand surgery until the age of 5 years. At that time, a final third-stage lengthening was performed utilizing the proximal phalanx of the left fourth toe (Fig 1d,e). One year later, the thumb was motored by performing an opponensplasty tendon transfer of the abductor digiti quinti. A residual anomalous abductor pollicis longus assisted in extending the thumb (Fig 1f,g).





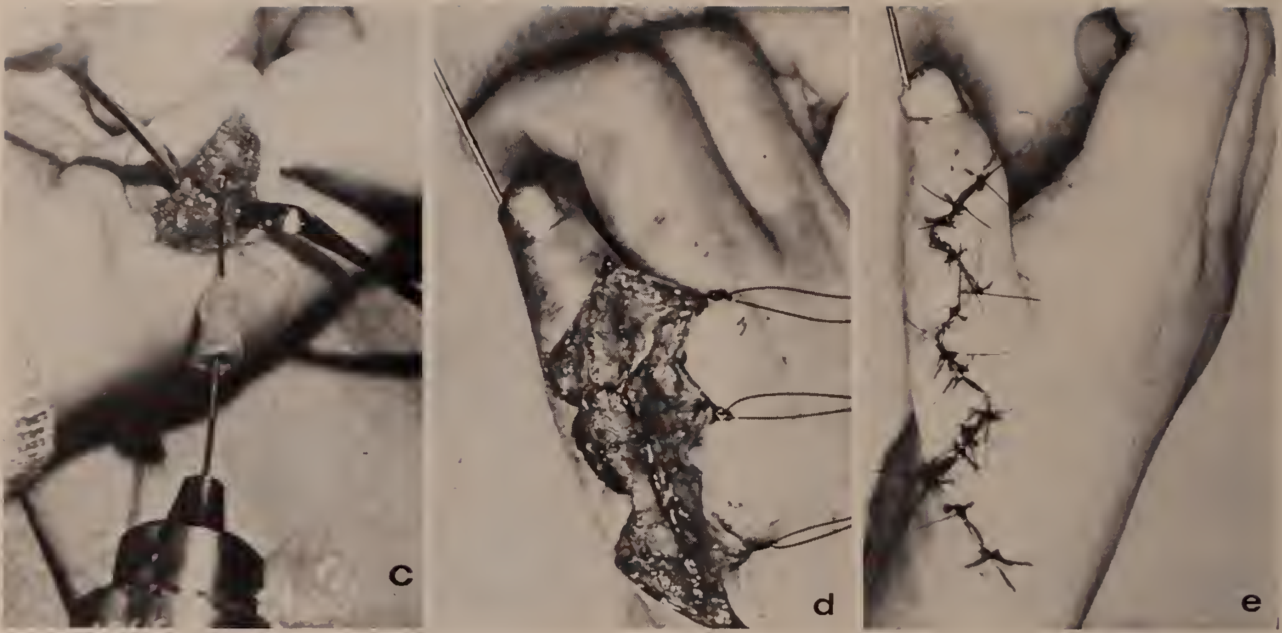
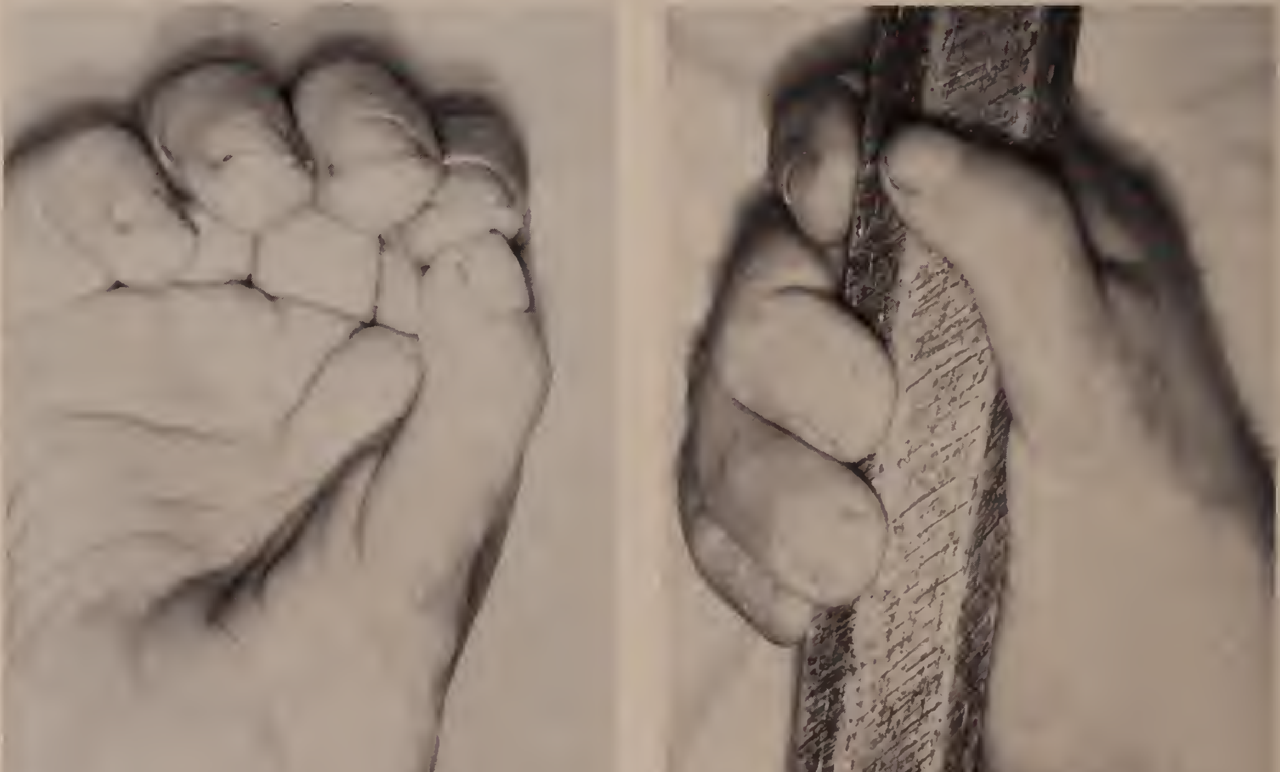


FIGURE 1. (a) Right hand with relatively large, functionless pouce floutant; (b) preoperative x-ray demonstrating hypoplastic thumb; (c) first-stage lengthening performed by interposing the proximal phalanx of the left fifth toe between the thumb metacarpal and proximal phalanx; (d) appearance of right thumb at third-stage lengthening; (e) the right thumb following third-stage lengthening; (f) following abductor digiti quinti opponensplasty, opposition is possible; (g) the ability to grasp large objects is much improved.



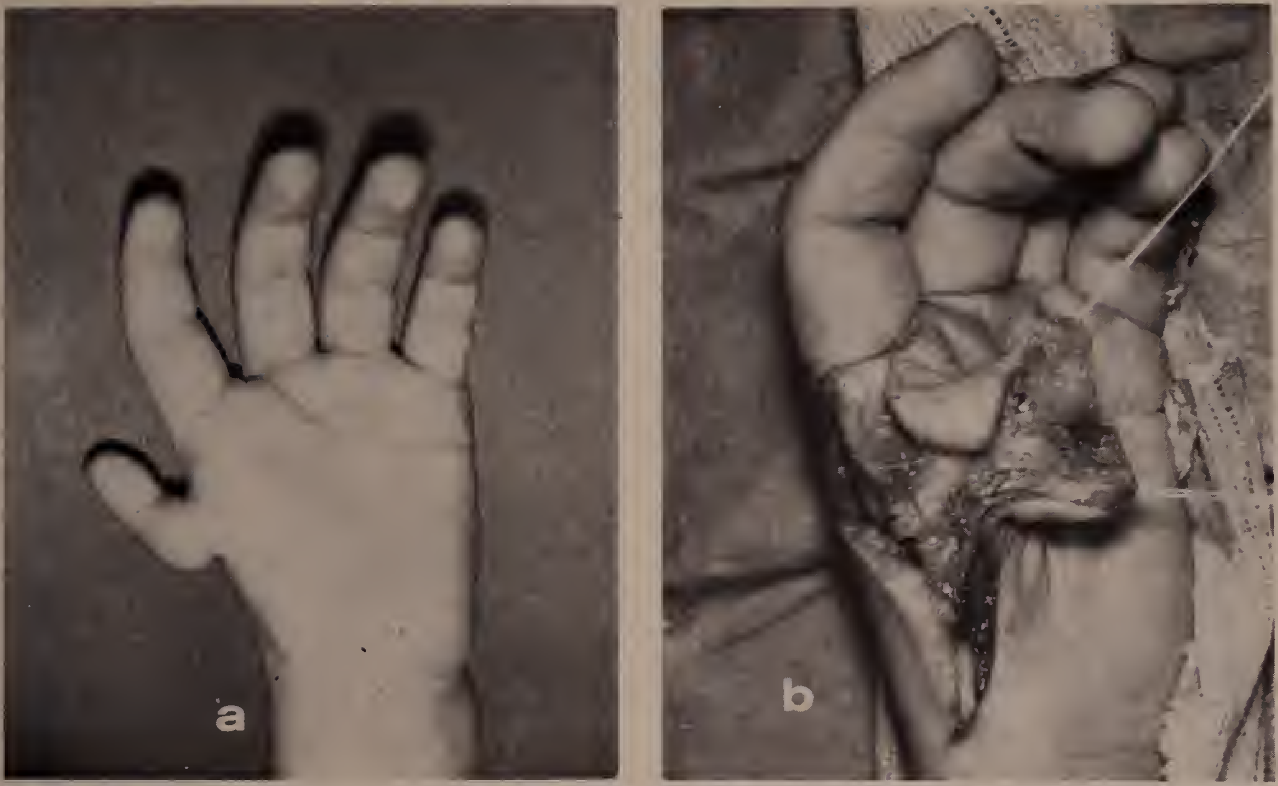
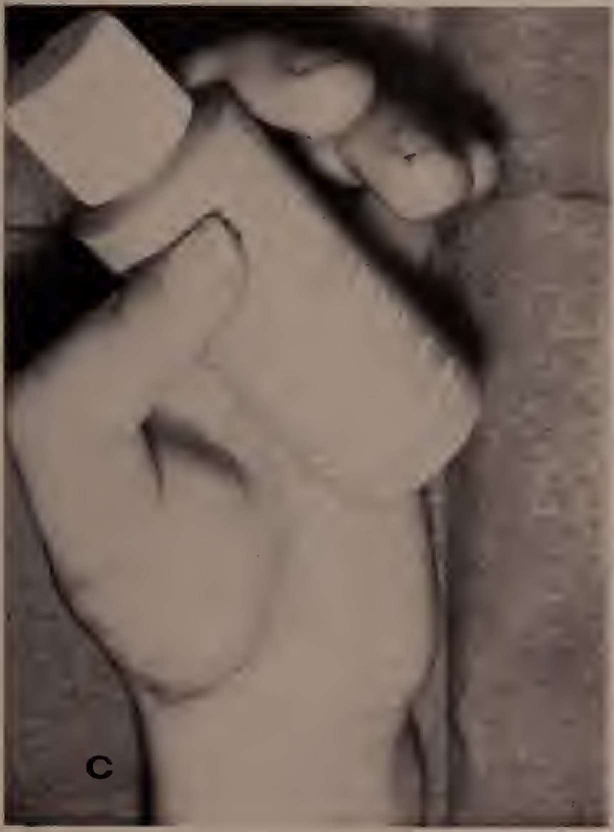


FIGURE 2. Left hand of patient in Fig 1: (a) small, functionless pouce floutant; (b) skin from pouce floutant utilized as extra flap during index pollicization; (c) appearance following index pollicization; functional result was excellent.



Because of the smaller size of the left pouce floutant and a scissoring pattern of the left index and long fingers, we elected to perform a pollicization of the left index finger (Fig 2a). The skin flap during the fileted left pouce floutant was used as an extra flap during the index pollicization (Fig 2b,c,d).

Results

Three of the seven hands reviewed had very small floating thumbs, which were removed shortly after birth. Routine index pollicizations were later performed. At follow-up, these hands all had good function, but a small neuroma measuring one fourth to one half inch was seen at the residual stalk of the index finger in each case. The pollicization was performed as late as age 3 years in one patient with a retained pouce floutant. Whenever possible, the extra skin obtained from the pouce floutant was used as a flap in the index pollicization.

In the four thumbs that were lengthened, toe bones were used as grafts and placed at interosteotomy sites or between the hypoplastic bones. Tendons were later transferred to provide adequate motors to the lengthened thumbs. The abductor digiti quinti (Huber procedure[3]) or a flexor sublimis tendon transfer was used as a thumb abductor. Extension of the thumb may be achieved with an extensor indicis proprius transfer, although this was not required in any of the cases reviewed.

All of the children in this series and their parents were extremely pleased with the cosmetic and functional results of the lengthened thumb, which resulted in a five-digit hand. They estimated its use in 60% to 80% of their function and noted particular improvement in the ability to grasp large objects. In each case, coordinated use of the index finger and the lengthened thumb was achieved. When attempting to pick up small objects, however, scissor positioning of the index and long fingers was still used by some patients.

Summary

The different aspects of management of the pouce floutant have been presented. The major factor affecting therapeutic decisions is the size of the pouce floutant. When small, the pouce floutant should be amputated and index pollicization performed. The skin from the pouce floutant is useful as an extra flap during the pollicization procedure. If the pouce floutant is relatively large, staged lengthening procedures, followed by tendon transfers, will provide a functional thumb. Whether the pouce floutant is retained or amputated, it is possible to improve the function of these patients with properly timed appropriate surgery.

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Clinical trials of an artificial blood to begin

It looks a little like runny mayonnaise. It is chemically related to teflon. And 16 years ago, in a vivid demonstration, it was shown that mice totally submerged in it could swim around happily and not drown.

The substance is known as artificial blood and the first commercially produced example — brand named Fluosol — is being readied for shipment to a network of medical centers for clinical trials, according to the *Journal of the American Medical Association.*

Fluosol is distributed in the U.S. by Alpha Therapeutics Corp., a subsidiary of the Green Cross Corp. of Osaka, Japan, has been approved for testing, but only in people who would otherwise refuse blood transfusions.

Most of these people will be members of Jehovah's Witnesses, a religious group that cites a biblical passage as grounds for refusing blood transfusions.

Two medical centers that have already received approval to begin using Fluosol are Michael Reese Hospital in Chicago and Harbor/UCLA Medical Center in Los Angeles.

In Japan, where Fluosol has been used in some 500 patients, it appears that the compound may soon be approved by the Japanese equivalent of the FDA.

Fluosol acts in the body as a medium for the transportation of oxygen, the same job that hemoglobin performs in real blood. However, its effects last only about 72 hours, and it lacks clotting factors and other properties of the real thing.

Certain physicians have expressed concern that widespread publicity about artificial blood might mislead potential blood donors into thinking they weren't needed.

On the contrary, blood donors are very much needed for the foreseeable future. Oxygen transporters such as Fluosol are not envisioned as a treatment of choice when blood is available, according to Alan Friedman, Ph.D., of Alpha Therapeutics.

Obituaries

Dana Winslow Atchley, M.D., New York City. Died June 27, 1982; age 90. Johns Hopkins University School of Medicine, 1915. Membership: Academy of Medicine; American Society for Clinical Investigation; Master of American College of Physicians; Diplomate American Board of Internal Medicine; New York County Medical Society; Medical Society of the State of New York.

Milton Blaine Bergmann, M.D., Southampton. Died July 18, 1982; age 88. SUNY Downstate Medical Center-Brooklyn, 1918. Membership: Academy of Medicine; American Academy of Ophthalmology and Otolaryngology; Pan American Medical Association; Fellow American College of Surgeons; Diplomate American Board of Ophthalmology; Suffolk County Medical Society; Medical Society of the State of New York.

Herman S. Bloomstein, M.D., Port Jefferson. Died July 9, 1982; age 74. Tulane University School of Medicine, 1933. Membership: Suffolk County Medical Society; Medical Society of the State of New York.

Carmelo P. Cancellieri, M.D., Southampton. Died July 11, 1982; age 66. Columbia University College of Physicians & Surgeons, 1941. Membership: American Academy of Allergy, Pan American Medical Association; Fellow of American College of Allergists; Suffolk County Medical Society; Medical Society of the State of New York.

Joseph A. C. Gabriels, M.D., Albany. Died June 10, 1982; age 91. Harvard Medical School, 1918. Membership: Diplomate American Board of Ophthalmology; Medical Society of the County of Albany; Medical Society of the State of New York.

Walter Peter Gage, M.D., Peekskill. Died July 6, 1982; age 77. Columbia University College of Physicians & Surgeons, 1931. Membership: Academy of Medicine; Fellow American College of Obstetricians and Gynecologists; Fellow American College of Surgeons; Qualified Fellow International College of Surgeons; Diplomate American Board of Obstetrics and Gynecology; Medical Society of the County of Westchester; Medical Society of the State of New York.

Edward M. Gould, M.D., Palm Beach, Florida. Died July 16, 1982; age 81. Yale University School of Medicine, 1924. Membership: American Psychiatric Association; Diplomate American Board of Psychiatry and Neurology; Medical Society of the County of Queens; Medical Society of the State of New York.

David M. Grayzel, M.D., New York City. Died June 21, 1982; age 85. Columbia University College of Physicians & Surgeons, 1931. Memberships: New York State Society of Pathologists; New York Pathological Society; American Association of Pathologists and Bacteriologists; Fellow American College of Pathologists; Diplomate American Board of Pathology; New York County Medical Society; Medical Society of the State of New York.

Jacob Harris, M.D., Brooklyn. Died December 31, 1981; age 74. University of Maryland School of Medicine, 1932. Membership: Medical Society of the County of Kings; Medical Society of the State of New York.

Carl Foster Meekins, M.D., Highland. Died June 30, 1982; age 85. Tufts University School of Medicine, 1926. Membership: Medical Society of the County of Ulster; Medical Society of the State of New York.

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Lynn Rumbold, M.D., Rochester. Died June 12, 1982; age 83. University of Buffalo School of Medicine, 1922. Membership: Academy of Medicine; American Occupational Medical Association; Fellow American College of Surgeons; Qualified Fellow International College of Surgeons; Medical Society of the County of Monroe; Medical Society of the State of New York.

Eva Shribman Vandow, M.D., The Bronx. Died May 5, 1982; age 73. Boston University School of Medicine, 1932. Membership: American Public Health Association; American Psychiatric Association; New York County Medical Society; Medical Society of the State of New York.

Harry I. Weinstock, M.D., New York City. Died July 8, 1982; age 82. Columbia University College of Physicians & Surgeons, 1923. Membership: American Psychoanalytic Association; American Psychiatric Association; Diplomate American Board of Psychiatry and Neurology; New York County Medical Society; Medical Society of the State of New York.

Doris Baker Zenger, M.D., East Hampton. Died December 10, 1981; age 62. University of Michigan Medical School, 1948. Membership: American Academy of Pediatrics; Diplomate American Board of Pediatrics; Suffolk County Medical Society; Medical Society of the State of New York.

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A CRITIQUE OF UNIVERSAL DIET RECOMMENDATIONS FOR PREVENTION OF CORONARY HEART DISEASE

Part II of three views on the diet–heart issue

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Coronary heart disease (CHD) as a result of atherosclerosis is the leading cause of death in the United States. Despite a 20% decline since 1960, CHD still accounts for nearly 50% of the deaths in the U.S.[1]

With the identification of high levels of serum cholesterol as one of the major risk factors in the development of atherosclerosis, dietary recommendations have been put forward which focus on diet modification for management of CHD. These recommendations are based on a diet-heart hypothesis which suggests a direct link between dietary lipid and CHD. However, a critical question which challenges this direct connection remains unanswered: should dietary recommendations for the prevention of a coronary heart attack (CHA) be made to the entire U.S. population or only to those diagnosed "at risk" for CHD? The current controversy appears to be a failure to properly interpret the scientific data and a tendency to emphasize only half-truths.

The Diet-Heart (Lipid) Hypothesis

The fundamental assumptions of the diet-heart hypothesis are (1) a positive link between the amount of ingested saturated fat and cholesterol and the level of serum lipids, especially cholesterol, (2) a positive relationship between all levels of serum lipids and cholesterol and the incidence of CHD, and (3) reduction of risk for most Americans of CHD by adhering to the AHA recommendations.

CHD is the result of the occlusion of the coronary arteries by *atheromas* (plaque) which form in the intima of the arterial walls from deposited cholesterol and lipids. Atheromas are thought to form as a result of certain lipid-protein complexes in the blood called low density lipoproteins (LDL). The LDL fraction appears to increase the risk of CHD because of an efficient ability to transport the metabolic products of foods such as dietary fat and cholesterol to the site of plaque formation.

It is now generally accepted that cholesterol from fat and very low density lipoproteins (VLDL) in the blood are not atherogenic. In addition, evidence suggests that the high density lipoproteins (HDL) actually scavenge cholesterol from tissues and arteries. Furthermore, the diet-heart hypothesis is hampered by lack of a clear definition and improper use of the terms "hyperlipidemia" and "hypercholesterolemia."

The problems with formulating an all-encompassing diet-heart hypothesis has been the complex etiology of CHD. For example, although studies show that serum cholesterol levels are positively correlated with the incidence of a CHA, others show that this relationship is not linear and holds true only at serum levels above the 225-240 mg/dl range. In addition, a number of factors influence serum cholesterol levels including variable individual responses to dietary lipids and to cholesterol-lowering components in food such as pectins and plant sterols.

In spite of these known variables, the American Heart Association (AHA) has advocated a single set of dietary guidelines for all Americans. These are based on the above diet-heart assumptions and recommend reducing the daily consumption of cholesterol to less than 300 mg and total calories from fat to under 30%.[2]

Positions of Health Groups

The American Medical Association (AMA) recognizes that the link between diet and the risk of CHD is complex, especially the role of serum lipoproteins in that relationship. Thus, the AMA, the Food and Nutrition Board of the National Academy of Sciences, and a task force of the American Society of Clinical Nutrition have not endorsed the AHA dietary recommendations for the entire U.S. population.[3,4,5] Most opponents of the AHA recommendations agree, however, that in certain responsive individuals and under well-defined clinical settings reduction of dietary cholesterol and saturated fat will statistically, and sometimes clinically, influence serum cholesterol. The AMA, therefore, recommends that dietary modification only be authorized after a person has been diagnosed as hyperlipidemic.

The AHA dietary recommendations however, are for the entire U.S. population. The AHA believes that normal and high levels of serum lipids and cholesterol cannot be defined. Therefore, this organization suggests that all foods that have been found to experimentally increase blood lipid levels be consumed in reduced amounts. The AHA implies that under this line of reasoning, the persons "at risk" would benefit while the others would be unaffected. Unfortunately, these dietary recommendations have been shown to have little effect on free-living adults.[6,7,8,9,10,11]

Before 220 million Americans are advised to make radical changes in their diet, food purchases and preparations, and before agriculture is directed to make major technological changes in product development, there must be reasonable assurance that the cholesterol diet-heart hypothesis is correct and that the benefits are worth the risks.[12] Indeed, the probability of benefit may be less than the American public has been led to believe.[9,10,11]

Would the "Prudent" Diet Benefit All Americans?

Data from epidemiological studies, such as that of the preliminary and final reports of the National Pooling Project (NPP) and the Health and Nutrition Examination Survey (HANES) may be the closest one can come at the present time to estimating the number of coronary heart attacks as a function of serum cholesterol levels.[16,17,18] Table I relates serum cholesterol levels to the incidence of first coronary events, sudden death, and all CHD deaths.[16] These data clearly show that the incidence of coronary events do not increase substantially until serum cholesterol levels are greater than 249 mg/dl and thus do not support the concept of a linear increase cross-cultural comparisons which show that risk decreases with decreases in plasma cholesterol levels.

Diet and Coronary Heart Disease

Over 20 years of extensive epidemiological findings consistent with clinical and pathologic and animal experimental data have identified at least four major risk factors which occur with a high degree of frequency in individuals who have coronary heart disease (CHD). They are high plasma cholesterol, particularly elevated low density lipoprotein cholesterol (LDL), hypertension, cigarette smoking and diabetes. Secondary risk factors are high blood triglycerides, low plasma high density lipoproteins (HDL), obesity, stress, lack of exercise and personality type. Diet may affect four of these. In addition, male sex, age and familial history are implicated.

Serum cholesterol and lipoprotein levels are influenced by many factors. Whether the evidence comes from epidemiologic or metabolic studies, no factor has been more closely correlated with them than diet, particlarly the saturated fat and cholesterol composition of the diet.[8]

Saturated fat tends to raise the level of cholesterol in the blood. Several metabolic studies have provided unequivocal evidence that saturated fats *per se* increase concentrations of cholesterol in man.[9,10] The plasma cholesterol elevating effect of saturated fatty acid is approximately twice as great as the lowering effect of polyunsaturated fatty acid.[10]

Dietary cholesterol is a determinant of plasma cholesterol although the quantitative effect seems to be subject to considerable individual variation. Over a low to moderate range of intake (100-700 mg/day), the plasma response to cholesterol is linear and amounts to about 5 mg/day change in dietary cholesterol.[11,12] Others have reported that plasma cholesterol is not markedly affected by dietary cholesterol once a substantial intake is achieved.[13]

Certain types of fiber are effective hypocholesterolemic agents. Large amounts of mucilaginous fibers (guar and pectin)[14] reduce plasma LDL and cholesterol levels as do various legumes, oats, apples, and a mixture of vegetables; whereas wheat fiber is without effect. The mechanism is unclear. Carbohydrates, simple or complex, as part of a mixed diet seem to have little effect on lipid levels.[15]

Plasma concentrations of HDL cholesterol are significantly increased by ethanol. The effects on HDL are apparent at intakes of 5 to 6 ounces of alcohol per week.[16] While moderate alcohol consumption is negatively associated with coronary heart disease, excess consumption exerts a significant hyperlipidemic (particularly VLDL) effect in some people.

Plasma cholesterol and triglyceride levels have been shown to decrease as a result of weight loss. The decrement is independent of initial lipid levels.[17]

Public Health and Dietary Recommendations

Given that dietary modification can lower plasma cholesterol, the question of the efficacy of making such recommendations to the general public always arises. Approximately six decades of evidence have provided a considerable degree of certainty that the level of plasma cholesterol is determined by the intake of dietary cholesterol, saturated fat, polyunsaturated fat and calories. The development, progression and regression of atherosclerosis are closely related to the resultant plasma cholesterol level.

Several carefully controlled dietary studies have been carried out to determine whether or not a modification aimed at reducing plasma lipids will decrease the risk of coronary artery disease. The end result was a lowering of plasma cholesterol in the participants and suggestive, but not unequivocal, reduction in CHD mortality.[18-21] Limitations exist in the interpretation of such data. It is somewhat misleading to relate recent dietary practices to the risk of CHD when development of atherosclerosis occurs over the decades. Multiple unavoidable random errors in the collection of dietary data would lead to underestimation of any relation between nutrients and CHD. Also these clinical trials may have failed to detect a substantial effect on CHD since they began in adults whose atherosclerosis was advanced and potentially irreversible. Analysis of the Framingham data (epidemiological) suggests that reduction of plasma lipids substantially reduced coronary death rate, but this point has not been proven directly. A definitive study of the effect of diet on the prevention of coronary heart disease has not been undertaken although a preliminary feasibility study was completed.[18]

In 1971, after thorough study by the National Heart and Lung Institute Task Force on Arteriosclerosis, the decision was made not to conduct a nationwide, controlled diet study because of design and implementation problems. Instead, the National Heart, Lung, and Blood Institute is conducting several studies which include dietary alterations. Two major clinical trials are ongoing in the United States today: the Multiple Risk Factor Intervention Trial (MRFIT) (modification of diet, smoking and hypertension) and the Lipid Research Clinic trial (LRC) which alters diet and adds a cholesterol-lowering drug, cholestyromine. The outcome of the two studies will be known sometime in 1982.

Summary

Atherosclerosis is a multifactorial disease. There are many theories surrounding its pathogenesis, none of which is more popular than the "lipid" hypothesis. There is an extensive body of evidence from experimental, epidemiological and pathologic studies linking diet to plasma cholesterol on the one hand and plasma cholesterol to heart disease on the other. This data suggests strongly that education of the public about diet modification as one means of reducing CHD risk is a safe, appropriate and feasible approach to the prevention of the disease at the present time. The recommendations to the public are to reduce the fat content of their diets, specifically saturated fats, and limit the daily intake of dietary cholesterol to 300 mgs/day.

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June 1980

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Books Received*

CARDIOLOGY

Handbook of Heart Terms. By The National Heart, Lung & Blood Institute. Hillside, New Jersey, Enslow Publishers, 1982. Illustrated, 63 pages. Hardcover, $4.95.

Cardiovascular Sequelae of Asphyxia in the Newborn. Report of the Eighty-Third Ross Conference and Pediatric Research. Columbus, Ohio, Ross Laboratories, 1982. Illustrated, 125 pages. Softcover.

TOBACCO RESEARCH

Report of the Council for Tobacco Research—U.S.A., Inc. 1981. New York, The Council for Tobacco Research, 1981. Softcover, 123 pages.

MEDICINE IN LITERATURE

Letters to a Young Doctor. By Richard Selzer. New York, Simon and Schuster, 1982. Hardcover, 205 pages. $13.95.

The Nicolai Case. By Wolf Zuelzer. Detroit, Michigan, Wayne State University Press, 1982. Illustrated, 463 pages. Hardcover, $30.

MEDICAL PRACTICE

Types of Medical Practice: Making Your Choice. By Norton Mockridge. Oradell, New Jersey, Medical Economics, 1982. Hardcover, 272 pages, $21.50.

CORPORATE PRACTICE

The Whys & Wherefores of Corporate Practice. Fourth edition. By Sheldon H. Gorlick, J.D. Oradell, New Jersey, Medical Economics, 1982. Hardcover, 156 pages. $19.95.

CANCER

Young People with Cancer—A Handbook for Parents. U.S. Department of Health & Human Services, National Institutes of Health, National Cancer Institute. Bethesda, Maryland, National Institutes of Health, 1982. Illustrated, 93 pages. Softcover. Available Free-of-Charge from National Cancer Institute, Building 31, Room 10A18 Bethesda, Maryland 20205.

NEUROLOGY

Advances in Neurology-Neurofibromatosis (Von Recklinghausen Disease): Genetics, Cell Biology, and Biochemistry. Edited by Vincent M. Riccardi, M.D. and John J. Mulvihill, M.D. New York, Raven Press, 1981. Illustrated, 282 pages. Hardcover, $29.50.

Basic Neurology. By John Gilroy, M.D., F.R.C.P.(C), F.A.C.P. and Patti L. Holliday, M.D. New York, Macmillan Publishing Co., Inc., 1982. Illustrated, 373 pages. Hardcover, $18.95.

INTERNAL MEDICINE

Patient Care Flow Chart Manual. Third edition. Oradell, New Jersey, Medical Economics, 1982. Hardcover, 591 pages, $39.95.

PSYCHIATRY

Primer of Clinical Psychopharmacology—A Practical Guide. By Donald M. Pirodsky, M.D. Garden City, New York, Medical Examination Publishing Co., Inc., 1981. Softcover, 119 pages. $13.95.

PHARMACOLOGY

Outline Guide to Antimicrobial Therapy. By John E. McGowan, Jr., M.D. Oradell, New Jersey, Medical Economics, 1982. Softcover, 175 pages. $13.95.

OCULAR DISEASES

Physicians' Guide to Oculosystemic Diseases. By William V. Delaney, Jr., M.D. Oradell, New Jersey, Medical Economics, 1982. Hardcover, 499 pages. $49.50.

DRUG USE

The USP System of Drug Use Information. Volume 1. **Drug Information for the Health Care Provider.** 982 pages. Volume 2. **Advice for the Patient.** 793 pages. By authority of the United States Pharmacopeial Convention, Inc. Rockville, Maryland, 1982. $37.95.

IMMUNOLOGY

Introduction to Molecular Immunology. By Alfred Nisonoff. Stamford, Conn., Sinauer Associated, Inc., 1982. Illustrated, 204 pages. Softcover, $11.95.

OBSTETRICS AND GYNECOLOGY

An Atlas of Intrauterine Contraception. By Russel J. Thomsen, M.D. New York, Hemisphere Publishing Corp., 1982. Illustrated, 169 pages. Hardcover, $49.50.

DEATH

Prescriptions for Death: The Drugging of the Third World. By Milton Silverman, Philip R. Lee, Mia Lydecker. Los Angeles, University of California Press, 1982. 186 pages. Hardcover, $16.95.

OBSTETRICS

Principles of Obstetrics. Edited by Ronald M. Caplan, M.D. Baltimore, Md., Williams & Wilkins Co., 1982. 321 pages. Softcover, $19.95.

UROLOGY

The Ureter. Edited by Harry Bergman, New York, Springer-Verlag, 1981. Illustrated, 780 pages. Hardcover, $78.50.

PEDIATRICS

Pediatrics, Neurology, and Psychiatry—Common Ground. Joey Herskowitz, M.D., and N. Paul Rosman, M.D. New York, Macmillan Publishing Co., Inc., 1982. Illustrated, 688 pages. Hardcover, $45.00.

Perinatal Medicine. Edited by Manohar Rathi, M.D., and Sudhir Kumar, Ph.D. New York, Hemisphere Publishing Corp., 1982. Illustrated, 237 pages. Hardcover, $39.50.

* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

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(*continued from page 1730*)

Vehicle-related injuries cause deaths

When the subject of work-related deaths arises, the common image is one of workers tangling with manufacturing machinery or perhaps of construction workers being hit by beams. But the leading cause of occupational fatalities, according to a recent study that focused on Maryland, is vehicle-related injuries.

Four of every ten work-related deaths in Maryland in 1978 were caused by injuries involving transportation vehicles — trucks, taxis, cars, boats, trains and planes. Road vehicles were involved in 25 percent of the fatalities. Ranking second were injuries involving nonroad vehicles, such as cranes, forklifts, tractors and bulldozers, which accounted for more than 15% of the deaths.

The third ranking instrument of death for workers was guns, mostly handguns. About 11% of work-related deaths were caused by gun shot injuries. Victims included taxi drivers, grocery store owners, gas station operators, police officers and vendors.

The study of fatalities caused by occupational injuries in Maryland was the work of Baltimore researchers headed by Susan P. Baker, M.P.H., of Johns Hopkins School of Hygiene and Public Health. It appears in the *Journal of the American Medical Association*. They note that findings for the 148 work-related deaths in 1978 in Maryland are genrally consistent with national statistics.

The death rate from occupational injuries in this country has dropped in the past 25 years from 39 to 13 per 100,000 workers. As the hazards of earlier years have been reduced, new ones have taken their place. However, traditional problems in manufacturing industries (where only 14% of work-related deaths occur) are still emphasized in occupational literature, regulations and training programs, while the hazards posed by use of transportation vehicles are virtually ignored.

It is generally supposed that most workers are protected by occupational health and safety laws and regulations. This is a misconception, according to Baker. "For many reasons and in a variety of ways," she writes, "large groups of high-risk workers have been virtually excluded from the protection offered by the Occupational Safety and Health Act (OSHA) of 1970. Many are not receiving effective protection from other governmental agencies."

For example, Baker says, the Department of Transportation has primary responsibility for overseeing the safety of millions of workers whose "workplace" is a road vehicle. Yet little attention is focused on truck occupant safety, mandatory seat belt use and the increased risk attributed to small, less sturdy automobiles.

The Federal Aviation Administration, Baker continues, sets occupant protection standards for civilian aircraft, but standards specifying the forces against which pilots and passengers must be protected have not been upgraded from minimal standards established 36 years ago.

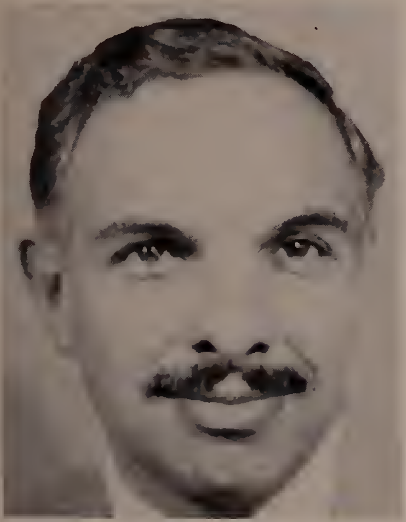
About one half of farm work-related deaths involve tractors, Baker adds, but no federal safety standards apply to the manufacture of nonroad land vehicles, such as tractors.

Persons at high risk of being assaulted — police officers, taxi drivers and storekeepers — are technically covered under the "general duty" clause of the OSHA act, which requires employers to provide safe workplaces. Yet no OSHA standards address this increasingly important problem, Baker says. Standards requiring bulletproof partitions, vests, helmets or other protection for high-risk employees would be comparable with many existing OSHA standards relating to nonassaultive injuries.

"The notion that certain jobs are 'high risk jobs' can easily become a self-fulfilling prophecy or foster complacency," Baker warns. Certain groups of workers "deserve special attention if their service to the rest of the population places them at especially high risk of death or severe injury," she states.

The Maryland data "reflect the nationwide shift in the job force to more and more jobs in service and transportation sectors and the risk of violent crimes against such vulnerable workers as taxi drivers, law-enforcement officers, and storekeepers," writes Gilbert S. Omenn, M.D., Ph.D., in an accompanying editorial. Omenn, from the Department of Environmental Health, University of Washington, Seattle, notes that "most adults spend almost half of their waking hours in work-related activities, and many encounter or introduce substantial hazards for themselves and co-workers." He questions what can be done.

Omenn's recommendations call for (1) seeking better data on sources of occupational injuries and diseases; (2) building a comprehensive management approach to job safety, emphasizing safety features designed into facilities, equiment, vehicles, working conditions, and work practices; (3) recognizing and redirecting crucial behavioral factors underlying injuries and illnesses; and (4) making work and the workplace prime components of organized efforts at promoting health and preventing disease and disability.



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AIDS—The mysterious disease*

A mysterious and frightening new disease appeared in the spring of last year: acquired immuno-deficiency syndrome (AIDS). Since that time, AIDS has reached epidemic proportions. There have been more than 500 documented cases in 26 states and 9 countries, and 60 to 80 new cases are currently being reported each month. The fatality rate for those afflicted stands at an alarming 40%.

AIDS is considered bizarre because, unlike other diseases, it suppresses a person's natural immunity against various infections and certain types of cancer. There are four statistically significant groups among those who have contracted AIDS: homosexuals, drug addicts, Haitian immigrants and hemophiliacs. While still unsure of the mechanism(s) by which the disease spreads, doctors say it appears to be transmitted through sexual contact and/or blood product. No successful treatments have been discovered.

According to Dr. Bijan Safai, Memorial Sloan Kettering Cancer Center, AIDS has appeared in four different strains to date: Kaposi's sarcoma, a rare cancer; an infectious strain which takes advantage of the decreased immunity of the host; a generalized enlargement of the lymph gland and weakness, loss of weight; a wasting syndrome characterized by loss of weight and energy. In all of the strains, he noted, survival is limited to about 16 to 18 months.

Dr. James Curran, Centers for Disease Control, stated that AIDS is not readily spread among the general population and, thus, should create no cause for panic.

Dr. Bruce Chabner raised the hope that research directed toward AIDS would shed some light on the relationship between the immune system and cancer. He also said information derived from the study of AIDS may prove useful in developing new cancer treatments.

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* Information presented on the "MacNeil-Lehrer Report."

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PHYSICIAN AVAILABLE—Trained and licensed in New York State, Board Eligible after full training in 1962, seeking a job on semi-retirement basis as a physician's assistant and/or obstetrical anesthesiologist, or both, on a part time basis. Preference: New York City. Write to: P.O. Box 136, Rego Park Station, N.Y. 11374.

REAL ESTATE FOR SALE OR RENT

MANHATTAN'S EAST SIDE, 133 EAST 73RD ST., N.Y.C. LEXINGTON Professional Center, Inc. Part time & full time medical, dental, psychiatric office suites. Furnished & equipped. 24 hour answering service; receptionist. Mail service; cleaning. X-ray & clinical laboratory on premises. No leases necessary. Rent by the hour or full-time. (212) 861-9000.

IF YOU OWN A MEDICAL BUILDING conversion to Professional Condominium gives you tremendous after-tax profits while controlling ownership of your office location. Learn how you can profit from our concept. Contact: Paul Gellert, Gelco Associates, 155 West 68th Street, New York, N.Y. 10023. Phone: (212) 223-1130.

POUGHKEEPSIE, N.Y. For sale: large home with office (office entrance separate) on 1½ acres. Home and office heated by new gas furnace. Office 1700 sq. ft. Brick and stone, center hall, living room, family room, library, formal dining room, E.I.K., 6 bedrooms, 4 baths (2 powder rooms). Near hospitals, Railroad, transportation. Call owner (914) 454-3690.

WESTCHESTER NEW YORK RESIDENCE Substantial English Georgian 6 bedrooms, sun room, artist Alcove, Circa 1920, ⅓ acre, giant oaks, Brick-Stone-Slate: Manageable, Safe-Secure-Secluded in turn of the century neighborhood. 22 minutes train to Grand Central. Buy @ 240K or rent @ $2.4K/mo. Dr. Skalafuris (202) 767-3408.

EAST 60'S OFF FIFTH AVENUE, prime office space in elegant building to rent. 1800 to 4000 square feet. Renovation required. Reply Dept. 265, c/o NYSJM.

2 BEDROOM LUXURIOUSLY FURNISHED Condo on Gulf of Mexico Beach at Fort Myers Beach, Fla. in Estero Island. Within walking distance of golf, tennis and marina facilities. Minimal rental 2 weeks. Call after 6 p.m. (716) 649-0514.

NIAGARA FALLS, N.Y.—House and completely furnished office with records; can reside in residence or income. Available Jan. 1, 1983. For information call after 6:00 p.m. (716) 754-7177.

JAMAICA, QUEENS: Walk NYC subway, major shopping, parking. Large residential population! Modern medical office bldg. Up to 4500 square feet (more or less!) for professional use. Reasonable rent. Call agent (212) 846-0900.

what goes on
IN
CONTINUING MEDICAL EDUCATION

NEW YORK STATE **DECEMBER 1982**

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Please send information to the Editor, WHAT GOES ON,
420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Tina Koty, Editor
Philip Keating, Director, Division of Finance

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NEW YORK

Saint Mary's Hospital of Brooklyn Department of Medicine

170 Buffalo Avenue
Brooklyn, NY 11213
* Third Floor—Board Room

December 1, 1982—Wednesday—8:00-9:00 a.m.
URINARY TRACT INFECTION
Stephen Seligman, MD.
CREDIT: AMA Cat. 1

December 8, 1982—Wednesday—8:00-9:00 a.m.
EPIDEMIC ACQUIRED IMMUNODEFICIENCY SYNDROME
Jeffrey Nadler, M.D.

December 15, 1982—Wednesday—8:00-9:00 a.m.
THE THIRD GENERATION CEPHALOSPORINS
Myles Gambert, M.D.

December 22, 1982—Wednesday—8:00-9:00 a.m.
THE CURRENT APPROACH TO THE MEDICAL MANAGEMENT OF CNS INFECTIOUS DISEASE
Irving Brown, M.D.
For further information contact The Department of Medicine at St. Mary's Hospital—774/3600 ext. 2044 or 2045.

St. Luke's-Roosevelt Hospital Center Smithers Alcoholism Treatment and Training Center

428 West 59th Street
New York, NY 10019

December 6-10, 1982—Monday to Friday
CLINICAL DECISION MAKING IN ALCOHOLISM AND DRUG ABUSE
For further information contact Andrew J. Gordon, Ph.D., Smithers Alcoholism Treatment & Training Center, St. Luke's-Roosevelt Hospital Center, 428 W. 59th St., NYC. Tel: 212/554-6725.

The Jewish Hospital and Medical Center of Brooklyn in association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY, Downstate Medical Center, Sponsored by the Division of Hematology/ Oncology

555 Prospect Place
Brooklyn, NY 11238
* B-51 Conference Room, Basement
Leviton Building

December 4-7, 1982—3:30-4:30 p.m.
ADVANCES IN HEMATOLOGY AND ONCOLOGY
AMERICAN SOCIETY OF HEMATOLOGY MEETING

December 8, 1982—3:30-4:30 p.m.
CHEMOTHERAPY OF CARCINOMA OF BLADDER
Alan Yogoda, M.D.

December 15, 1982—3:30-4:30 p.m.
LUNG CANCER, 1982
Robert Wittes, M.D.

December 22, 1982—3:30-4:30 p.m.
HYPERCALCEMIA IN MALIGNANCY
Richard Bockman, M.D.
NO FEE. CREDIT: AMA Cat. 1
For further information contact The Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212/240-1211.

NYU Medical Center Post Graduate Medical School

550 First Avenue
New York, NY 10016
* Classroom F, Schwartz Lecture Hall
401 East 30th Street, New York

December 4-5, 1982—Saturday and Sunday
BASIC REVIEW OF PATHOLOGY AND RADIOLOGY FOR UROLOGISTS
Salah Al-Askari, M.D., Mircea N. Golimbu, M.D., Robert L. Rowan, M.D.
FEE: $275. CREDIT: AMA Cat. 1 (13 hrs)
For further information contact Registration Office, NYU Post-Graduate Medical School, Tel: 212/340-5295.

NYU Post-Graduate Medical School and The New York Poison Control Center

550 First Avenue
New York, NY 10016

December 6-9, 1982—Monday-Thursday
POISONING AND TOXICOLOGIC EMERGENCIES
FEE: $485. CREDIT: AMA Cat. 1 (21 hrs.) and AAFP & ACEP

The Department of Medicine

December 13-15, 1982—Monday-Wednesday
MANAGING CLINICAL PROBLEMS IN THE ELDERLY
FEE: $375. CREDIT: AMA Cat. 1 (20 hrs.) and AAFP

The Institute of Rehabilitation Medicine

December 8-10, 1982—Wednesday-Friday
CLINICAL ELECTRODIAGNOSIS OF NEUROMUSCULAR DISEASES
FEE: $400. CREDIT: AMA Cat. 1 (17 hrs.)

The Department of Radiology * Grand Hyatt Hotel, NYC

December 15-19, 1982—Wednesday-Sunday
COMPUTED TOMOGRAPHY
FEE: $445. CREDIT: AMA Cat. 1 (30½ hrs.)

The Medical Schools of New York City

Departments of Neurosurgery

* Grand Hyatt Hotel, NYC

November 29-December 2, 1982—Monday through Thursday
NEUROSURGERY—NEW YORK CITY 1982/ CONTROVERSIES, COMPLICATIONS & SURGICAL TECHNIQUES
For further information contact NYU Post-Graduate Medical School, 550 First Avenue, New York, NY 10016. Tel: 212/340-5295.

New York County Medical Society Committee on Maternal Welfare, The Section of Obstetrics and Gynecology of the New York Academy of Medicine, The Medical Society of the State of New York, and the American College of Obstetricians & Gynecologists

40 West 57th Street
New York, NY 10019
* New York Academy of Medicine
2 East 103rd Street, NY 10029

December 8, 1982—Wednesday—1:00 p.m.-5:00 p.m.
FIRST ANNUAL CONFERENCE ON MATERNAL MORTALITY
CREDIT* AMA Cat. 1 (4 hrs.) & ACOG
For further information contact Albert Altchek, M.D., N.Y. County Medical Society, 40 W. 57th Street, NY 10019. Tel: 212/582-5858.

NYU Medical Center Post-Graduate Medical School

550 First Avenue
New York, NY 10016
ONE-ON-ONE TUTORIALS IN:
ECHOCARDIOGRAPHY
NEW STRATEGIES IN DIABETIC THERAPY
ADVANCED CLINICAL ELECTRODIAGNOSIS
For further information contact Ms. Lydia Lawrence, NYU Medical Center. Tel: 212/340-5295.

Beth Israel Medical Center Co-sponsored by The Page and William Black Post-Graduate School of the Mount Sinai School of Medicine, CUNY

10 Nathan D. Perlman Place
New York, NY 10003
* Loeb Auditorium, Hospital for Joint Diseases
Orthopaedic Institute, 301 East 17th Street, New York, NY 10003
December 15, 1982—Wednesday—8:30 a.m.-12:00 noon
THE CURRENT STATUS OF GASTROINTESTINAL CANCER:
A REVIEW AND UPDATE
Alvin H. Gelb, M.D.
CREDIT: AMA Cat. 1 (15 hrs.) NO FEE
For further information contact Beverley R. Baptiste at 212/420-2000.

SUNY Downstate Medical Center Kings County Hospital Center in cooperation with District 1, NYSSA

Department of Anesthesiology
450 Clarkson Avenue
Brooklyn, NY 11203
December 20, 1982—4:00-5:00 p.m.
VISITING PROFESSOR PROGRAM
OPIATE RECEPTORS AND ENDORPHINS
A. Donald Finck, M.D.
December 21, 1982—5:00-6:00 p.m.
EPIDURAL AND INTRATHECAL NARCOTICS
A. Donald Finck, M.D.
CREDIT: AMA Cat. 1
For further information contact Abraham I. Raskob, M.D. SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, NY 11203. Tel: 212/270-1233.

Westchester Square Hospital in collaboration with Albert Einstein College of Medicine/ Montefiore Hospital & Medical Center

2475 St. Raymond Avenue
Bronx, NY 10461
* Conference Room
December 2, 1982—Thursday—4:00-5:30 p.m.
RISK FACTORS AND THE PREVENTION OF HEART DISEASE
William Frishman, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)
December 16, 1982—Thursday—4:00-5:30 p.m.
PERIPHERAL VASCULAR DISEASE
Gerald Sosler, M.D.
CREDIT: AMA Cat. 1 (2 hrs.)

Albert Einstein College of Medicine of Yeshiva University Department of Surgery

1300 Morris Park Avenue
Bronx, NY 10461
* Van Etten Hospital
Room 523
December 3, 1982—4:00-5:30 p.m.
ONCOLOGY FOR THE FAMILY PRACTITIONER
ASCITES—CASE STUDIES
S. Wapnick, M.D.
CREDIT: AAFP Cat. 1
December 17, 1982—4:00-5:30 p.m.
CT SCANS OF THE ABDOMEN—CASE STUDIES
H. T. Morehouse, M.D.
CREDIT: AAFP Cat. 1
For further information contact Margot L. Wulf, Admin. Secy. to Dr. Herbert Volk, Albert Einstein College of Medicine of Yeshiva University, 1300 Morris Park Avenue, Bronx, NY 10461.

Metropolitan Hospital Center—New York Medical College, Co-Sponsored by the American Society of Clinical Pathologists

1901 First Avenue
New York 10029
Wednesday, December 1, 1982 at 3:30 p.m.
MONTHLY SLIDE SEMINAR
PEDIATRIC PATHOLOGY
William A. Blanc, M.D.
Wednesday, January 12, 1983 at 3:30 p.m.
MONTHLY SLIDE SEMINAR
FORENSIC PATHOLOGY
Elliott M. Gross, M.D.
CREDIT: AMA Cat. 1
For further information contact Victor Tchertkoff, M.D., Coordinator, Metropolitan Hospital Center. Tel: 212/360-6253.

The Page and William Black Postgraduate School of Medicine of the Mount Sinai School of Medicine (CUNY)

One Gustave L. Levy Place
New York 10029
December 1-3, 1982—9:00 a.m.-5:00 p.m. ea. day
SURGERY OF THE PARANASAL SINUSES
William Lawson, M.D., D.D.S.
Hugh F. Biller, M.D.
FEE: $600 CREDIT: AMA Cat. 1 (40 hrs.)
December 3, 1982—9:00 a.m.-5:00 p.m.
6TH ANNUAL BROOKDALE CONFERENCE ON GERIATRICS: CONTROVERSIES IN GERIATRIC MEDICINE
Leslie S. Libow, M.D.
FEE: $100—including luncheon CREDIT: AMA Cat. 1 (6.5 hrs.)
Saturday, December 4, 1982—9:30 a.m.-5:40 p.m.
MORPHINE THROUGH 2,000 YEARS: THE 20TH BERNARD H. ELIASBERG MEMORIAL SYMPOSIUM
David C. C. Stark, M.D.
FEE: $90 CREDIT: AMA Cat. 1 (6.5 hrs.)
Tuesday, December 7, 1982—4-6 p.m.
DRUG INFORMATION REFERENCE SOURCES: KEEPING CURRENT WITH CLINICAL ASPECTS OF NEW AND EXISTING DRUGS
Doris Jaeger, M.L.S.
FEE: $25 CREDIT: AMA Cat. 1 (2 hrs.)
Wed.-Friday, December 8-10, 1982
SPECIAL PATHOLOGY UPDATE: 1982
Jerome Kleinerman, M.D.
Stephen A. Geller, M.D.
FEE: $300 CREDIT: AMA Cat. 1 (16 hrs.)
Saturday, December 11, 1982—9:00 a.m.-5:00 p.m.
PSYCHOPHARMACOLOGY FOR PSYCHOTHERAPISTS: NEW DEVELOPMENTS
Seymour Rosenblatt, M.D.
FEE: $75 CREDIT: AMA Cat. 1 (6.5 hrs.)

Mon.-Thursday, December 13-16, 1982—9:00 a.m.-5:00 p.m.
SCIENTIFIC BASIS FOR EVALUATION OF ASBETOS-ASSOCIATED DISEASE
Irving J. Selikoff, M.D.
FEE: $650 CREDIT: AMA Cat. 1 (6.5 hrs.)
Thursday-Friday, December 16-17, 1982—8:00 a.m.-5:00 p.m.
MEDICAL AND SURGICAL COMPLICATIONS OF PREGNANCY
Sheldon Cherry, M.D.
Thomas D. Kerenyi, M.D.
FEE: $200 CREDIT: AMA Cat. 1 (13 hrs.)

New York State Office of Mental Health

Kings Park Psychiatric Center
Kings Park, New York 11754
December 8, 1982—10:30 a.m.—12:00 Noon
* Auditorium, Day Treatment Center
THE PSYCHOPHARMACOLOGY OF MENTAL DISORDERS IN OLD AGE
Fred Charatan, M.D.
For further information, contact G. V. Laury, M.D. Kings Park Psychiatric Center, Kings Park, N.Y. Tel.: 516/544-2669.

QUEENS COUNTY

Flushing Hospital and Medical Center

4500 Parsons Blvd.
Flushing, NY 11355
December 12, 1982—9:00 a.m.-1:00 p.m.
SECOND ANNUAL REVIEW IN INTERNAL MEDICINE GASTROENTEROLOGY
Robert Schaeffer, M.D.
FEE: Per session: $50.00 FH&MC Staff Members
$60.00 Non-Staff Members
CREDIT: AMA Cat. 1
For further information contact Luisa T. Gonzalez, Coordinator, Continuing Medical Education, Flushing Hospital and Medical Center. Tel: 212/670-5741.

NASSAU COUNTY

Long Island Jewish-Hillside Medical Center The Department of Ophthalmology New Hyde Park, New York 11042 * Long Island Jewish Medical Center Teaching Center

December 8, 1982—8:00 a.m.-4:00 p.m.
CORNEA AND EXTERNAL DISEASE
Stephen Foster, M.D., Dennis O'Day, M.D., J. James Rowsey, M.D. For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside, at Tel: 212/470-2114.

Long Beach Memorial Hospital in affiliation with The Page & William Black Postgraduate School of Medicine of The Mount Sinai School of Medicine (CUNY)

455 East Bay Drive
Long Beach, New York 11561
* Hospital Auditorium
December 7, 1982—3:00-6:00 p.m.
SPORTS MEDICINE
Burton L. Berson, M.D.
CREDIT: AMA Cat. 1
For further information contact Community Relations Dept. Tel: 516/432-8000, ext. 362 or 363.

Long Island Jewish Hillside Medical Center, Dept. of Psychiatry

New Hyde Park, New York 11042
*Sloman-Lowenstein Auditorium
LIJ Hillside Medical Center
Friday, December 3, 1982—8:30 a.m.-4:30 p.m.
THE BORDERLINE PERSONALITY—CURRENT CONCEPTS AND APPROACHES
Charles J. Rabiner, M.D.
CREDIT: AMA Cat. 1 (7 hrs.)
For further information contact Ann J. Boehme, CME Coordinator Long Island Jewish Medical Center. Tel: 212/470-2114

North Shore University Hospital Division of Ophthalmology

300 Community Drive
Manhasset, N.Y. 11030
* The Ketcham Boardroom
Clinical Conference held in Eye Clinic
December 2, 1982—Thursday—8:00 a.m.
CLINICAL
December 9, 1982—Thursday—8:00 a.m.
ORBITAL SURGERY
Albert Hornblass, M.D.
December 16, 1982—Thursday—8:00 a.m.
NEUROOPHTHALMOLOGY
Arthur Wolintz, M.D.
December 23, 1982—Thursday—8:00 a.m.
ORBITAL SURGERY
John Simonton, M.D.
December 30, 1982—Thursday—8:00 a.m.
CLINICAL
For further information contact North Shore University Hospital, Division of Ophthalmology, 300 Community Drive, Manhasset, New York 11030.

Long Island Jewish-Hillside Medical Center/ Queens Hospital Center Affiliation, The Postgraduate Institute for Medical and Dental Education and the Health Sciences Center State University of New York at Stony Brook Department of Medicine

New Hyde Park, NY
* Nursing School Auditorium-Queens Hospital Center
82-68 164th Street, Jamaica, NY
December 1, 1982—Wednesday—11:00 a.m. to 12:00 Noon
GRAND ROUNDS—RECENT ADVANCES IN DIABETES MELLITUS
George Cahill, M.D.
December 8, 1982—Wednesday—11:00 a.m. to 12:00 Noon
GRAND ROUNDS—CURRENT CONCEPTS IN THE PATHOGENESIS OF HYPERTENSION
George Kaloyanides, M.D.
December 15, 1982—Wednesday—11:00 a.m. to 12:00 Noon
GRAND ROUNDS—SURGERY OF PEPTIC ULCER DISEASE
Irving B. Margolis, M.D.
For further information contact Herbert Diamond, M.D., Chairman, Dept. of Medicine, Long Island Jewish-Hillside Medical Center, New Hyde Park, NY

Nassau County Medical Center

Department of Medicine
2201 Heampstead Turnpike
East Meadow, NY 11554
December 2, 1982—Thursday—10:00 a.m.
THE THIRD ANNUAL MEDICAL GRAND ROUNDS—THE

SHORT AND LONG-TERM EFFECTS OF NUCLEAR WEAPONS: WHAT PHYSICIANS SHOULD KNOW
H. Jack Geiger, M.D.
CREDIT: AMA Cat. 1 & AAFP

December 9, 1982—Thursday—10:00 a.m.
PATHOPHYSIOLOGY OF DIARRHEA
Henry J. Binder, M.D.
CREDIT: AMA Cat. 1 & AAFP

December 16, 1982—Thursday—10:00 a.m.
MANAGEMENT OF HYPOTENSION IN ACUTE MYOCARDIAL INFARCTION
M. Joseph Anto, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Ethel A. Ford, CME Coordinator, Dept. of Medicine, Nassau County Medical Center, 2201 Hempstead Turnpike, East Meadow, NY 11554. Tel: 516/542-0123.

Nassau County Medical Center

2201 Hempstead Turnpike
East Meadow, N.Y. 11554

September 27, 1982-May 26, 1983—11:30 a.m.-12:30 p.m.
LECTURES IN CONTINUING MEDICAL EDUCATION
FEE: None. CREDIT: AMA Cat. 1 (30 hrs.)
For further information contact Irvin Fradkin, M.D. Tel: 516/378-6464.

September 10, 1982-June 17, 1983—8:00-9:00 a.m.
TOPICS IN PERINATAL MEDICINE
FEE: None. CREDIT: AMA Cat. 1 (33 hrs.)
For further information contact Nergesh Tejani, M.D. or Nehmet Dincsoy, M.D. Tel: 516/542-2255.

October 4, 1982-May 23, 1983—11:30 a.m.-12:30 p.m.
CLINICAL PATHOLOGIC CORRELATION CONFERENCE
FEE: None. CREDIT: AMA Cat. 1 (33 hrs.)
For further information contact Joseph Letteri, M.D. Tel: 516/542-3679.

October-May 1983—12:30-1:30 p.m.
PEDIATRIC ENDOCRINOLOGY
FEE: None. CREDIT: AMA Cat. 1 (26 hrs.)
For further information contact Mariano Castro-Magana, M.D. Tel: 516/542-2398.

September 1982-June 1983—11:30 a.m.-12:30 p.m. and 3:30-4:30 p.m. daily
CURRENT TOPICS IN DIAGNOSTIC RADIOLOGY
FEE: None. CREDIT: AMA Cat. 1 (90 hrs.)
For further information contact Gerald Irwin, M.D. Tel: 516/542-2633.

March 1983-May 1983—4:00-5:00 p.m.—Thursdays
GENETICS FOR THE PEDIATRICIAN
FEE: None. CREDIT: AMA Cat. 1 (10 hrs.)
For further information contact Jack Sherman, M.D. Tel: 516/542-3391.

September 27, 1982 thru June 27, 1983—8:00-9:00 a.m.—Mondays
MEDICAL/SURGICAL TUMOR BOARD
FEE: None CREDIT: AMA Cat. 1 (10 hrs.)
For further information contact Alfred Adamo. Tel: 516/542-3896.

April 21 and 22, 1983—9:00 a.m.-5:00 p.m.—both days
SEVENTH ANNUAL SYMPOSIUM ON MOTOR DISORDERS—"UPDATE IN CLINICAL ELECTROPHYSICS"
FEE: Attending Staff—$80.00
Other attendings—$200.00
CREDIT: AMA Cat. 1 (12 hrs.)
For further information contact Arminius Cassvan, M.D. Tel: 516/542-2835.

SUFFOLK

Brookhaven Memorial Hospital Center

101 Hospital Road
Patchogue, NY 11772

* 1st Floor Conference Room

December 7, 1982—Tuesday—8:00-9:00 a.m.
PEDIATRIC CONFERENCES—HYPERACTIVITY AND ATTENTION DEFICIT DISORDERS
Marvin Klein, M.D.
CREDIT: AMA Cat. 1 & AAFP

December 3, 1982—8:00-9:00 a.m.
CLINICAL PROBLEMS IN FAMILY MEDICINE VASCULAR SURGERY: UPDATE ON BYPASS
Robert Corn, M.D.
CREDIT: AMA Cat. 1 & AAFP

December 10, 1982—8:00-9:00 a.m.
THE PULMONARY EVALUATION
Marion Bergman, M.D.
CREDIT: AMA Cat. 1 & AAFP

December 17, 1982—8:00-9:00 a.m.
VALVULAR HEART DISEASE
Soma Pulipati, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Dorothy S. Lane, M.D., Director of Medical Education, Brookhaven Memorial Hospital Medical Ctr., 101 Hospital Rd., Patchogue, NY. Tel: 516/654-7795.

BUFFALO

Roswell Park Memorial Institute
666 Elm Street
Buffalo, New York 14263

December 9, 1982—Thursday
"COMPREHENSIVE CARE OF THE ADVANCED CANCER PATIENT"
Dr. Edward Bockstahler
CREDIT: AMA Cat. 1
For further information contact Gayle Bersani, R.N., Cancer Control Coordinator, Roswell Park Memorial Institute at 716/845-4406.

FUTURE EVENTS

College of Physicians & Surgeons of Columbia University

630 West 168th Street
New York, NY 10032

January 8-April 2, 1983 (Every Saturday)—9:00 a.m.-12 noon
NEUROANATOMY, NEUROPHYSIOLOGY & NEUROPHARMACOLOGY
FEE: $395. CREDIT: AMA Cat. 1 (39 hrs.)
For further information contact Dr. Elizabeth Gerst, Continuing Education Center, 630 W. 168 St., NY Tel: 212/694-3682.

Flushing Hospital and Medical Center Department of Medicine

4500 Parsons Blvd.
Flushing, NY 11355

January 1, 1983—Tuesday—10:30 a.m.-12:00 noon
GRAND ROUNDS—SEPSIS—CASE PRESENTATION
Ruy Soiero, M.D.

January 11, 1983—Tuesday—10:30 a.m.-12:00 noon
GRAND ROUNDS—THROMBOLYTIC THERAPY UPDATE: 1983
Sol Sherry, M.D.

January 18, 1983—Tuesday—10:30 a.m.-12:00 noon
GRAND ROUNDS—THE ADRENAL GLAND: PATHOPHYSIOLOGY, ADRENAL FUNCTION TESTS, HYPERCORTISONISM AND ADRENAL INSUFFICIENCY
Norman Fleischer, M.D.

January 25, 1983—Tuesday—10:30 a.m.-12:00 noon

GRAND ROUNDS—NEUROLOGIC MANIFESTATIONS OF SYSTEMIC DISEASE
Ronald Kanner, M.D.
CREDIT: AMA Cat. 1
For further information contact Luisa T. Gonzalez, Coordinator, Continuing Medical Education, Flushing Hospital and Medical Center. Tel: 212/670-5741.

OUT OF STATE

California Medical Association

731 Market Street
San Francisco, California 94103
*Hilton Hotel, San Diego
December 3–5, 1982—Friday–Sunday
PERIOPERATIVE CARDIAC DYSFUNCTION
CARDIOTHORACIC RESEARCH AND ED. FNDN.
CREDIT: CMA Cat. 1
*Holiday Inn on Union Square
San Francisco
December 4, 1982—Saturday
CALIF. CHAPS., AM. ACADEMY OF PEDIATRICS ANNUAL WINTER MEETING, EMERGENCY PEDIATRICS, PART II.
CREDIT: CMA Cat. 1
*UCSD at Hilton, San Diego
December 13–17, 1982—Monday–Friday
POSTGRADUATE INSTITUTE FOR EMERGENCY ROOM PHYSICIANS—SYMPOSIUM II
CREDIT: CMA Cat. 1
For further information contact Continuing Medical Education, California Medical Association, 731 Market Street, San Francisco 94103. Tel: 415/777-2000.

FUTURE EVENTS—OUT OF STATE

The Page and William Black Postgraduate School of Medicine of the Mount Sinai School of Medicine (CUNY)

One Gustave L. Levy Place
New York 10029
*Kenya, Africa
January 13–27, 1983
GASTROENTEROLOGY CLINICAL STUDY TOUR IN KENYA
Martin Finkel, M.D.
CREDIT: AMA Cat. 1
*Antigua, West Indies
January 16–23, 1983
HYPERTENSION—A COMPREHENSIVE UPDATE WITH SPECIAL REFERENCE TO CULTURAL, EHNIC AND SOCIAL ISSUES
Marvin Goldstein, M.D.
CREDIT: AMA Cat. 1

Long Island Jewish-Hillside Medical Center

New Hyde Park, NY 11042
*Ala Moana Americana Hotel, Honolulu, HI
January 6–7, 1983
1983 REGIONAL CME MEETINGS
AMERICAN COLLEGE OF PHYSICIANS
For further information contact Ann J. Boehme, Continuing Education Coordinator, Long Island Jewish-Hillside Medical Center, New Hyde Park, NY 11042. Tel: 212/470-2114.

ATTENTION, ANYONE WISHING TO SUBMIT AN ANNOUNCEMENT FOR "WHAT GOES ON IN CONTINUING MEDICAL EDUCATION" ALL CONTINUING MEDICAL EDUCATION ANNOUNCEMENTS MUST BE RECEIVED THE FIRST OF THE MONTH, TWO MONTHS PRIOR TO THE DATE OF THE EVENT.

NOTICE

The Medical Society of the State of New York invites the Deans of Medical Schools and the Administrators of Hospitals to send notices of continuing medical education including teaching days, important lectureships, courses, and similar programs for publication in WHAT GOES ON to: The Editor, WHAT GOES ON, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11042. Telephone: (516) 488-6100. This is a free service.

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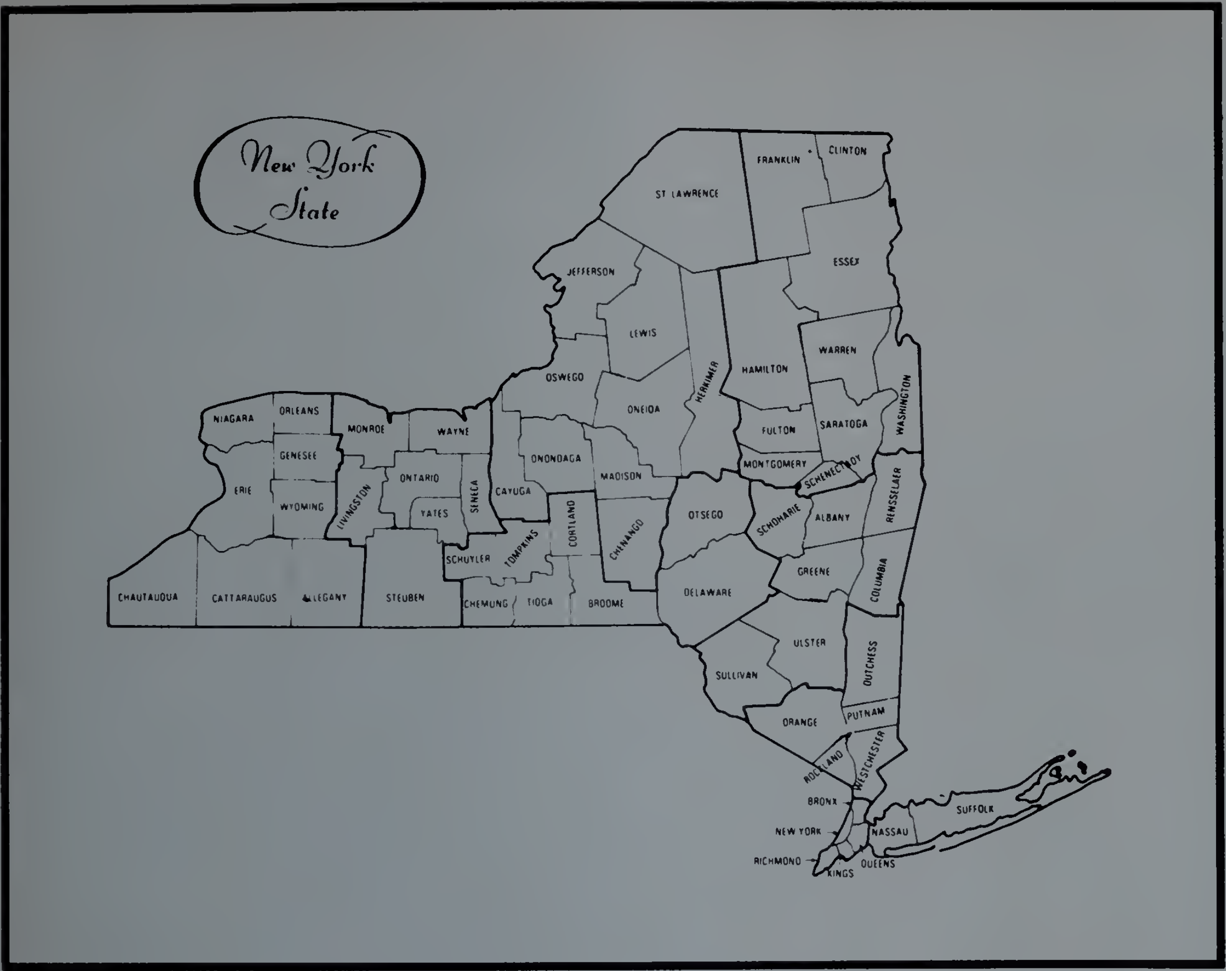

physicians' placement opportunities

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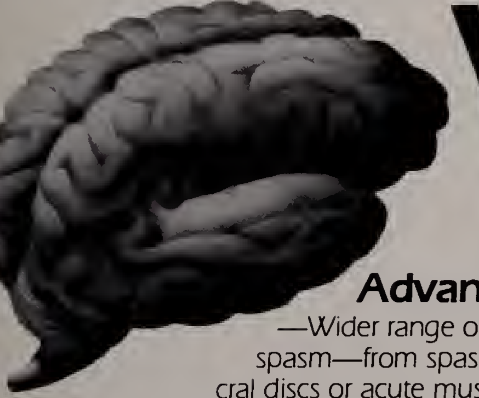

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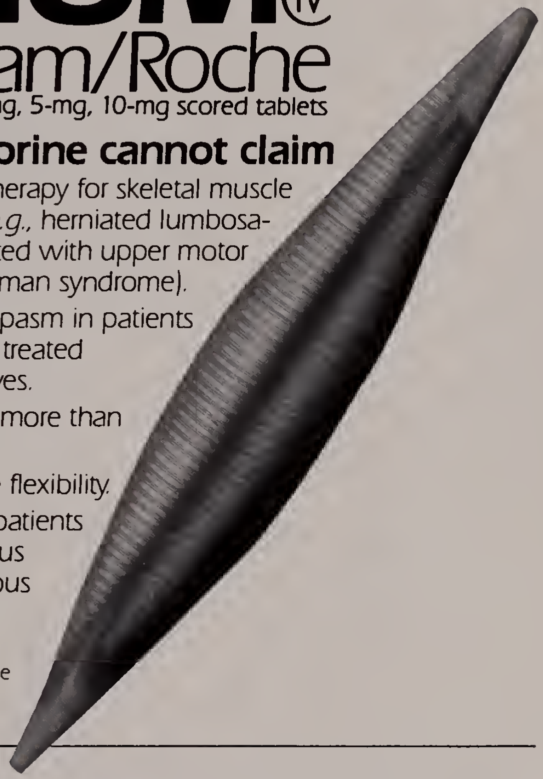

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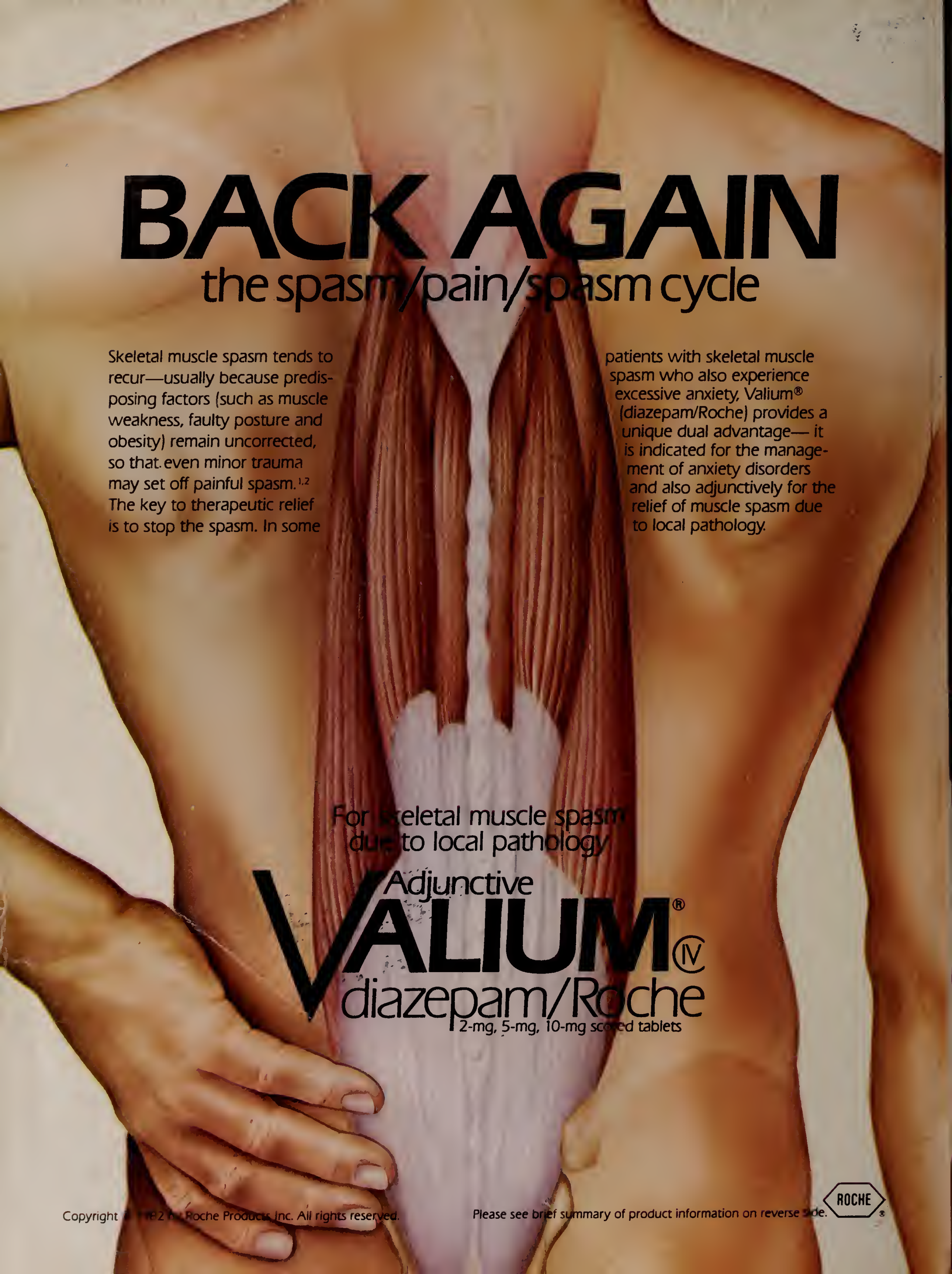

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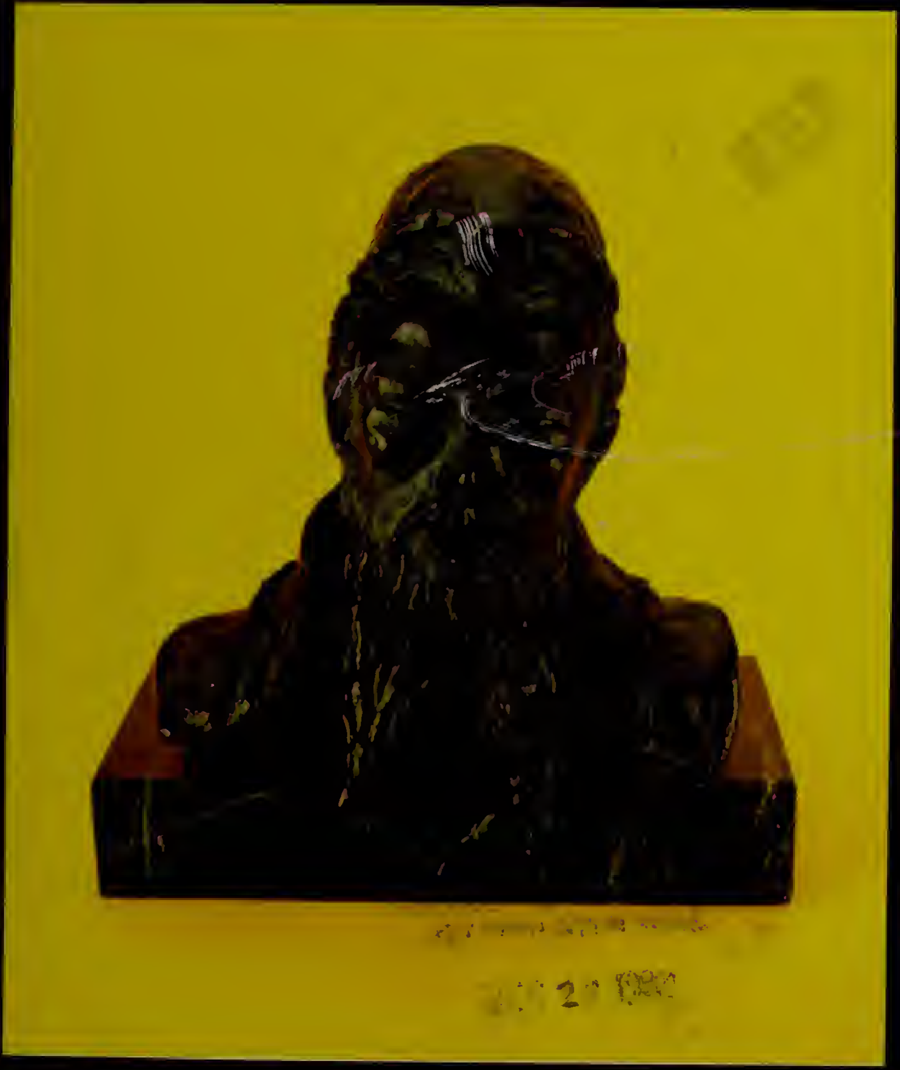

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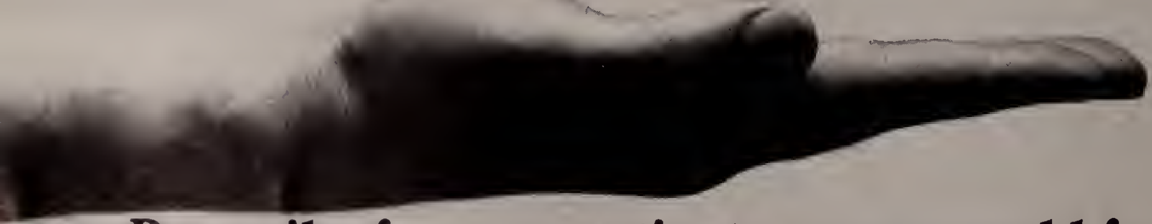

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INDERAL—the sooner, the better for hypertension—a leading risk factor in coronary heart disease.[1]

INDERAL®

(PROPRANOLOL HCl) B.I.D.

The sooner, the better.

*Please see following page for Brief Summary of Prescribing Information.

THE MOST WIDELY PRESCRIBED BETA BLOCKER IN THE WORLD

INDERAL®

(PROPRANOLOL HCl)

B.I.D. FOR HYPERTENSION

The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)
Inderal® (propranolol hydrochloride)

BEFORE USING INDERAL (PROPRANOLOL HYDROCHLORIDE), THE PHYSICIAN SHOULD BE THOROUGHLY FAMILIAR WITH THE BASIC CONCEPT OF ADRENERGIC RECEPTORS (ALPHA AND BETA), AND THE PHARMACOLOGY OF THIS DRUG

CONTRAINDICATIONS

1) bronchial asthma, 2) allergic rhinitis during the pollen season, 3) sinus bradycardia and greater than first degree block, 4) cardiogenic shock, 5) right ventricular failure secondary to pulmonary hypertension; 6) congestive heart failure (see WARNINGS) unless it is secondary to a tachyarrhythmia treatable with propranolol; 7) in patients on adrenergic-augmenting psychotropic drugs (including MAO inhibitors), and during the two week withdrawal period from such drugs

WARNINGS

CARDIAC FAILURE In congestive heart failure, inhibition with beta-blockade carries the potential hazard of further depressing myocardial contractility and precipitating cardiac failure In patients already receiving digitalis, propranolol may reduce the positive inotropic action of digitalis and may have an additive depressant effect on AV conduction.

IN PATIENTS WITHOUT A HISTORY OF CARDIAC FAILURE, in rare instances, cardiac failure has developed during propranolol therapy At the first sign of impending cardiac failure, patients should be fully digitalized and/or given a diuretic, and observed closely a) if cardiac failure continues, despite adequate digitalization and diuretic therapy, propranolol should be immediately withdrawn, b) if tachyarrhythmia is being controlled, patients should be maintained on combined therapy and closely followed until threat of cardiac failure is over

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuation of INDERAL therapy Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced and the patient carefully monitored In addition, when INDERAL is prescribed for angina pectoris, the patient should be cautioned against interruption or cessation of therapy without the physician's advice If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease, who are given propranolol for other indications

IN PATIENTS WITH THYROTOXICOSIS, possible deleterious effects from long term use have not been adequately appraised Give special consideration to propranolol's potential for aggravating congestive heart failure Propranolol may mask the clinical signs of developing or continuing hyperthyroidism or complications and give a false impression of improvement Propranolol should be withdrawn slowly, since abrupt withdrawal may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm Propranolol does not distort thyroid function tests

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker In one case this resulted after an initial dose of 5 mg propranolol

IN PATIENTS UNDERGOING MAJOR SURGERY, beta-blockade impairs the ability of the heart to respond to reflex stimuli Except in pheochromocytoma, propranolol should be withdrawn 48 hours prior to surgery In case of emergency surgery, the effects of propranolol can be reversed by administration of beta-receptor agonists such as isoproterenol or levarterenol, but such patients may be subject to protracted severe hypotension Difficulty in restarting and maintaining the heart beat has been reported

IN PATIENTS PRONE TO NONALLERGIC BRONCHOSPASM (*e g* , CHRONIC BRONCHITIS, EMPHYSEMA), administer with caution, since propranolol may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta-receptors

DIABETICS AND PATIENTS SUBJECT TO HYPOGLYCEMIA Propranolol may prevent the appearance of premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia, especially in patients with labile diabetes. A precipitous elevation of blood pressure may accompany hypoglycemic attacks

USE IN PREGNANCY Safe use in human pregnancy not established Embryotoxic effects have been seen in animals at doses about 10 times the maximum recommended human dose

PRECAUTIONS

Patients receiving catecholamine depleting drugs such as reserpine should be closely observed if propranolol is administered, since it may occasionally produce hypotension and/or marked bradycardia resulting in vertigo, syncopal attacks, or orthostatic hypotension

Observe laboratory parameters at regular intervals Use with caution in patients with impaired renal or hepatic function

ADVERSE REACTIONS

Cardiovascular bradycardia; congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, arterial insufficiency, usually of the Raynaud type, thrombocytopenic purpura *Central Nervous System* lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics *Gastrointestinal* nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis *Allergic* pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress *Respiratory* bronchospasm *Hematologic* agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura *Miscellaneous* reversible alopecia Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta-blocker (practolol) have not been conclusively associated with propranolol *Clinical Laboratory Test Findings* Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase

HOW SUPPLIED

TABLETS

—Each hexagonal-shaped, orange, scored tablet is embossed with an "I" and imprinted with "INDERAL 10," contains 10 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0421-81) and 1,000 (NDC 0046-0421-91) Also in unit dose package of 100 (NDC 0046-0421-99)

—Each hexagonal-shaped, blue, scored tablet is embossed with an "I" and imprinted with "INDERAL 20," contains 20 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0422-81) and 1,000 (NDC 0046-0422-91) Also in unit dose package of 100 (NDC 0046-0422-99)

Each hexagonal-shaped, green, scored tablet is embossed with an "I" and imprinted with "INDERAL 40," contains 40 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0424-81) and 1,000 (NDC 0046-0424-91) Also in unit dose package of 100 (NDC 0046-0424-99)

Each hexagonal-shaped, yellow, scored tablet is embossed with an "I" and imprinted with "INDERAL 80," contains 80 mg propranolol hydrochloride, in bottles of 100 (NDC 0046-0428-81) and 1,000 (NDC 0046-0428-91) Also in unit dose package of 100 (NDC 0046-0428-99)

The appearance of these tablets is a trademark of Ayerst Laboratories

Store at room temperature (approximately 25° C)

INJECTABLE

Each ml contains 1 mg of propranolol hydrochloride in Water for Injection The pH is adjusted with citric acid Supplied as 1 ml ampuls in boxes of 10 (NDC 0046-3265-10)

Store at room temperature (approximately 25° C)

7997/882

Reference: 1 Freis, E D Hypertension (Suppl. II) *3* 230 (Nov -Dec.) 1981

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Abstracts

Zak TA: Retinopathy of prematurity: an update on retrolental fibroplasia. ***New York State J Med 1982;*** 82: 1795–1796.

Seventeen percent (76/437) of intensive care nursery babies developed retinopathy of prematurity. The risk of developing RLF was inversely proportional to gestational age and birth weight and was associated with duration of oxygen therapy in excess of two weeks. Screening examinations were usually positive eight to 12 weeks post partum. Twenty-two percent of affected babies developed cicatricial changes, including retinal dragging and detachments. Careful follow-up and appropriate therapy was successful in preventing unnecessary blindness in 16 of 17 babies. The incidence of severity of RLF visual loss can be reduced in many cases by conventional therapy if effective screening and careful follow-up allows early diagnosis and treatment.

Ingegno AP, Yatto RP: Hereditary white nails (leukonychia totalis), duodenal ulcer, and gallstones: genetic implications of a syndrome. ***New York State J Med 1982;*** 82:1797–1800.

Hereditary leukonychia is a rare disorder inherited as an autosomal dominant trait and characterized by a porcelain-like whitening of the nails. We have found two unrelated families with this disorder who also have a high incidence of duodenal ulcer and gallstones. The probands were both women with active duodenal ulcers and leukonychia. Nine of 17 first-degree relatives of the two patients shared with them one or more aspects of the triad. The aggregation of these abnormalities in two families and in other unrelated individuals in the present study and in a review of the literature suggests that the clinical expression of leukonychia is a pleiotropic manifestation of a gene that leads separately to leukonychia, duodenal ulcer, and gallstones.

Klingman K, Mylotte JM: Ampicillin and cephalothin susceptibility of Enterobacteriaceae acquired in the community setting. ***New York State J Med 1982;*** 82: 1801–1804.

We prospectively evaluated all Enterobacteriaceae isolated at a Veterans Administration medical center during an eight-week period for site of acquisition and antimicrobial susceptibility. Patients from whom isolates were obtained were also evaluated for underlying diseases and other factors possibly predisposing to colonization or infection with Enterobacteriaceae. During this period 118 patients were identified in whom 130 strains of Enterobacteriaceae were isolated; 90% of the isolates were identified in urine cultures. Two thirds of the isolates were hospital acquired. Seventeen of 40 CA (community-acquired) isolates were resistant to ampicillin, cephalothin, or gentamicin sulfate alone or in combination. Age, underlying diseases, and recent surgery or antibiotic therapy were as common in patients with sensitive organisms as in those with resistant ones in the community setting. In our population of predominately elderly men with frequent underlying diseases, CA Enterobacteriaceae are frequently resistant to ampicillin (43%) and cephalothin (25%). Therefore, it may be appropriate in such populations to initiate therapy with an aminoglycoside when serious CA Enterobacteriaceae infection is suspected.

Whitehead ED, Leiter E: New frontiers in alloplastic genitourinary prostheses. II. The surgical management of erectile impotence. **New York State J Med 1982;** 82:1806–1811.

In the past ten years, various genitourinary prostheses for the surgical management of erectile impotence have been introduced. These prostheses are semirigid, inflatible, and adjustable. The current indications, evaluative procedures, and selection criteria for implantation with these prostheses as well as the advantages and disadvantages of each type of prosthesis is presented. Today, implantation of penile prostheses is a highly acceptable method for managing organic impotence and carefully selected cases of psychogenic impotence.

Temple DF, Ledesma EJ, Mittelman A: Cerebral metastases from adenocarcinoma of the colon and rectum. ***New York State J Med 1982;*** 82:1812–1814.

Autopsy records of 999 cases with colorectal carcinoma revealed only 29 cases with brain metastases, giving an incidence of 2.9%. Lesions in all areas of the colon resulted in metastasis to the brain. However, sigmoid and rectal lesions form the bulk of the primary sites. This is a reflection of the predominant distribution of cancers in these sites. The presence of brain metastasis is usually a sign of diffuse hematogenous spread. The most common organ systems involved with disease are the liver, lung and adrenals. There is no structured plan for managing these brain lesions. This is due to the fact that the appearance of brain metastasis almost always heralds a terminal event. There are, however, several reports in the literature of solitary metastatic disease that has responded to aggressive surgical treatment when local disease is controlled. This has resulted in symptomatic improvement and increased survival.

Abstracts in Interlingua

Zak, TA: Retinopathia del prematuritate; stato actual del fibroplasia retrolenticulari. *New York State J Med 1982;* 82:1795–1796.

Dece-septe (17) pro cento (76/437) del pueros del Nurseria pro Attention Intensive disveloppate retinopathia del prematuritate. Le risco de fibroplasia retrolenticulari (FRL) esseva inversemente proportional al etate del gestation e al peso del nascentia e esseva associate al duration del oxygenotherapia in excesso de 2 septimanas. Le examination selective generalmente esseva positive 8 a 12 septimanas postpartum. In 22 pro cento del pueros affectate esseva observate cambios cicatritial, includente slittamento e distaccamento del retina. Le attention ulteriori e le tractamento appropriate esseva successose per le prevention de un cecitate non necessari in 16 de 17 pueros. Le frequentia del perdita del vision grave causate per le FRL poteva esser reducite in multe casos mediante le tharapia conventional si le selection es effective e le seguimento ulteriori permite le diagnose e tractamento temprane.

Ingegno, AP, e Yatto, RP: Ungue blanc hereditari (leukonychia totalis), ulcere duodenal e calculi del vesicula biliari: implicationes genetic de un syndrome, *New York State J Med,* 82:1797–1800.

Le leukonychia hereditari es un alteration rare hereditate in forma de un tendentia autosomic dominante e characterisate per un blancmento de aspecto de porcellana del ungues. Nos ha trovate duo familias, non relationate, que ha iste trastorno, e que etiam teneva un elevate frequentia de ulcera duodenal e calculi del vesicula biliari. Le patientes esseva feminas con ulcera duodenal active e leukonychia: Nove de 17 del relativos de prime grado de duo patientes comparteva con illes un o plus aspectos del triade. Le aggregation de iste anormalitates en duo familias e in altere personas non relationate intra illes como esseva observate in iste studio, suggere que le expression clinic del leukonychia es un manifestation pleiotopic del gene que conduce separatemente al leukonychia, le ulcere duodenal e le calculi del vesicula biliari.

Klingman K, e Mylotte JM: Sensibilitate del Enterobacteriaceae acquirite in le communitate al ampicillina e cephalotina. *New York State J Med 1982;* 82:1801–1804.

Nos ha evalutate prospectivemente omne Enterobacteriaceae isolate in le Veterans Administration Medical Center durante un periodo de 18 septimanas pro determinar le sito del accquisition e le sensibilitate bacterian. Le patientes del qual le isolates esseva obtenite esseva evalutate pro determinar le existentia de morbos subjacente e altere factores possibilimente predisponente del colonisation o infection con Enterobacteriaceae. Durante le periodo de studio, 118 patientes esseva infectate con iste bacteria, e 130 species esseva isolate. El 90 pro cento esseva obtenite mediante culturas del urina. Duo tertios del isolates esseva acquirite in le hospital. Dece-septe (17) de 40 "CA" isolates esseva resistente al ampicillina, le cephalotina o al sulfato de gentamicina sol o in combination. Le etate, le morbo subjacente, le chirurgia recente o le therapia antibiotic esseva tan commun in patientes con bacteria sensitive como illes con bacteria resistente, in le communitate. In nostre population, predominantemente ancian con morbos subjacente frequente, le Enterobacteriaceae "CA" es fequentemente resistente al ampicililina (43 pro cento) e al cephalotina (25 pro cento). In consequentia, pote esser appropriate, in tal population, initiar le therapia con un aminoglycoside, cata vice que un infection con Enterobacteriaceae es suspectate.

Whitehead ED, e Leiter E: Nove frontieras in le prostheses genitourinari alloplastic. II. Tractamento chirurgic del impotentia del erection. *New York State J Med 1982;* 82:1806–1811.

Durante le ultime 10 annos, differente prostheses genitourinari facite chirurgicmente pro tractar le impotentia erectile ha essite introducite. Iste prostheses pote esser semi-rigide, inflatibile o adjustibile. Es presentate le indicationes actual e le evalutation e selection del prostheses pro implantation e etiam le avantages e disavantages de cata typo de prosthesis. Actualmente, le implantation del prostheses penile es un tractamento altemente acceptabile pro correger le impotentia organic e de casos selectionate de impotentia psychogenic.

Temple DF, Ledesma EJ, e Mittelman A: Metastases cerebral del adenocarcinoma del colon e rectum. *New York State J Med 1982;* 82:1812–1814.

Le reportos autopsic de 999 casos de carcinoma colorectal revelava que solmente 24 habeva metastases cerebral (frequentia 2.9 pro cento). Omne areas del colon causava metastases cerebral; nonobstante, le carcinoma del sigmoide e le rectum esseva quasi semper le sito primari. Le metastasis cerebral generalmente es un signo de dissemination hematogenic. Le organos plus commun de metastases es le ficato, le pulmones e le glandulas suprarenal. Le metastases cerebral es quasi sempre le evento terminal; nonobstante, ha varie reportos in le litteratura supra metastases solitari que ha respondite al chirurgia aggressive quando le morbo local es controlate. Isto resulta in un melioramento symptomatic e superviventia.

Translated by Edwardo I. Juliet, M.D.

Contemporary Hypnotic Therapy '82

Dalmane® [flurazepam HCl/Roche] Stands Apart

References: 1. Williams RL, Karacan I: Introduction, chap. 1, in *Sleep Disorders: Diagnosis and Treatment*, edited by Williams RL, Karacan I, Frazier SH. New York, John Wiley & Sons, 1978, p. 2. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **3.** Kales A *et al*: *JAMA 241*:1692-1695, Apr 20, 1979. **4.** Kales A *et al*: *J Clin Pharmacol 17*:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. **5.** Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Kales A *et al*: *Clin Pharmacol Ther 19*:576-583, May 1976. **7.** Kales A, Scharf MB, Kales JD: *Science 201*:1039-1041, Sep 15, 1978. **8.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **9.** Dement WC *et al*: *Behav Med 5*(10):25-31, Oct 1978. **10.** Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **11.** Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. **12.** Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. **13.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **14.** Kales A, Kales JD: *Pharmacol Physicians 4*(9):1-6, Sep 1970. **15.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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The Physician's Sleep Glossary

Some common sleep laboratory terms

poly•som•no•graph. An instrument which simultaneously records by electrodes physiological variables during sleep—for example, brain activity (EEG), eye movements (EOG), muscle tonus (EMG) and other electrophysiological variables. These readings indicate precisely when patients fall asleep, how many wake periods they experience, the quality of sleep and the duration of sleep.

sleep la•ten•cy. The period of time measured from "lights out," or bedtime, to the commencement or onset of sleep.

wake time af•ter sleep on•set. Intervals of time spent awake between onset of sleep and the end of the sleep period. The polysomnograph registers the length and frequency of the intervals.

to•tal sleep time. The amount of time actually spent in sleeping. This is estimated by subtracting wake times from the period encompassed by the onset and the termination of sleep.[1]

REM/NREM. 1. REM, or rapid eye movement, sleep is "active"—characterized by increased metabolic rates, elevated temperature and arousal-type EEG patterns. 2. NREM, or non-rapid eye movement, sleep represents "quiet" sleep stages. There are four distinct stages of NREM sleep.[2]

re•bound in•som•nia. A statistically significant worsening of sleep compared to baseline on the nights immediately following discontinuation of sleep medication.[3]

Dalmane® (IV)
flurazepam HCl/Roche
15-mg/30-mg capsules

Efficacy objectively demonstrated in the sleep laboratory—the most valid environment for measuring hypnotic efficacy.

In numerous sleep laboratory investigations patients fell asleep sooner, slept longer and woke up less during the night[3-12] with

Dalmane®
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Compared with temazepam and other hypnotics, onset of sleep is more rapid[4] with

Dalmane®

Fewer middle-of-the-night awakenings[4] with

Dalmane®

More total sleep time on nights 12 to 14 of therapy[4] and continued efficacy for up to 28 nights[5] with

Dalmane®

Rebound insomnia is avoided upon discontinuation [3,4,7] of

Dalmane®

Low incidence of morning "hangover"[14] with

Dalmane®

The efficacy of Dalmane has been studied in over 200 clinical trials with more than 10,000 patients.[3-15] During long-term therapy, which is rarely required, periodic blood, kidney and liver function tests should be performed. Contraindicated in patients who are pregnant or hypersensitive to flurazepam.

Please see summary of product information on following page.

Dalmane® Ⓒ
(flurazepam HCl Roche)

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, e.g., excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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Medical Meetings

January conference

The Role of Clinical Electrophysiologic Studies in the Diagnosis and Treatment of Chronic Cardiac Arrhythmias" will be the topic for consideration for the 14th Bethesda Conference planned for January 8–9, 1983, at the American College of Cardiology's (ACC) Heart House in Bethesda, Maryland.

ACC 1983 schedule of events at Learning Center

January 10–12
Emergency Management of Cardiovascular Crises for Physicians
Program Director: Max Harry Weil, M.D., F.A.C.C.

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Program Co-Directors: Leonard S. Dreifus, M.D., F.A.C.C., and Eric L. Michelson, M.D., F.A.C.C.

International Academy of of Pathology

The Annual Meeting of the United States/Canadian Division of the International Academy of Pathology will be held at the Atlanta Hilton, Atlanta Georgia from Monday morning, February 28, 1983 through Friday evening, March 4, 1983.

Month in Washington

Prepared by the Washington, D.C. office of the American Medical Association.

Month in Washington

The "lame duck" session of Congress starting November 29, 1983 will feature action on legislation to exempt the professions from Federal Trade Commission (FTC) jurisdiction and on most of the major appropriations bills, including funding for the Health and Human Services Department.

Other major health issues to be resolved when Congress returns include authorizations for the National Institutes of Health and extension of the health planning program.

The FTC showdown was postponed for a number of reasons, including the need for a continuing resolution to keep the federal government operating for the first two months of the fiscal year that began October 1. The resolution was necessary because Congress had approved only two of the 13 big money bills for the current fiscal year. The failure to act more swiftly on the appropriations front was the reason for the extra, or lame duck session that was forced by President Reagan.

Before hitting the campaign trail for the general elections, the House rejected the Administration's proposal for a constitutional amendment requiring a balanced budget. The vote was far short of the necessary two-thirds margin of approval.

Among other hurried votes, the Senate adopted 70 to 29 a non-binding resolution opposing any "means" test for Medicare patients, knocking down a trial balloon floated by the Administration as officials tried to figure out ways to pare Medicare costs next fiscal year.

Congress did approve legislation encouraging states to pass strict laws against drunk driving by giving them more highway funds.

The House approved an authorization to give the National Institutes of Health 11% more money this fiscal year and to add a new Institute of Arthritis. The Senate must still act.

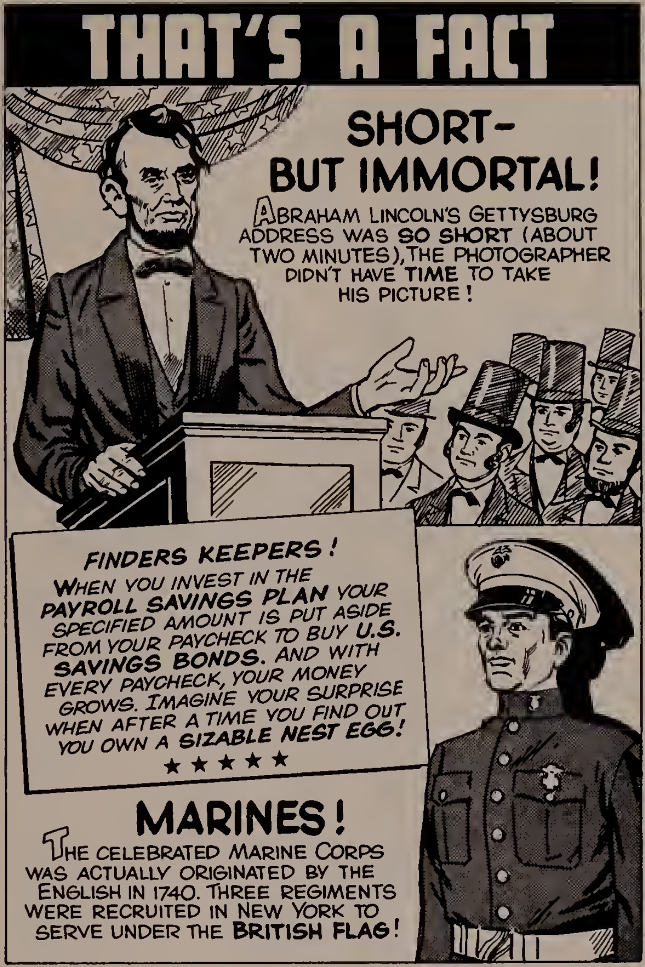
The controversial health planning program won a lease on life by House adoption of a bill keeping the program going for two years, but cutting funding to a total of $65 million and restricting federal funding for certificate-of-need to institutions involved with $1 million or more of new projects. The Senate has not voted on this issue.

*** *** ***

Congress' early October decision to adjourn and postpone until at least the end of November the showdown vote on exemption of the professions from the Federal Trade Commission has given both sides in the controversy time to bolster their drives for votes.

The climate in the lame duck session of Congress will be more relaxed. Lawmakers will be under less political pressure with the elections well behind them. The "lame

(*continued on page 1789*)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(continued from page 1787)

ducks" — Senators and Representatives defeated in the general election — will be under no pressure at all.

The postponement was, in part, due to the belief by Congressional leaders that the issue is a political hot potato that the lawmakers would rather not handle until the elections are over.

Since the timing of the House vote was in the hands of the Democratic leadership — which is generally opposed to the anti-FTC drive led by the American Medical Association — there was reason to speculate that the leadership was not confident its forces could prevail in a vote by the full House.

The Senate Republican leadership promised to take up the measure in the "lame duck" session after the Senate Appropriations Committee had approved 13 to 5 an amendment that would prohibit the FTC from using appropriated funds to take actions against state-regulated professions such as physicians. The amendment was part of a continuing appropriations resolution that finally cleared Congress. Amendment sponsor Senator James McClure (R-ID) agreed not to press for a Senate vote when assured by leadership the question will be resolved in the special session.

The Senate Commerce Committee earlier this year approved a re-authorization bill for the FTC that included an amendment by Senator Ted Stevens (R-AK) to exempt the professions. This measure is still pending before the Senate, delayed in part because of the opposition of Committee Chairman Robert Packwood (R-OR) to the Stevens Amendment, which was adopted by a 10 to 5 committee vote.

The situation in the House originally was for a vote on a bill re-authorizing the FTC for another year. As approved by the House Commerce Committee, the bill contained no restrictive language on the FTC's jurisdiction, but opponents of the FTC's control over the professions were promised a floor vote on the bill by Representatives Thomas Luken (D-OH) and Gary Lee (R-NY) for a moratorium on FTCs actions against the professions. A slight majority of the House (220 members) has endorsed the Luken-Lee bill.

A strong argument against the FTCs jurisdiction over the professions was registered from a surprise quarter, the Attorney General of North Carolina, Rufus Edmisten. The Association of State Attorneys General had voted to support the FTC, but Edmisten told Congress that "without the Luken-Lee Amendment the FTC will have the authority to pre-empt state laws and regulations, an authority which I have opposed repeatedly."

Edmisten noted in a letter to Representative L. H. Fountain (D-NC) that in 1978 he joined with the attorneys general of 16 other states to challenge "the FTCs attempt to pre-empt state laws relating to advertising of ophthalmic goods.

"In essence, our argument was that the FTC does not have authority to pre-empt state statutes. This is a principle of tremendous importance. The (Appeals) Court remanded the case, with its opinion supporting the position of the attorneys general."

Edmisten said FTC actions "have undermined what is a traditional state regulatory authority and have discouraged these groups from many self-regulatory activities."

(continued on page 1880)

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Letters to the Editor

Endometrial carcinoma

To the Editor: The article "Para-Aortic Lymph Node Metastasis in FIGO Stage I Endometrial Carcinoma" by Piver et al (August, 1982),* may be considered a step forward in the staging and treatment of endometrial cancer. However, the authors did not distinguish between metastases limited to the para-aortic nodes which occur in a small number of patients from the more common occurrence of metastases involving both para-aortic and pelvic nodes. The fractional curettage or a hysterogram (implantation danger negligible) may be an aid in distinguishing between the two as the lymphatics of the upper third of the uterus form tributaries of the ovarian lymphatic trunks which drain into the lumbar lymph nodes, especially at L-1 (left) and L-2 (right).

Computed tomography and ultrasonography should be almost a routine procedure in staging undifferentiated endometrial cancer. If the involvement is limited to the para-aortic nodes, a definite percentage of these patients' outcomes may be improved by surgery or a combination of chemotherapy and irradiation limited to the para-aortic nodes. Of course, a good percentage of patients with endometrial cancer are poor risks for radical procedures because of their obesity and their "shaky" general condition.

LEONARD B. GOODMAN, M.D., F.A.C.R.
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* Piver MS, Barlow JJ, Lele SB: Para-aortic lymph node metastasis in FIGO stage I endometrial carcinoma: value of surgical staging and results of treatment. *New York State J Med* 1982; 82:1321–1324.

Carcinoma of colon

To the Editor: We read with interest the case report by Gallagher et al entitled, "Carcinoma of the Colon Appearing as Subcutaneous Emphysema of Lower Extremity," which appeared in the February, 1982 issue of the *New York State Journal of Medicine.** We have recently encountered a similar patient and would like to add it to the sparse literature on this subject and note several points that enabled us to make the correct diagnosis at the time of our patient's admission.

Case report. A 76-year-old black female was transferred to New York Hospital with one month of right hip pain and swelling, fever, and anorexia. There was no history of trauma or prior musculoskeletal or gastrointestinal disease. She was on no medications and had no previous surgery or medical illnesses. On examination, the blood pressure was 100/60 mm Hg, pulse 120, and temperature 38.6°C. There was an 8 × 12 cm nontender mass in the right lower quadrant of the abdomen. Stool was guaiac negative. The right hip had local tenderness, but no fluctuance or crepitation. The right thigh had a circumference 9 cm greater than the left. The white blood count was 23,400 and the hematocrit was 24.4%. X-rays of the right hip and thigh demonstrated gas in the soft tissues of the lateral thigh. Fluid was aspirated from the thigh and gram-positive cocci and gram-negative bacilli were seen on Gram's stain; the patient was treated with broad-spectrum antibiotics.

A perforated cecal carcinoma with extension of a retroperitoneal abscess into the lateral thigh was diagnosed. Immediate surgical drainage of a 300-cc abscess was performed. Cultures grew *Escherichia coli*, beta-streptococcus, and bacteroides. A barium enema demonstrated a 7 × 10-cm carcinoma of the ascending colon. Right hemicolectomy was performed three weeks after abscess drainage for an adenocarcinoma of the colon that had perforated into the retroperitoneum just superior to the psoas muscle. The liver and all nodes were without tumor. Postoperatively, the patient gradually deteriorated with respiratory insufficiency, renal failure, persistent sepsis, and eventual death. Permission for autopsy was refused.

Comment. This case supports the conclusion of Gallagher and coauthors that the gastrointestinal tract must be considered as a possible source for subcutaneous emphysema of the thigh in patients without trauma. In older patients without a history of inflammatory bowel disease or diverticulitis, a perforated carcinoma must always be suspect. In our patient, a palpable abdominal mass and anemia were additional clues in making the diagnosis at the time of admission. Presentation in the lateral thigh is unusual, but can be due to further extension of the abscess along fascial planes from the retroperitoneum.

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Gallagher E, Weingarten M, Swirsky M: Carcinoma of colon appearing as subcutaneous emphysema of lower extremity. *New York State J Med*, 1982; 82:219–221.

Typhoid fever

To the Editor: We believe that an important alternative in the treatment of typhoid fever was omitted from a recent article by Cunha.[1]

In a randomized clinical trial with 124 adult patients with typhoid fever, Pillay et al[2] found amoxicillin to be a viable alternative to chloramphenicol without the side effects of the latter drug. Both Scragg[3] and Abengowe[4] found amoxicillin to be superior to chloramphenicol. These investigators, in pediatric and adult populations,

(*continued on page 1875*)

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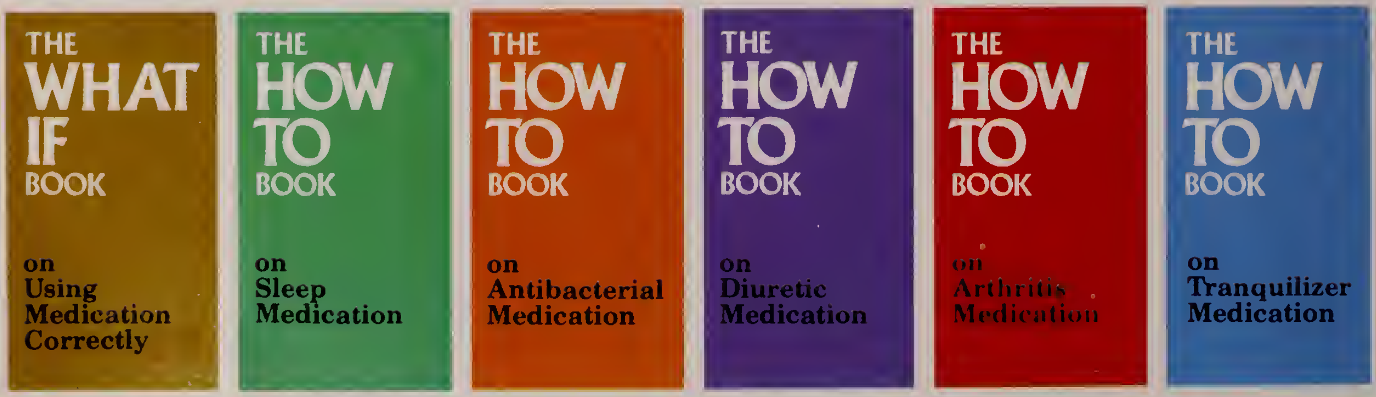
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Retinopathy of Prematurity

An update on retrolental fibroplasia

THADDEUS A. ZAK, M.D.
Buffalo, New York

Assistant Professor of Ophthalmology and Pediatrics, State University of New York at Buffalo School of Medicine, and Buffalo Children's Hospital

Seventeen percent (76/437) of intensive care nursery babies developed retinopathy of prematurity. The risk of developing RLF was inversely proportional to gestational age and birth weight and was associated with duration of oxygen therapy in excess of two weeks. Screening examinations were usually positive eight to 12 weeks post partum. Twenty-two percent of affected babies developed cicatricial changes, including retinal dragging and detachments. Careful follow-up and appropriate therapy was successful in preventing unnecessary blindness in 16 of 17 babies. The incidence of severity of RLF visual loss can be reduced in many cases by conventional therapy if effective screening and careful follow-up allows early diagnosis and treatment.

Retinopathy of prematurity (also called retrolental fibroplasia, or RLF) is a vascular disease of the premature retina associated with oxygen therapy. Although RLF was first described 40 years ago,[1] it remains an enigma. Improvements in monitoring oxygen therapy in the intensive care nursery (ICN) have failed to eliminate the development of retinal vascular changes in the premature infant,[2] and with improved survival, RLF is not uncommon in today's pediatric population.

RLF has a vast literature,[3] and it is difficult for a primary care physician to interpret the plethora of publications. This article will attempt to provide a simplified approach to understanding the incidence, risk factors, and complications of RLF, and the need for follow-up of intensive-care nursery infants, based on data from the Children's Hospital of Buffalo.

Method

All babies admitted to the ICN of Buffalo Children's Hospital during the period of August 1980 through July 1981 who received oxygen therapy or were less than 36 weeks gestational age, or both, received initial screening examinations for RLF, either at eight to 12 weeks of age or at time of discharge from the nursery, whichever occurred first. The author personally performed all screening examinations, having had two years prior experience in RLF screening.

Pupillary dilation was accomplished by instillation of cyclopentolate 1% and phenylephrine 2.5% drops at 60 and 30 minutes before examination. Binocular indirect ophthalmoscopy using a Sauer lid speculum was performed on all infants, with the assistance of a nurse to position the infant's head to permit viewing of the peripheral retina. Scleral indentation was utilized as required.

RLF was diagnosed only when a definite demarcation line was present at the junction of vascular and avascular retina. Examinations were performed on even very sick infants still on respirators, without any serious sequelae, to avoid delaying initial examinations beyond eight to 12 weeks after parturition.

Birth weight, gestational age, duration of oxygen therapy, age at examination, and degree of RLF or its absence were recorded for each baby.

Repeat examinations were performed at two- to four-week intervals for babies who remained in the nursery, and monthly on those under 1,700 g who returned for outpatient follow-up.

Results

Of 437 babies examined, 76 (17.4%) were diagnosed as having active RLF. The drawing area of the ICN has 15,000 births per year, so the incidence was 0.5% of all live births.

Table I demonstrates the significant inverse effect ($P <.01$) of birth weight on incidence of active RLF.

Table II displays the effect of decreasing gestational age. The lower the birth weight and gestational age, the greater the risk of RLF.

The duration of oxygen therapy was found to be

TABLE I. Active RLF *v* Birth Weight

Birth Weight, g	Incidence of RLF
500–899	37/46 (80%)
900–1,099	26/52 (50%)
1,100–1,499	13/82 (16%)
1,500 and over	0/256 (0%)

TABLE II. Active RLF v Gestational Age

Gestational Age	Incidence of RLF
24–26 wk	31/39 (79%)
27–28 wk	27/46 (59%)
29–30 wk	15/63 (24%)
31–32 wk	3/81 (4%)
32 wk and over	0/204 (0%)

a significant risk factor. Seventy-four of 76 (97%) babies with active RLF received a minimum of two weeks oxygen therapy. Seventy-four of 126 babies (59%) with at least two weeks of oxygen therapy and less than 1,500 g birth weight developed active RLF.

Comment

The incidence of active RLF, 17.4%, is similar to that of other studies,[4,5] and should emphasize that active RLF is not a rare disease.

Screening examinations for RLF in the nursery must not be interpreted as definitive for diagnosis, since active RLF usually is not clinically apparent until six to 12 weeks post partum.[5] Any baby under 32 weeks gestational age, or under 1,500 g birth weight, or who received over two weeks of oxygen therapy should be considered high risk and should be reassessed by an examiner skilled in premature infant eye examinations at two to three months post partum.

The natural history of active RLF depends on its severity.[6] Mild stages usually undergo nearly complete resolution with normal retinal vascular development. More severe cases tend to develop retinal scarring, traction, high myopia, and retinal detachments, and only the most severe cases will develop the white retrolental mass from near total retinal detachment.

Of the 76 RLF babies, 17 had severe active disease (grade 3 to 5/5). All of these developed cicatricial changes (Table III). Five of the 17 required retinal surgery for detachment, eight of the 17 required strabismus surgery, and eight of 17 required spectacles to correct anisometropia. Ten of 17 required patching to correct amblyopia.

Many of the lesser grades of active disease, although self-limited, are at a greater risk of amblyopia, strabismus, and refractive errors.[7]

TABLE III. Cicatricial Changes in 17 of 76 Babies with Active RLF

Myopia	16/17
Total detachment, both eyes	1/17
Partial detachment	6/17
Retinal dragging	11/17
Peripheral scarring	3/17
Leukocoria	2/17
Strabismus	7/17
Anisometropia	13/17
Glaucoma	1/17

The need for careful follow-up by experienced examiners cannot be overemphasized, since the chance of treatable pathologic eye conditions is high if early diagnosis is achieved.[8] Careful office examination along with retinal examination under anesthesia is often required to detect and treat early retinal detachment before irreparable loss of vision occurs. Even complete detachments are occasionally operable if recognized early.[9] RLF need not be a diagnosis of total blindness.

Summary

Retinopathy of prematurity affected 0.5% of newborns, and 17.4% of intensive care nursery graduates. Decreasing birth weight, decreasing gestational age, and oxygen therapy longer than two weeks are the major predictors of incidence.

Eye examinations at time of discharge from the nursery often do not give positive results, and all at-risk babies should be examined between eight and 12 weeks of age, and monthly thereafter if RLF is diagnosed.

The rarity of total retinal detachment and the presence of a multitude of eye diseases in which early treatment can circumvent unnecessary loss of vision are discussed. Although RLF is still not curable, effective vision-saving treatment is available in many cases.

The need for careful follow-up eye examinations by an ophthalmologist experienced in RLF could avoid unnecessary visual loss, allow treatment at an optimal period, and hopefully prevent a life of blindness.

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Hereditary White Nails (Leukonychia Totalis), Duodenal Ulcer, and Gallstones

Genetic implications of a syndrome

Hereditary leukonychia is a rare disorder inherited as an autosomal dominant trait and characterized by a porcelain-like whitening of the nails. We have found two unrelated families with this disorder who also have a high incidence of duodenal ulcer and gallstones. The probands were both women with active duodenal ulcers and leukonychia. Nine of 17 first-degree relatives of the two patients shared with them one or more aspects of the triad. The aggregation of these abnormalities in two families and in other unrelated individuals in the present study and in a review of the literature suggests that the clinical expression of leukonychia is a pleiotropic manifestation of a gene that leads separately to leukonychia, duodenal ulcer, and gallstones.

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Hereditary leukonychia totalis is a rare disorder inherited as an autosomal dominant trait and characterized by a porcelain-like whitening of the nails.[1] Occasional reports of this anomaly have appeared for more than a century with approximately 100 individuals in 17 families reported.[2] Up to now, those affected have been thought to be generally healthy and the anomaly considered to be a dermatologic curiosity.[3] The observation of a patient with x-ray- and endoscopically documented duodenal ulcer and leukonychia totalis who had similarly affected family members and the subsequent observation of a second similarly affected family prompts this report, proposing the delineation of a syndrome of family-inherited white nails (leukonychia) and duodenal ulcer. Prior reports of hereditary leukonychia are reviewed for similar associations. The possibility that leukonychia may be a pleiotropic manifestation of a single gene that also leads separately to duodenal ulcer is examined and the question of associated genetically determined susceptibility to gallstone disease is raised.

Patients

Family 1 (Fig 1). Family 1 consists of three generations, with one aspect or another of the triad of leukonychia, duodenal ulcer or gallstones appearing in eight family members.

Case 1 (*III-1*). A 65-year-old sister of the proband has leukonychia of all the nails. Hospital records reveal that at age 51 she had a partial gastrectomy for duodenal ulcer and subsequently underwent cholecystectomy for cholelithiasis. Blood group is AB.

Case 2 (*III-2*). The proband is a 64-year-old woman with leukonychia of all the nails (Fig 2). At age 59 she appeared with low back pains, nausea, vomiting, and weight loss. Penetrating duodenal ulcer was documented by x-ray; endoscopically, multiple duodenal ulcers were seen. An incidental finding was a hyperfunctioning thyroid nodule which was removed and found to be a follicular adenoma. The patient has blood group AB.

Case 3 (*III-3*). A 62-year-old brother of the proband has normal nails. Physician and hospital records show a long, well-documented history of duodenal ulcer confirmed radiographically. Recently he has been found to have multiple myeloma. Blood group is AB.

Case 4 (*III-6*). A 48-year-old sister of the proband

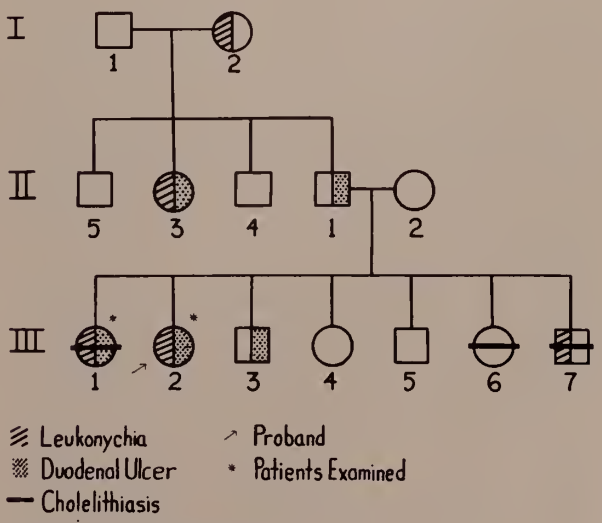

FIGURE 1. Pedigree of family 1.

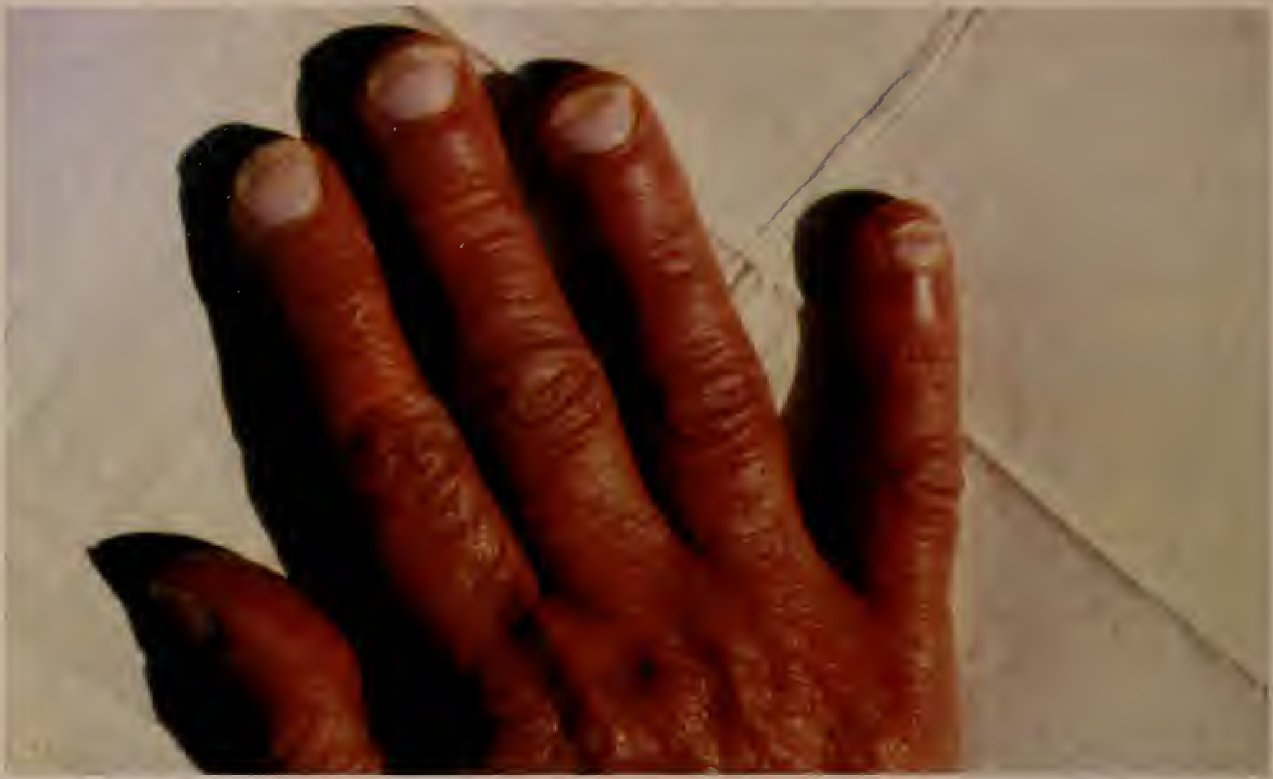

FIGURE 2. Nails of case 2 showing leukonychia totalis.

has normal nails. Hospital records reveal cholecystectomy for cholelithiasis. Blood group is AB.

Case 5 (*III-7*). A 45-year-old brother of the proband has white nails. Hospital and physician records show removal of multiple sebaceous cysts and cholecystectomy for cholelithiasis. Blood group is AB.

Case 6 (*II-1*). Father of the proband whose hospital records reveal death at age 52 of a gastric malignancy many years following an operation for duodenal ulcer. He had normal nails; blood group is unknown.

Case 7 (*II-3*). A paternal aunt of the proband reported by the family to have leukonychia. Physician records reveal radiographically confirmed diagnosis of duodenal ulcer.

Case 8 (*I-2*). Paternal grandmother of the proband who died of unknown cause. She was known to have leukonychia but no other medical information is available. No members of this family have been known to have renal calculi, knuckle pads or deafness.

Family 2 (Fig 3). Family 2 consists of two generations, with the second generation sharing a common father but having different mothers.

Case 9 (*II-1*). A 50-year-old brother of the proband has normal nails. Physician and hospital records show radiographically confirmed duodenal ulcer.

Case 10 (*II-3*). The proband is a 41-year-old woman with leukonychia of all the nails, and endoscopically proved duodenal ulcer. Blood group is O.

Case 11 (*I-2*). Father of the proband who had leukonychia of all the nails. Hospital records show cholecystectomy for cholelithiasis. Multiple upper gastrointestinal series are recorded showing "duodenitis" but none clearly demonstrate ulcer.

Patients II-4 and II-6, 33- and 31-year-old stepsisters of the proband, have radiographically demonstrated renal calculi.

Case 12 (*not illustrated*). A 49-year-old woman followed at clinic who has leukonychia of all the nails. Hospital records reveal cholecystectomy for gallstones and gastrectomy for duodenal ulcer. No family history is available for this patient.

Comment

Hereditary leukonychia totalis has been regarded

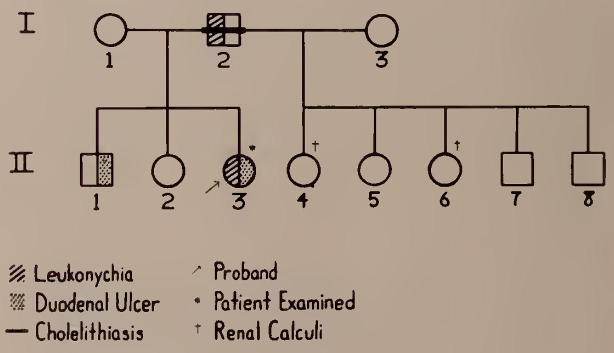

FIGURE 3. Pedigree of family 2.

as a dermatologic oddity carrying no connotation of disease.[4] Cockayne[5] first suggested that hereditary leukonychia is an autosomal dominantly inherited trait. Kruse et al[6] noted that it would be extraordinary that a gene could be so specialized as to affect only the cells which elaborate nails and not affect any other structures, but no associations between leukonychia and other medical disorders were made until Bart and Pumphrey[7] associated leukonychia with knuckle pads and deafness. A pedigree and literature review by Bushkell and Gorlin[2] suggested an association of leukonychia with sebaceous cysts and renal calculi.

Of the fewer than ten patients in the literature with hereditary leukonychia totalis whose medical histories are given, one had a partial gastrectomy at age 39,[8] one had gallbladder disease, and one had pancreatitis.[2] The association of leukonychia with duodenal ulcer and gallstones in these unrelated individuals is noteworthy, providing further evidence that leukonychia seen in conjunction with more common diseases is not merely coincidental.

The genetics of peptic ulcer disease has been controversial. Familial aggregations have been well documented, as has a concurrence in identical twins.[9] There is also an increased incidence of genetically conditioned subclinical markers such as blood group O and nonsecretor status in duodenal ulcer.[10] Elevations of serum pepsinogen I and hypergastrinemia with hyperpepsinogenemia I have also been associated with duodenal ulcer.[11,12]

Polygenic inheritance has been the prevailing hypothesis for susceptibility to peptic ulcer disease, primarily by the exclusion of any single genetic defect.[13] However, evidence for the genetic heterogeneity of peptic ulcer disease is provided by the existence of two distinct autosomal dominant disorders with peptic ulceration as a part of their phenotype, one being multiple endocrine adenoma syndrome type I with gastrinoma, the other being the tetrad of essential tremor, congenital nystagmus, a narcolepsy-like sleep disturbance, and severe duodenal ulceration.[14–16] Rotter[17] postulates the existence of other multisystem syndromes in which one can identify individual families with ulcer disease inherited as a simple mendelian trait. He reported two kindreds with an autosomal dominant form of peptic ulcer disease associated with the presence of elevated levels of serum immunoreactive pepsinogen I as a dominantly transmitted subclinical marker.[11]

A genetic influence on gallstones may be inferred from the increased frequency of cholelithiasis in members of some families[18] and from the increased incidence of gallstones in several American Indian tribes.[19] A greater frequency of blood groups A and AB in patients with gallstones also suggests a possible genetic influence.[20] The prevalence of blood group AB in one of the kindreds reported here may be related to the appearance of gallstones in several family members.

We suggest that the affected individuals reported here represent a separate multisystem syndrome of the type postulated by Rotter in which a susceptibility to duodenal ulcer is inherited as a mendelian trait together with the dominant trait for leukonychia totalis. The high incidence of cholelithiasis in one generation of a kindred is noteworthy and suggests the possibility that the susceptibility to gallstone disease also may be a genetically conditioned part of this multisystem syndrome. In contrast to subclinical markers which possibly play a direct role in the pathogenesis of duodenal ulcer, or indicate a direct pathogenetic process, the clinical expression of leukonychia is a pleiotropic manifestation of a gene that leads separately to leukonychia, duodenal ulcer, and gallstones, analagous to the pleiotropic manifestations of Marfan's syndrome—tall stature, aortic dissection, and dislocated lenses.

The disassociation of ulcer disease from leukonychia in some of the family members presented represents an incomplete penetrance of any one feature of the syndrome, as seen with the reduced penetrance observed in most dominant disorders. Even within the pedigree of family 1, there is reduced penetrance for the trait of leukonychia. Individual I-2 must have transmitted the trait to individual II-1, because he passes it on to his offspring in generation III. Therefore, there is some degree of reduced penetrance of the trait of white nails within the pedigree. Thus it is not unexpected to see the individual such as III-3, in the last generation, who, like individual II-1, has ulcer yet does not have white nails.

The pleiotropic manifestation of a gene associated with duodenal ulcer extends the concept of heterogeneity of duodenal ulcer to include ulcer disease inherited as a simple mendelian trait. The study of other similarly affected individuals would provide confirmation that the multiple effects could be attributed to the action of a single gene.

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Information resources for the visually impaired

Almost 11 million people in the United States suffer from some degree of decreased vision that cannot be restored to normal by corrective lenses or surgery, writes Curtis Margo, M.D., of the Armed Forces Institute of Pathology, Washington, DC, in the *Journal of the American Medical Association.*

In 1978, although the number of persons with some usable vision (low vision) far outnumbered those who were blind, there was only one low-vision service organization for every five organizations for the blind. Even these limited resources are underused, however, because many patients and physicians are unaware of their existence, Margo says.

With Barbara Brown of the Medical College of Georgia, Augusta, Margo has compiled a selective directory of information resources for the visually impaired.

Specialists with low-vision optical aids
Directory of Agencies Serving the Blind and Physically Handicapped in the United States, from
American Foundation for the Blind
15 West 16th Street
New York, New York 10011
(212) 620-2000

Mail-Order optical aids
National Association for the Visually Handicapped
305 East 24th Street
New York, New York 10010
(212) 889-3141
New York Lighthouse Optical Aids Service
36-02 Northern Boulevard
Long Island City, New York 11101
(212) 355-2200

Nonoptical low-vision aids
American Foundation for the Blind
Customer Service Division
15 West 16th Street
New York, New York 10011
(212) 621-2172
Independent Living Aids, Inc.
11 Commercial Court
Plainview, New York 11803
(516) 681-8289

Large-print reading material
American Bible Society
PO Box 5677, Grand Central Station
New York, New York 10163
(212) 581-7400
Library of Congress Services for the Blind
1291 Taylor Street, NW
Washington, DC 20542
National Association for the Visually Handicapped
305 East 34th Street
New York, NY 10010
(212) 889-3141

Education, Rehabilitation, Counseling
American Council for the Blind
501 North Douglas Avenue
Oklahoma City, Oklahoma 73106
National Federation of the Blind
Dupont Circle Building, Suite 212
1346 Connecticut Avenue, NW
Washington, DC 20036
National Association for Parents of the Visually Impaired
2011 Hardy Circle
Austin, Texas 78757

Ampicillin and Cephalothin Susceptibility of Community-Acquired Enterobacteriaceae*

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We prospectively evaluated all Enterobacteriaceae isolated at a Veterans Administration medical center during an eight-week period for site of acquisition and antimicrobial susceptibility. Patients from whom isolates were obtained were also evaluated for underlying diseases and other factors possibly predisposing to colonization or infection with Enterobacteriaceae. During this period 118 patients were identified in whom 130 strains of Enterobacteriaceae were isolated; 90% of the isolates were identified in urine cultures. Two thirds of the isolates were hospital acquired. Seventeen of 40 CA isolates were resistant to ampicillin, cephalothin, or gentamicin sulfate alone or in combination. Age, underlying diseases, and recent surgery or antibiotic therapy were as common in patients with sensitive organisms as in those with resistant ones in the community setting. In our population of predominately elderly men with frequent underlying diseases, CA Enterobacteriaceae are frequently resistant to ampicillin (43%) and cephalothin (25%). Therefore, it may be appropriate in such populations to initiate therapy with an aminoglycoside when serious CA Enterobacteriaceae infection is suspected.

The incidence of infections caused by members of the family Enterobacteriaceae has increased markedly over the past ten to 15 years.[1] One of the significant complications of infections with this group of organisms is bacteremia. In a recent review of gram-negative bacteremia, 75% of the bacteremias were nosocomial in origin. These hospital-acquired (HA) organisms are often resistant to commonly prescribed antibiotics such as ampicillin and cephalothin sodium.[2] However, there is little or no information concerning the antimicrobial susceptibility patterns of community-acquired (CA) Enterobacteriaceae. It is presumed that CA isolates are usually susceptible to commonly used beta-lactam antibiotics. However, a recent study has suggested that resistance of urine culture isolates from outpatients to beta-lactam antibiotics is increasing.[3] In a recent retrospective review of gram-negative bacteremia at this hospital, 48% of CA bacteremias were caused by organisms resistant in vitro to ampicillin or cephalothin or both (SK Ksiazek, JM Mylotte, unpublished data).

The observation noted above encouraged a prospective evaluation of CA Enterobacteriaceae with particular reference to assessing their susceptibility to ampicillin and cephalothin and to identifying factors or conditions that might account for acquisition of resistant organisms in the community setting. It is hypothesized that such information may be useful in making empiric therapeutic decisions in patients with suspected serious CA infections due to Enterobacteriaceae.

Materials and methods

Patients for this study were identified by daily monitoring of results of urine, blood, pleural fluid, ascites, cerebrospinal fluid, joint fluid, and bone cultures done in the hospital microbiology laboratory. Sputum cultures were not included; oropharyngeal colonization with Enterobacteriaceae frequently presents equivocal information regarding the importance of such isolates, even in the presence of lower respiratory tract infection.

Antimicrobial susceptibility testing was performed by disk diffusion according to Performance Standards of the NCCLS.[4] For the purposes of this study, we were concerned only with susceptibility to ampicillin, cephalothin, and gentamicin sulfate (formulary aminoglycoside at this institution). An organism was considered to be "resistant" if it was found to be resistant to one or more of the above-mentioned antibiotics.

All patients with cultures that yielded one or more species of Enterobacteriaceae from the above sites were included in this study; subsequent isolates of the same species from the same site were not included. An isolate was considered HA if it was found on culture 72 hours or more after admission to the hospital and was not present in the same body site within 72

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hours of admission. Isolates that were present on admission to the hospital or that were cultured within the first 72 hours of hospital confinement were considered CA isolates. If, after review of a patient's record, it was discovered that an isolate was present in the same body site on a previous hospitalization within the 12 months prior to this study, it was considered to be an HA isolate.

Patients were categorized according to the following: age; underlying disease; and antibiotic therapy (parenteral or oral), hospitalization, and surgery during the 12-month period prior to this study. Information concerning the above categories was obtained by interviewing each patient as well as from hospital records.

Results

One hundred eighteen patients were identified in whom 130 strains of Enterobacteriaceae were isolated from cultures of urine, blood, and other body sites during an eight-week period. Eight patients had two isolates and two patients had three isolates identified in urine cultures. Forty patients acquired Enterobacteriaceae in the community setting and 78 isolates were hospital acquired. Table I demonstrates the site of acquisition and source of the isolates. Eighty-nine percent of the isolates came from urine cultures. Two thirds of the isolates were acquired in the hospital setting.

The clinical characteristics of the 118 patients in relationship to the site of acquisition and antimicrobial susceptibility of the isolated Enterobacteriaceae are given in Table II. The mean ages of the patients were not significantly different although the patients with HA organisms were older. Underlying diseases occurred commonly in all four groups and frequently patients had more than one disease. As expected, Foley catheterization was most common in the hospital-acquired groups.

The frequency of antibiotic therapy, hospitalization, surgery, and Foley catheterization during the year prior to the study period was analyzed to determine if any of these factors were relevant to the acquisition of resistant strains. In the 40 patients with CA Enterobacteriaceae these factors were found to occur with the same frequency in patients with sensitive organisms as those with resistant ones. Similarly, in the 78 patients with HA Enterobacteriaceae no significant differences in the frequency of these factors was found when patients with sensitive and resistant organisms were compared.

The site of acquisition, antimicrobial susceptibility, and frequency of isolation of species of Enterobacteriaceae are given in Table III. *Escherichia coli* and *Proteus mirabilis* were most frequently isolated in the CA and HA sensitive groups. *Klebsiella pneumoniae* was the most frequent isolate in the CA and HA resistant groups. The species of isolates in the CA resistant group were similar to those in the HA resistant group. This suggested the possibility that the CA resistant isolates were acquired in the

TABLE I. Site of Acquisition and Source of 130 Isolates of Enterobacteriaceae in 118 Patients

Site of Acquisition	Susceptibility	No. of Patients	Source of Culture*			Total
			Blood	Urine	Other†	
Community	S**	23	3	19	2	24
	R‡	17	1	15	1	17
Hospital	S	33	1	37	1	39
	R	45	6	44	0	50
TOTALS (%)		118	11 (8.5)	115 (88.5)	4 (3.0)	130 (100)

* = number of isolates from each source
† = includes 3 isolates from peritoneal fluid and 1 from bile
** S = sensitive by disk diffusion to ampicillin, cephalothin, and gentamicin
‡ R = resistant to ampicillin, cephalothin, or gentamicin alone or in combination

TABLE II. Clinical Characteristics of 118 Patients Compared to Site of Acquisition and Antimicrobial Susceptibility of Isolated Enterobacteriaceae

	CS (N = 23)	CR (N = 17)	HS (N = 33)	HR (N = 45)
Mean age, yr	61.9	59.4	72.3	68.3
Foley catheter	7	4	22	37
Diabetes	7	3	7	5
Cancer	2	4	5	9
Alcoholism	5	4	3	4
Genitourinary tract disease	5	5	9	8
Stroke	3	1	7	8
ASHD	6	2	4	12

CS = community-acquired sensitive
CR = community-acquired resistant
HS = hospital-acquired sensitive
HR = hospital-acquired resistant

TABLE III. Site of Acquisition, Antimicrobial Susceptibility, and Frequency of Isolation of Various Species of Enterobacteriaceae

Species	Site of Acquisition: Community Sens	Community Resist	Hospital Sens	Hospital Resist
Escherichia coli	15	2	25	3
Klebsiella pneumoniae	1	6	1	17
Proteus mirabilis	6	1	13	3
Enterobacter cloacae	0	3	0	6
Enterobacter agglomerans	1	0	0	1
Proteus stuartii	1	1	0	8
Citrobacter freundii	0	1	0	5
Morganella morganii	0	1	0	3
Serratia	0	2	0	3
Proteus rettgeri	0	0	0	1
TOTALS	24	17	39	50

Sens = sensitive to ampicillin, cephalothin, and gentamicin
Resist = resistant to ampicillin, cephalothin, or gentamicin alone or in various combinations

TABLE IV. Resistance Patterns of Community-Acquired and Hospital-Acquired Resistant Enterobacteriaceae

Site of Acquisition	Total No. Isolates	Resistance Pattern: Amp Alone	Ceph Alone	Amp & Ceph	Amp, Ceph & Gent	Gent Alone	Amp & Gent
Community	17	7	0	9	1	0	0
Hospital	50	20	2	15	9	3	1

Amp = ampicillin
Ceph = cephalothin
Gent = gentamicin

hospital setting and persisted after discharge. However, seven of 17 patients in the CA resistant group had not been hospitalized at any time during the one year prior to this study. Thus recent hospitalization was not a reliable marker for the presence of resistant Enterobacteriaceae.

Patterns of resistance of CA and HA resistant isolates are given in Table IV. All 17 isolates in the CA resistant group were resistant to ampicillin. Ten of the 17 isolates were resistant to cephalothin. However, only one of the 17 CA resistant isolates demonstrated resistance to gentamicin.

Comment

There is little or no information about antimicrobial susceptibility of Enterobacteriaceae in the community setting. Ampicillin or cephalothin is commonly prescribed to treat patients with suspected CA gram-negative infection, eg, urinary tract infection. This approach is based on the presumption that CA bacteria are usually sensitive to beta-lactam antibiotics. However, the data in the present study point out that this presumption may not be applicable to all patient populations.

In the present study in a population consisting of predominately elderly men with significant underlying diseases, 43% of patients with CA Enterobacteriaceae had organisms resistant to ampicillin, cephalothin, or gentamicin alone or in various combinations. The factor(s) responsible for this resistance were not readily apparent. A history of antibiotic therapy, hospitalization, surgery, or Foley catheterization in the previous year was found as frequently in patients with sensitive organisms as in those with resistant organisms. Multivariate analysis was not performed, and this leaves open the possibility that a combination of several factors may be a predictor of patients harboring resistant organisms.

Other factors may be important in the acquisition of resistant Enterobacteriaceae in the community setting. There may be unidentified sources of resistant organisms in the community. This possibility is suggested by the fact that seven of 17 patients with CA resistant organisms in the present study had not been hospitalized during the year prior to this study. Alternatively, some patients may have become colonized with resistant organisms during hospitalizations occurring before one year prior to this study. Such prolonged colonization may be possible, especially in the urinary tract. The patient population in this study is at risk for such prolonged colonization. They are elderly and frequently have underlying diseases such as prostatism, diabetes, prostatic cancer, and urinary tract stones, which predispose to bacterial colonization of the urinary tract. The impact of outpatient antimicrobial therapy on the development of resistance among indigenous Enterobacteriaceae remains unanswered. In this study we purposely interviewed all patients in order to determine if any of them received outpatient antimicrobial therapy. This occurred infrequently and therefore no statistical comparison could be made between patients with resistant and sensitive organisms.

Others have found evidence of ampicillin and cephalosporin resistance in CA Enterobacteriaceae but have not made specific comments about this aspect. Lynch et al[5] in a study of gram-negative bacteremia at a Veterans Administration Medical Center found that 40% of CA isolates were resistant to ampicillin and 20% were resistant to cephalothin. None of these isolates were resistant to gentamicin. These authors felt that gentamicin should be prescribed if serious CA gram-negative infection was suspected in their population of patients. However, they made no comments on the reason(s) for the resistance of the CA isolates.

The prospective identification of patients harboring resistant organisms has important therapeutic implications. Kreger et al,[1] in a recent retrospective study of gram-negative bacteremia, found that mortality increased significantly when inappropriate antimicrobial therapy was prescribed. The ability to predict which patients with CA Enterobacteriaceae have resistant organisms would increase the likelihood that appropriate therapy is prescribed.

We were unable to identify clinical characteristics which would reliably predict the presence of resistant Enterobacteriaceae in the community setting. However, this prospective study has documented a high degree of resistance of CA Enterobacteriaceae to ampicillin and cephalothin, predominately among urinary tract isolates, in our patient population. Therefore, in our patients, when CA urinary tract infection due to Enterobacteriaceae is suspected, gentamicin should be part of the initial treatment regimen especially when the patient is seriously ill.

One must be cautious in extrapolating the findings of the present study to other patient populations. This study was done over a short period of time in a population of elderly males with a high incidence of underlying disease. Almost 90% of the Enterobacteriaceae isolated were from urine specimens. Whether or not resistance patterns are the same for Enterobacteriaceae isolated from body sites other than the urinary tract or in other patient populations in the community setting is speculative and, accordingly, requires further study.

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The case of the finely chopped tapeworm

About 40 years ago, a professor at McGill University in Montreal related a story about tapeworms he had discovered in women of the orthodox Jewish faith who made their own gefilte fish.

The problem, as recalled by Lazarus J. Loeb, M.D., who recounts the story in a letter in the March 19 *Journal of the American Medical Association*, occurred with the use of raw fresh water fish in which the tapeworm, *Diphyllobothrium latum*, can live.

Pickerel and northern pike, being choice ingredients in the well-known Kosher dish, were filleted and then chopped by hand in a wooden bowl. Extra ingredients (depending on personal recipe favorites) were added as the chopping continued. So far, so good.

However, during the course of adding the seasonings and condiments, Loeb writes, the women would taste the raw mixture at frequent intervals, risking the ingestion of a live tapeworm.

A lesson to be learned from this can be taken from Loeb's own mother, who, he recalled, did not taste the gefilte fish she was making until it was very finely chopped. The Waco, Texas, physician assumes that no tapeworm could have survived his mother's diligent chopping.

Loeb suggests that physicians who provide care for Jewish women who make their own gefilte fish (presumably with less diligence than his mother) should be on the lookout for the tapeworm when the patients have recurrent abdominal discomfort.

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New Frontiers in Alloplastic Genitourinary Prostheses

II. The surgical management of erectile impotence

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In the past ten years, various genitourinary prostheses for the surgical management of erectile impotence have been introduced. These prostheses are semirigid, inflatable, and adjustable. The current indications, evaluative procedures, and selection criteria for implantation with these prostheses as well as the advantages and disadvantages of each type of prosthesis is presented. Today, implantation of penile prostheses is a highly acceptable method for managing organic impotence and carefully selected cases of psychogenic impotence.

Unsatisfactory erections have appearently been a problem since earliest recorded time. For example, it is reported that around 1,000 BC, the Chinese splinted erectile tissue with ivory rods.[1] In the more recent past, the treatment of impotence has been by aphrodisiacs, witchcraft, testicular extracts, testicular transplantation, ligation of the dorsal vein of the penis, and bulbocavernosus and ischiocavernosus plication.[2] However, these methods were relatively ineffective. Consequently, extensive efforts were made to develop an implantable baculum-type device similar to the os penis found in mammals such as the walrus.

Apparently, the first surgical procedure of this type in man for the correction of erectile impotence employed the use of autologous rib cartilage to strengthen a newly reconstructed penis following traumatic amputation.[3] A similar technique was later used by Frumpkin[4] with early satisfactory results in terms of the ability to have intercourse. However, with the passage of time, it was noted that the cartilage would first curve on itself and later would be almost totally absorbed.

The first alloplastic rigid acrylic penile prosthesis was used by Scardino in 1950 when he implanted it into a man with impotence due to traumatic spinal cord injury.[5] Ten years later, Loeffler and Sayegh[6] reported their use of the first single midline perforated acrylic prosthesis which was inserted between the corpora cavernosa. In the same year, Beheri of Egypt[7] pioneered the use of paired intracorporeal prostheses when he reported his experience with paired polyethylene rods. In 1976, Lash and associates[8] were the first to use rod-shaped paired silastic prostheses that were centrally placed between the corpora cavernosa in a pocket that extended from the suspensory ligament to the corona. In 1976, Pearman[9] introduced the first rod-shaped silastic prosthesis which was placed in the midline dorsally between Buck's fascia and the tunica albuginea. Later, he modified his technique and also placed it beneath the tunica albuginea in the midline, but within the corpora cavernosa.[10,11] However, neither the Lash prosthesis nor the Pearman prosthesis was fixed proximally. Each terminated at the junction of the penis with the abdomen.[12] As a result, poor posterior stability during penile thrusting was common.

The first use of paired intracorporeal penile prostheses in the United States was presented by Whitehead in 1972 at the Annual Meeting of the American Urological Association in Washington, DC, and later reported by Morales and associates in 1973.[13] This prosthesis was made of polyethylene and shaped similar to the Beheri prosthesis. Michael P. Small, one of the inventors of the Small-Carrion penile prosthesis, has referred to it as the "first modern intra-corporeal penile prosthesis" (Fig 1).[14] The major complications of these earlier types of prostheses were: extrusion through the urethra or skin of the shaft of the penis, lymphedema, irritation of the glans penis, breakage of the prosthesis, slippage of the glans over the prosthesis, and infection.[15,16]

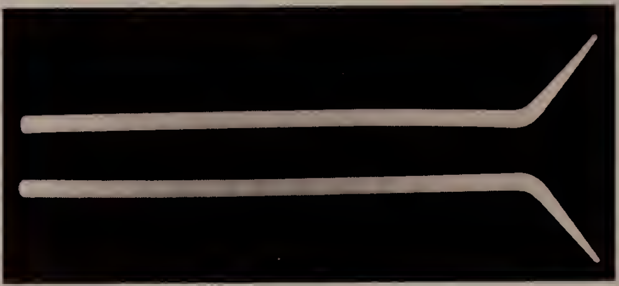

FIGURE 1. Early paired polyethylene penile prosthesis.

Current types of prostheses

Today, several types of fully implantable intracorporeal paired penile prostheses are implanted in patients with erectile impotence (see Table). They are (1) the semirigid (Small-Carrion) penile prosthesis; (2) the inflatable (Scott) penile prosthesis; and (3) the adjustable (Finney and Jonas) penile prostheses. All of these prostheses are designed to minimize slippage and reduce pressure points within the corpora cavernosa. These prostheses are generally implanted on an inpatient basis. However, on occasion they may be implanted on an outpatient ambulatory basis.

The Small-Carrion penile prosthesis. In 1972, Small and associates[17] developed a prosthesis consisting of two semirigid rods implanted within the corpora cavernosa.* This prosthesis, like the prostheses of Beheri and Morales and associates, was angulated to fit the proximal limb in the crus of the penis in the perineum. The exterior of the Small-Carrion prosthesis is firm silicone and the interior is a viscous silicone sponge similar to the inner material of implantable breast prostheses (Fig 2). Several approaches for implantation are utilized including a dorsal penile, perineal, and infrapubic approach. The Small-Carrion prostheses are quite satisfactory in most patients. However, the semirigid rods create a somewhat rigid penis that often requires the use of restrictive clothing because of the permanent state of rigidity that is produced. On occasion, it may be difficult to conceal this rigidity in daytime and recreational activities, particularly in locker rooms and while swimming. Small and Carrion are credited with popularizing the insertion of the semirigid penile prosthesis within the corpora cavernosa, and today their prosthesis is the most widely used of all such devices.[18]

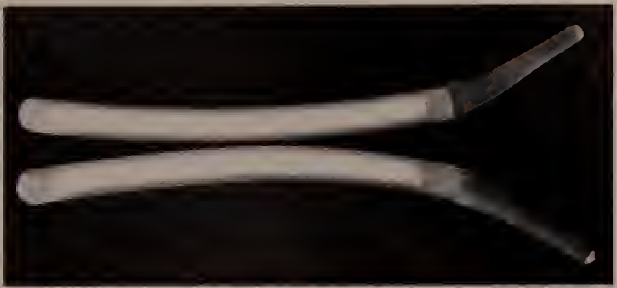

FIGURE 2. Small-Carrion Penile Prosthesis.

The Scott inflatable penile prosthesis. The penile prosthesis that most closely mimics nature is an hydraulically operated inflatable penile prosthesis† first implanted in February 1973 by Scott and his associates.[19] This prosthesis has undergone several design changes. The current model is medical-grade silicone elastomer and consists of four components: a single inflate/deflate pump, a storage reservoir, and paired inflatable and expandable penile cylinders. The components are connected to each other by silicone elastomer tubing and stainless steel connectors, and the system is filled with radiopaque fluid (Fig 3).

The advantages of the current Scott inflatable penile prosthesis are several: (1) It is under the volitional control of the patient (Fig 4). (2) It simulates normal erectile physiology by transfer of fluid from a seamless dip-coated storage reservoir in the perivesical space to inflatable cylinders in the corpora cavernosa of the penis. The resulting increase in girth and turgor, and some increase in length, permits

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* Heyer-Schulte Corporation, Goleta, California.

† Medical Engineering Corporation, Racine, Wisconsin

Comparison of Currently Implanted Penile Prostheses for Erectile Impotence

Type	Advantages	Disadvantages
Semirigid (Small-Carrion)	Modest surgery Minimal complications	Penis always rigid Harder to conceal in daytime and recreational activities such as locker rooms and swimming Penis never increases in width, turgor, or length, and penis is never flaccid
Inflatable (Scott)	Closely mimics the natural erection Volitional control of erectile state including rigidity, increase in girth, some increase in length, and flaccidity of penis Most natural appearance	Mechanical failure (replacement of component(s) may be necessary) Most expensive More involved surgical procedure
Adjustable-hinged (Finney)	Modest surgery Minimal complications Can be concealed for daytime activities Stiffened penis hangs in dependent position	Not always rigid enough for satisfactory vaginal penetration Penis never increases in width, turgor, or length, and penis is never flaccid
Adjustable-malleable (Jonas)	Modest surgery Minimal complications Simplicity of design that allows elevated and dependent penis Malleability enables positioning in the dependent and elevated states	In dependent position it remains firm Not always rigid enough for satisfactory vaginal penetration Penis never increases in width, turgor, or length, and penis is never flaccid

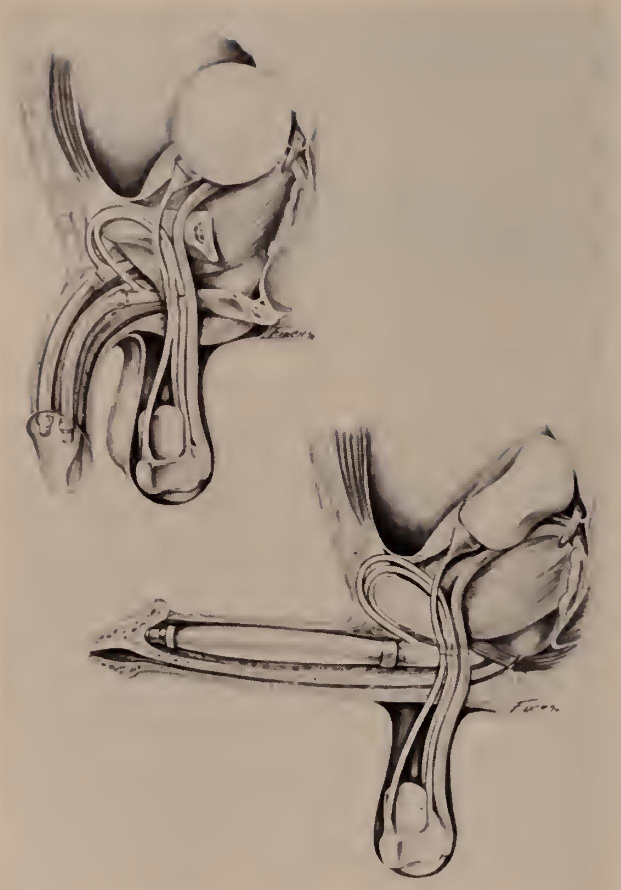

FIGURE 3. Scott Inflatable Penile Prosthesis in flaccid state (top) and in erect state (bottom).

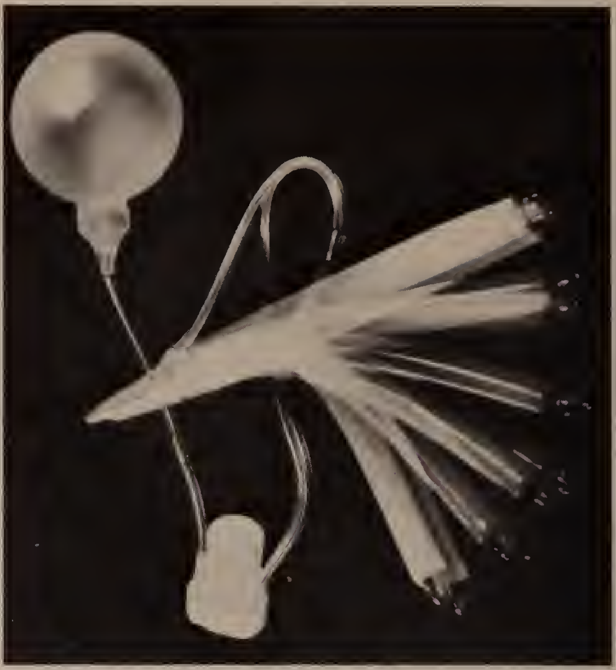

FIGURE 4. Scott Inflatable Penile Prosthesis demonstrating degrees of volitional control of erect state.

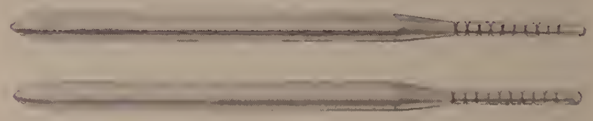

FIGURE 5. Finney Penile Prosthesis.

vaginal penetration and sexual intercourse. (3) It does not interfere with normal physical activity or exercise. (4) It is cosmetically undetectable.

The Finney penile prosthesis. More recently, in 1977, Finney reported on his paired adjustable penile prosthesis that has a hinge at the level of the pubic area (Fig 5).[20] The hinge allows the penis to be placed in a dependent position for micturition and elevated manually for intercourse. It is covered by a soft silicone elastomer, but the rod is rigid silicone. The proximal end can be trimmed to fit the individual patient. The advantageous features of the Finney penile prosthesis are that its hinged segment allows for the penis to be less conspicuous than with the Small-Carrion prosthesis and that its tail allows for trimming a single prosthesis to optimal length.

Jonas penile prosthesis. The most recently introduced penile prosthesis is the paired adjustable, malleable Jonas prosthesis in which twisted silver wires are embedded in silicone.* This allows manual direction and stabilization of the penis in various positions (Fig 6).[21] The advantageous features of the Jonas prosthesis are as follows: (1) the prosthesis may be elevated for intercourse; (2) the penis may be placed in the dependent position for micturition; and (3) the penis may be placed against the body in the nonmicturition and nonerectile states with normal concealment of the penis by clothing.

Two additional intracorporeal prostheses introduced in the late 1970s that have not gained widespread acceptance are the Subrini Silastic Penile Rods and the Gerow Silicone Elastomer Rod with a longitudinal groove on the ventral side. It is claimed that both prostheses permit proximal flexibility for precoital and postcoital management. The Gerow single implant has a ventral groove that permits the

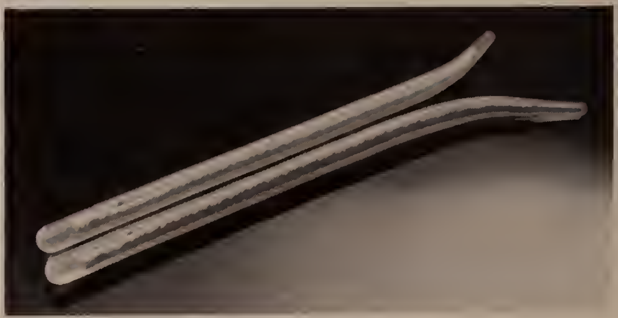

FIGURE 6. Jonas Penile Prosthesis.

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* Dacomed Corporation, Minneapolis, Minnesota.

implant to lie over the divided intracorporeal septum.[22]

Current indications, evaluative procedures, and selection criteria for implants

Today we know that erectile impotence, estimated to be present in between five and 15 million men in the United States, can be caused by one or a combination of numerous organic or psychologic disturbances including diabetes mellitus, Peyronie's disease, priapism, paraplegia, atherosclerosis, multiple sclerosis, transverse myelitis, Parkinson's disease, epilepsy, surgical procedures such as radical prostatectomy, radical cystectomy, abdominal-perineal resection, and aortoiliac surgery, penile trauma, pelvic fracture, perineal trauma (ruptured urethra), spinal cord trauma, alcoholism, cirrhosis, chronic renal disease, drug abuse, and drug side-effects. Patients with organic impotence due to many of these etiologies are frequently ideal candidates for implantation with penile prostheses, as shown in the following outline.

- Vascular disease
  - Artherosclerosis
  - Priapism
- Neurologic disease
  - Autonomic neuropathy (diabetes mellitus)
  - Multiple sclerosis
  - Paraplegia
  - Spinal cord trauma
- Trauma
  - Pelvic fracture
- Surgical procedures
  - Radical prostatectomy
  - Radical cystectomy
  - Abdominal-perineal resection
  - Aorto-iliac surgery
- Other
  - Peyronie's disease

Today, the following tests are frequently performed in an attempt to identify specific causes of impotence: glucose tolerance tests, CBC, SMA-12 urine analysis, plasma testosterone, luteinizing hormone, follicle-stimulating hormone, prolactin, thyroid function tests, and occasionally 24-hour urine excretion of 17-ketosteroids, free cortisol, total urinary testosterone, and skull x-rays.[23,24] Furthermore, in the last several years, great strides have been made in developing objective laboratory measurements of erectile function and dysfunction that have allowed a clearer distinction to be made between organic and psychogenic impotence. These include (1) monitoring of nocturnal penile tumescence,[25–28] (2) Doppler penile blood pressure and flow studies,[29] (3) penile arteriography,[30] (4) phalloarteriography,[31] (5) corpus cavernosography,[32] (6) bulbocavernosus reflex latency time,[33] and (7) cystometrograms.[34] It is estimated that in approximately 50% of patients, impotence is associated with an organic etiology.

Comment

Due to the following properties, silicone and silastic penile prostheses are the state of the art in penile surgery for the correction of erectile impotence: (1) excellent tissue tolerance, (2) absence of foreign body reaction, (3) ability of the prostheses to be manufactured in various sizes and forms allowing satisfactory cosmetic results and mechanical reliability, and (4) compatibility with other synthetic materials required for surgical correction of erectile impotence.

The Finney and the Jonas prostheses have been known to buckle during coitus because of lack of rigidity, but they do permit a degree of flexibility that enables the penis to be "dressed" in a dependent position. However, all of these devices, including the Small-Carrion prosthesis, fail to significantly increase the girth or turgor of the penis, and they create a degree of penile rigidity and urethral resistance that may make subsequent urethral endoscopic surgery, such as cystoscopy, transurethral resection of bladder tumors, or transurethral resection of the prostate difficult.[15,35]

The Scott inflatable penile prosthesis, however, which closely mimics the physiologic changes of a natural erection, produces a normal-appearing erection with normal increase in girth and turgor and some increase in length, to permit intravaginal penetration and sexual intercourse. Since penile rigidity and urethral resistance in the flaccid state are not increased, there is no interference with the ability to perform urethral endoscopic surgery, if necessary, after insertion of the prosthesis.[36] The complications associated with the Scott inflatable penile prosthesis are due mainly to mechanical failures that today occur in approximately 8% of patients.[37] The main complications have been buckling or ballooning or rupture of cylinders, tubing kink, inadequate cylinder length, reservoir leakage and infection.[38–40] Correction of a mechanical complication requires additional relatively minor surgery to replace one or more of the components.

Complications have been noted in approximately 1% of patients with the semirigid and adjustable types of prostheses. These complications have included infection, urethral erosion, extrusion of the prosthesis, urinary retention, and malposition of the prosthesis.[18,21,41–43] Since the introduction of antibiotic protocols for use in conjunction with penile prosthesis insertion the infection rate has been less than 0.5% with the Small-Carrion prosthesis and approximately 1.5% with the Scott Inflatable Penile Prosthesis.

The long-term success rate after implantation of the Small-Carrion, Finney, and Jonas prostheses approximates 95%.[41,44] After implantation of the Scott inflatable penile prosthesis one can expect a long-term success rate, including possible surgical revision, in terms of patient and partner satisfaction in approximately 90% to 95% of patients.[39,45–49]

Patients who have had the Scott inflatable penile prosthesis implanted generally maintain the same frequency of intercourse as was present prior to the development of impotence. Partner acceptance after insertion of the Small-Carrion penile prosthesis has been reported between 42% and 99%.[42,50,51] Orgasmic sensation and ejaculation are unaffected by prosthetic implantations.

Conclusion

A great many patients can be successfully treated with any of several current types of penile prostheses for erectile impotence if (1) they are properly screened and selected; (2) the patient and his partner's expectations do not exceed the results that can be achieved through implantation; (3) appropriate preoperative discussion is carried out to determine the true motivation of the patient and his partner; and (4) they are allowed to make their choice of prosthesis based on full disclosure of the advantages and disadvantages of each type of penile prosthesis.

At this time, implantation of penile prostheses is a highly acceptable method of managing organic impotence and carefully selected cases of psychogenic impotence. As of this date, it is estimated that approximately 70,000 to 80,000 impotent men have been implanted with such penile prostheses.

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Nosocomial infections

Nosocomial infections—infections caught in the hospital—strike up to two million patients and cause or contribute to 80,000 deaths annually, according to estimates from the Centers for Disease Control (CDC), Atlanta. Treating nosocomial infections adds a burden of roughly $2 billion to the yearly cost of health care delivery.

Writing in the May 21 *Journal of the American Medical Association*, Ruth L. Berkelman, M.D., medical epidemiologist in the CDC's Hospital Infections Program, reports tracing two outbreaks of surgical wound infections involving 12 patients (one of whom died) to an operating room nurse with recurrent vaginal and anal infections. The case is unusual, Berkelman writes, because the bacteria involved — Group A beta-hemolytic *Streptococcus*, the organism that causes strep throat — is implicated in less than one percent of surgical wound infections. Also, the organism is rarely found in the anus or vagina.

"Many nosocomial infections involve potent strains of common organisms that normally would not cause serious problems in a healthy person outside the hospital," Berkelman explained in a separate interview. "The antiseptics and disinfectants we use in the hospital kill the weaker, more common organisms and leave the less common, more resistant strains. Hospital patients are susceptible to infection by these strains because of their poor health and because invasive procedures like surgery and use of intravenous lines and catheters provide more ways of introducing the organisms into their bodies.

"Nosocomial infections are spread primarily by human hosts," Berkelman added. "Hospital personnel, other patients and visitors can transmit disease organisms by hand-to-hand contact, although airborne transmission is also a factor. Inanimate objects like gifts, plants and flowers, and hospital floors, walls, and equipment are not as important in transmitting infection as we once believed."

The nurse in Berkelman's study was apparently cured of infection after ten days of penicillin therapy following the initial outbreak of wound infections. But after two more cases occurred five months later, the nurse was again found to have a streptococcal infection. She was then relieved of patient care duties, given another course of penicillin therapy, and began receiving monthly penicillin injections. She returned to work after one year free of infection but continues to receive monthly antibiotic treatment.

Berkelman found that patients who had received antibiotics for other reasons prior to surgery were resistant to wound infection. Nevertheless, she cautions, "the infections are too rare to justify routine use of antibiotics as a preventive measure. Doing so would risk the development of ever more resistant organisms. Instead, we should continue to concentrate on early identification of carriers in order to prevent and control nosocomial infections."

Cerebral Metastases

From adenocarcinoma of the colon and rectum

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Autopsy records of 999 cases with colorectal carcinoma revealed only 29 cases with brain metastases, giving an incidence of 2.9%. Lesions in all areas of the colon resulted in metastasis to the brain. However, sigmoid and rectal lesions form the bulk of the primary sites. This reflects the predominant distribution of cancers in these sites. The presence of brain metastasis is usually a sign of diffuse hematogenous spread. The most common organ systems involved with disease are the liver, lung, and adrenals. There is no structured plan for managing these brain lesions, due to the fact that the appearance of brain metastasis almost always heralds a terminal event. There are, however, several reports in the literature of solitary metastatic disease that has responded to aggressive surgical treatment when local disease is controlled. This has resulted in symptomatic improvement and increased survival.

Hepatic and pulmonary metastases are common in patients with colorectal carcinoma. In contrast, metastases to the brain are unusual. To determine the incidence and clinicopathologic factors that influence the course of patients with brain metastasis from colorectal carcinoma, the computerized clinical and autopsy records of 999 patients with colorectal carcinoma were reviewed and form the basis of this report.

Materials and methods

Between January 1959 and December 1979, 999 patients with colorectal cancers at various stages of the disease were treated at Roswell Park Memorial Institute. All cases were autopsied. There were 29 cases of histologically documented brain metastases with cell types identical to that of the primary malignancy, an incidence of 2.9%. Of the 29 cases, 18 were men and 11 were women, ranging in age from 37 to 81 years (average age, 61.3 years) (Table I).

Figure 1 summarizes the sites of the primary lesions. All patients with rectal lesions (with the exception of one) had well-differentiated or moderately well-differentiated adenocarcinoma. One patient had squamous-cell carcinoma of the anus. As their initial surgical therapy, all patients with rectal lesions (with the exception of one) underwent an abdominoperineal resection; the exceptional patient was treated by end colostomy and a mucous fistula.

Patients with lesions in the various other sites who had their primary surgery at Roswell Park Memorial Institute were treated by standard radical colectomies.

Diagnostic studies

Most of the patients in this study presented with intracranial metastasis prior to widespread use of the computerized axial tomographic scan. In addition, when intracranial metastasis was manifested in most of these patients, there was usually clinical and, in some cases, diagnostically apparent hematogenous spread of disease, as such efforts to document brain metastasis were not done in a systematic manner.

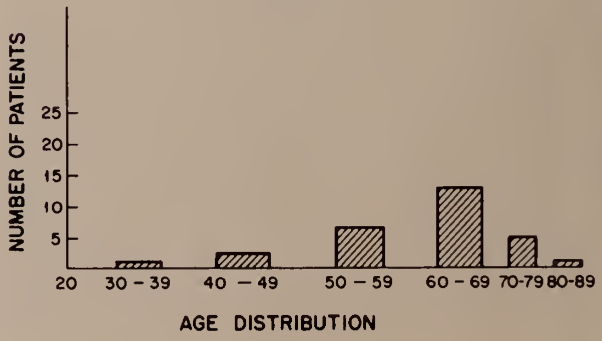
The brain scan, when done, missed the lesion in 3/11 patients and, on another occasion, gave a false-positive result.

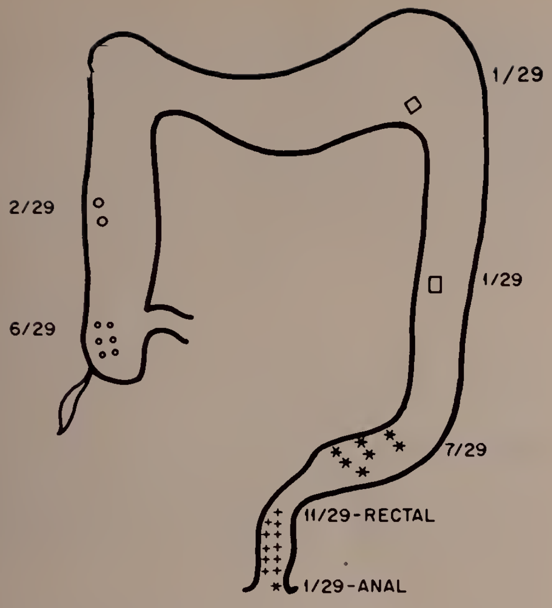
Electroencephalographic findings showed no more accuracy than did the brain scan. Six patients had an EEG; the EEG interpretation was consistent with the autopsy findings in only one patient.

In five of the six patients, the site of the lesion on EEG was either not at variance with the autopsy findings or (as occurred in three patients) when a lesion was identified as being at variance with the autopsy findings, usually a second lesion was missed.

Only three patients had a CAT scan in this series. In one of these patients, the site of the lesion was falsely identified, while in the remaining two pa-

TABLE I.





	SITE OF 1° LESION	% OF PATIENTS
I.	RECTAL LESIONS	12/29 = 41.4 %
II.	SIGMOID LESIONS	7/29 = 24.1 %
III.	CECAL LESION	6/29 = 20.7 %
IV.	ASCENDING COLON	2/29 = 6 .9 %
V	SPLEVIC FLEXURE	1/29 = 3.5 %
VI.	DESCENDING COLON	1/29 = 3.5 %

FIGURE 1. Distribution of colorectal lesions giving brain metastasis.

tients, the site of the lesion was correctly identified and corroborated by autopsy finding.

Similarly, only three patients had arteriograms. In one patient the study gave a false-negative result. However, in the other two patients the lesions were correctly identified.

Table II summarizes the more frequent neurologic symptoms and physical findings encountered in patients with antemortem findings. Some patients had isolated symptoms; others had a combination of symptoms.

Clinical course and treatment of brain metastasis

In all patients with antemortem diagnosis of brain metastasis, there was evidence of widespread disease prior to the manifestation and documentation of the brain metastasis.

As a result, in only three patients was surgical intervention attempted. These three patients survived 21, 12, and 3 days, respectively. In another patient, whole-brain radiation therapy was the treatment used, but the patient died two weeks after its initiation. One patient with multiple brain lesions treated with bilateral intracarotid bischloronitrosourea (BCNU) died 16 days after initiation of chemotherapy; no response could be ascertained or documented in such a short time.

TABLE II. Neurologic Manifestations

Major Manifestation	Number of Patients
Hemiparesis	10/14
Headaches	7/14
Unsteady gait	4/14
Convulsions	3/14
Nausea/vomiting	2/14
Hemonymous hemanopsia	1/14

Eleven patients with antemortem diagnosis of metastatic brain disease were treated by supportive therapy, steroid and anticonvulsant drugs. The average survival time was approximately one month. Respiratory failure was the cause of death in the majority of these patients.

Comment

Brain metastasis from colorectal carcinoma, unlike liver and pulmonary metastasis, is uncommon. Cerebral involvement secondary to colorectal carcinoma has an incidence of 1.8% of all metastatic manifestations or foci.[1] In this study, 29 of 999 autopsied patients with colorectal carcinoma had documented brain metastasis.

It is interesting to note that 15 of the 29 patients had silent asymptomatic metastasis. The analysis of these 29 cases showed there were 18 patients with a single focus, while the remaining 11 patients had two or more metastatic foci. Eighteen patients had lesions located in the supratentorial aspect of the brain, compared with seven patients with infratentorial lesions. Four patients had lesions located in both areas. At the time of diagnosis of the brain metastasis, there was usually also widespread involvement of other organ systems. Table III summarizes the common organ sites involved with metastatic foci, based on autopsy.

In reviewing the clinical course of this selected group of patients, it was apparent that the presence

TABLE III. Organ Sites Commonly Involved With Metastastic Disease in Association With Brain Metastases

(Autopsy Findings)

Organ Site*	Number of Patients
Liver	22/29
Lung	25/29
Adrenals	15/29
Local regional nodes	13/29
distant nodes (mediastinum)	
Other sites:	
bone, pancreas, peripancreatic nodes, thyroid, and stomach	

* In 14/29 patients the liver scans prior to demise were positive for metastatic disease, and in 16/29 patients, the chest x-ray, and in some cases tomograms, had evidence of metastatic pulmonary lesions.

or clinical manifestation of intracranial metastatic deposit was an almost-terminal event, pointing to an overwhelming invasion. Survival time following the documentation of brain metastasis (ie, either clinical neurologic signs or diagnostic finding) ranged from two to eight weeks, with an average survival time of four weeks.

This finding of multisystemic involvement in addition to brain metastasis makes it difficult to develop a sound comprehensive approach for therapy in these patients. In the three patients subjected to surgery at our institution, all had widespread disease noted at autopsy, and supportive treatment did not markedly increase survival. Based on our data, we cannot recommend any one modality or therapeutic approach over another since the numbers are small and the results dismal. However, it is clear that in patients with neurologic signs an attempt should be made to document not only the presence of brain metastasis but also the extent of involvement of other major systems.

The approach to an intracranial lesion depends on several factors: (1) the extent of disease in other organ systems; (2) the number of lesions; (3) the anatomically involved areas; and (4) surgical access to the intracranial lesion itself.

If primary disease is controlled and a solitary, easily accessible mass is identified—and if the patient is a good surgical risk—an aggressive surgical approach can be pursued.[2,3] Radiation therapy as well as chemotherapy[5] can then be used for possible eradication of remaining microscopic foci. Although the cases reviewed in this series do not tend to support this approach, case reports of long-term survivors following craniotomy have been reported.[4,5]

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As the worm turns

According to Philip Gunby, writing in the Medical News section of the *Journal of the American Medical Association*, the physician could hardly believe what he was seeing as he peered through his laparoscope into a patient's abdomen.

A bright red worm, about six-inches long, was wriggling through the patient's intestinal wall into the abdominal cavity.

Then, to the physician's astonishment, another blood-red worm wriggled out of the intestine into view.

The scene was an operating room in Baltimore's Franklin Square Hospital a few weeks ago. Within a matter of days, the *JAMA* Medical News senior associate editor writes, physicians there saw three patients with the same problem. Two required abdominal surgery, and the other was treated medically.

To find out what was happening, the Franklin Square physicians turned to Everett Schiller, Sc.D., of the Tropical Medicine Center at the neighboring Johns Hopkins Medical Institutions.

Schiller concluded that the worm is a species of the genus *Eustrongylides*, a roundworm that lives in fish-eating birds and passes its eggs via bird droppings. The droppings are ingested by fish that in turn are eaten by still other birds.

As it turns out, the three patients whose severe abdominal pain brought them to the hospital were all fishermen. And all had been engaging in a not-too-uncommon pastime among anglers in that area when the fish aren't biting: they were swallowing live bait minnows. None had suffered any ill effects from this practice previously.

When the minnow is host to the *Eustrongylides* worm, the parasite has no problems. But "the food and enzymes contained in the human stomach probably are intolerable to the worms," Schiller says. "So, because they are very active, they use a serpentine motion and a dissolving enzyme that they can produce to bore a hole in the human intestine and escape. The next thing that happens is that the intestinal contents spill into the abdominal cavity."

Why they suddenly are appearing in live bait minnows in the Baltimore area is not clear, but when Schiller and colleagues dissected more than five dozen of these so-called bull minnows (purchased from a shop in the area that these fishermen were known to use), they found *Eustrongylides* in 48%.

The scientific literature indicates that the worms are found from Maine to Florida and occasionally as far west as Oregon. In an effort to learn more about them, Schiller is asking anglers who find the parasite in their bait minnows to send the worms (dead or alive) and one of the minnows from the infested group in crushed ice to him at the Parasitology Laboratory, 615 North St., Baltimore, Md., 21205, together with any pertinent information.

In the meantime, Gunby said, physicians in Baltimore are suggesting that fisherman abstain from taking the bait themselves when the fish refuse to do so.

Renal Transplantation in the Patient With Juvenile Onset Diabetes Mellitus

An overview

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Over 50% of patients who live longer than 20 years after the onset of juvenile onset diabetes (type I) develop renal failure. It has been estimated that in the United States, diabetes may currently be responsible for 25% of new cases of renal failure. Yet, as recently as 15 years ago, the diabetic patient developing renal failure was rarely given the option of either transplantation or dialysis. It was not until preliminary clinical trials at the University of Minnesota[1] showed that transplantation was a feasible alternative for this group of patients that treatment of renal failure in the diabetic patient was started on a large scale. Recently, dramatic improvement has been reported in survival and rehabilitation for diabetic patients treated with either transplantation or chronic maintenance hemodialysis. As a result, the number of patients treated by these modalities is growing rapidly. Through 1979, a total of 600 patients with type I diabetes were reported to have undergone transplantation and 1,400 had been started on dialysis. By 1981, these numbers had increased to 1,000 transplanted patients and 4,000 on maintenance dialysis.[2]

There are specific problems related to treatment of renal failure in the diabetic patient. Juvenile onset diabetes mellitus affects many organs; transplantation or dialysis treats only one aspect of the disease. Many of the other manifestations of the disease can be either incapacitating (eg, retinopathy) or fatal (eg, cardiovascular). In addition, the specific treatment chosen for management of renal failure may affect the rate of development of the other complications. Therefore, several important questions need to be answered in making treatment decisions for the diabetic patient with renal failure. First, what is the relative risk of transplantation for the diabetic compared to the nondiabetic patient? Second, in the diabetic patient, what is the risk of transplantation compared to alternative therapy, ie, dialysis? In answering these questions, both patient survival and quality of life must be assessed.

Risk of transplantation

Is the patient with juvenile onset diabetes mellitus at greater risk than the nondiabetic for transplantation?

Exciting new data comparing patient and graft survival in 90 diabetic and 113 nondiabetic patients have recently been presented by Sutherland et al[3] from the University of Minnesota. Remarkable improvement has occurred in both patient and graft survival since 1979. Two-year actuarial patient survival was greater than 90% for both the 90 diabetic and the 113 nondiabetic patients, whereas two-year actuarial graft survival exceeded 80% for both groups. Improved survival was not due to a change in donor or recipient population. The markedly improved patient and graft survival was seen in recipients of both living related and cadaver kidneys. The improvement in survival compared to previously reported data from the same institution[4] was attributed to a number of factors—pretransplant splenectomy, blood transfusions, the use of the new immunosuppressive agent cyclosporin A in some patients, aggressive hypertension control, and meticulous control of diabetes with intensive insulin management. Others, including a combined report of the Standards Committee of the American Society of Transplant Surgeons,[5] are also now demonstrating equivalent results in the diabetic and nondiabetic patient following transplantation.

The early results following kidney transplantation

Presented at the Seventh Scientific Meeting of the New York Transplantation Society, New York City, on January 27, 1982.

in diabetic patients can now be anticipated to be as good as the results in the nondiabetic. Long-term patient survival results currently demonstrate an advantage to the nondiabetic transplant recipient. This may be due to an increased number of late cardiovascular deaths in diabetic patients. Sutherland et al[6] compared long-term survival in 107 diabetic and 296 nondiabetic patients who had survived three years following transplantation. At six years, actuarial survival was 85% in the diabetic patient versus 90% in the nondiabetic; at eight years, actuarial survival was 76% in the diabetic and 86% in the nondiabetic. The most important factor influencing long-term patient surival in the diabetic patient appeared to be donor source. Seven-year actuarial survival was 100% in recipients of HLA-identical sibling kidneys, 81% in recipients of cadaver grafts, and 62% in recipients of grafts from non-HLA-identical relatives. The relationship of donor source to diabetic patient survival has been noted by others.[7,8] Feduska et al[9] have recently proposed a program of pretransplant donor-specific blood transfusions in order to improve patient and graft survival following living related donor transplantation in the diabetic patient and to thus minimize the use of cadaver donors in this group.

Whereas it is universally accepted that donor source affects graft survival, the unusually marked influence on patient survival is specific to the diabetic patient. This may be due to the apparent increased risk of graft failure in the diabetic patient. Diabetic patients do not tolerate the sequence of graft failure and return to dialysis. The European Dialysis and Transplant Registry reports that of 172 diabetic transplant recipients returning to dialysis after transplantation, only 30% survived 12 months.[10] It is unclear what percentage of this patient loss is due to transplant-related complications, to progression of other manifestations of diabetes, or to risk of dialysis *per se*.

The diabetic transplant recipient differs from the nondiabetic in other areas as well. First, patients with juvenile onset diabetes are at risk for recurrence of diabetic glomerulosclerosis. Almost all biopsies performed four years after transplantation show histologic evidence of recurrent disease. However, to date, no kidney has been lost secondary to recurrence of diabetic glomerulosclerosis. As diabetes is usually present a mean of 20 years before end-stage renal failure develops, an equivalent amount of time may be required before a transplanted kidney is lost to recurrent disease. Second, due to the other manifestations of the disease, late posttransplant rehabilitation is not as good in the diabetic patient. Retinopathy, neuropathy, and cardiovascular disease are not nearly as significant an influence on posttransplant rehabilitation in the nondiabetic patient. Yet, at the University of Minnesota, over 80% of diabetic patients with functioning grafts were found to be active (employed, student, homemaker) three years following transplantation.[6] Inactive patients had a higher incidence of disabilities (blind, impaired vision, amputations). Five to nine years post transplant, most diabetic patients reported that they were better than in the pretransplant period. However, compared to nondiabetic transplant recipients, the diabetic patients scored less well on scales of physical, emotional, and social well-being.[11]

Relative risks of dialysis and transplantation

What are the relative risks of dialysis and transplantation in the diabetic patient?

Patient survival. Until recently, reports on the survival and quality of life of the diabetic patient on dialysis had been discouraging. Patient survival data strongly favored transplantation. Fifteen percent to 40% of diabetic patients were reported to die within a year of initiation of dialysis, and patient survival at three years was only 30%. Survival on hemodialysis was significantly lower in the diabetic as compared to the nondiabetic patient.[12] Preliminary results using peritoneal dialysis are also poor (44% one-year patient survival).[13]

Kjellstrand et al[2] have now reported a major improvement in the survival of diabetic patients on maintenance hemodialysis. They studied diabetic patient survival versus time of treatment at Hennepin County Hospital in Minneapolis. The experience of this institution represents over 10% of all dialyzed diabetic patients in the United States. Kjellstrand et al report that one-year patient survival has improved from 60% in 1966 to over 80% in 1981. Three-year patient survival has improved from 30% in 1966 to 65% in 1981. Comparing survival data of diabetic patients started on dialysis between 1976 and 1981 with survival data of patients transplanted between 1969 and 1978, they conclude, "There is no longer any difference between survival of hemodialyzed patients and related nonidentical or cadaver transplant recipients." However, as previously discussed, transplant survival statistics have also improved markedly over this time period.

Unfortunately, there are no prospective randomized studies comparing dialysis with transplantation in the diabetic patient. For example, Kjellstrand et al state that 13% of diabetic patients now accepted for dialysis are over 60 years of age; but, those over 60 represent only a very small percentage of any transplant series. Thus, patient selection may affect results. The European Dialysis and Transplant Registry[10] compares large numbers of patients (2,851 dialysis; 599 transplanted), but does not state selection criteria for each treatment modality and also does not take donor source into consideration when analyzing posttransplant survival. In the accompanying tables, we have summarized some of the recent available data for purposes of comparison. Importantly, in examining the data, the time period involved must be noted, and for the transplantation statistics, the relationship of survival to donor source

TABLE I. Percent One-Year Patient Survival in Diabetic Patients Treated With Dialysis or Transplantation

Institution	% Survival	Type Graft	Reference
Transplantation			
American Society of Transplant Surgeons (1977–1978)	89	Related	5
	92	Cadaver	
University of Minnesota (1976–1978)	90	HLA-identical	4
	80	Nonidentical related	
	70	Cadaver	
University of Minnesota (1979–1981)	100	HLA-identical	3
	95	Nonidentical	
	90	Cadaver	
San Francisco (1969–1981)	87	Cadaver	9
Mayo Clinic (1970–1978)	80	Related	7
	64	Cadaver	
European Dialysis and Transplant Association (1973–1980)	55	All types	10
Dialysis			
Downstate Medical Center (1976)	67		12
Hennepin County (1976–1981)	83		2
European Dialysis and Transplant Association (1973–1980)	62		10

must also be considered. In addition, it must be recognized that the patients in each series may not comprise comparable groups.

One-year (Table I) and two-year (Table II) patient survival is clearly best for recipients of HLA-identical sibling transplants. Using comparable time periods, there appears to be little difference between survival on dialysis and survival after cadaver or non-HLA-identical related transplantation. However, the most recent transplant data on survival in these groups exceed the best dialysis survival statistics.

Three-year (Table III) and four-year (Table IV) patient survival is, again, best in recipients of HLA-identical sibling transplant recipients. In the data presented, the best results after transplantation exceed those for dialysis. However, there is great overlap. Because much of the patient loss in the past was in the first years after initiation of treatment, and these results have improved (Tables I and II), we must wait to see the long-term outcome in those patient groups currently having improved short-term survival.

The cause of death for patients dying while being maintained on dialysis differs from that for patients dying after transplantation. Cardiac and vascular problems were responsible for 72% of dialysis deaths reported by the European Registry, whereas sepsis played a role in 14%.[10] Following transplantation, cardiac and vascular problems were responsible for 29% of deaths in the Minnesota series and 44% in the European data. Sepsis accounted for 45% of the deaths in both transplant groups.[6,10]

Quality of life (rehabilitation). The second major consideration in choosing a treatment modality for the patient is quality of life. Although subjective quality of life is difficult to evaluate, a number of parameters that are likely to be related to the quality of life in the diabetic patient can be studied. These include progression of retinopathy, need for amputations, need for hospitalization, and whether the patient is active or disabled.

Using these parameters, early data strongly favored transplantation. Most significant was the difference in preservation of eyesight. Up to 44% of diabetic patients starting hemodialysis were reported to develop blindness during the first year, as compared to 95% preservation of vision following successful transplantation. At the University of Minnesota, the finding of rapid deterioration of vision on dialysis led to the treatment plan of transplanting

TABLE II. Percent Two-Year Patient Survival in Diabetic Patients Treated With Dialysis or Transplantation

Institution	% Survival	Type Graft	Reference
Transplantation			
University of Minnesota (1966–1980)	90	HLA-identical	16
	77	Related	
	70	Cadaver	
University of Minnesota (1979–1980)	>90	All types	3
European Dialysis and Transplant Association (1973–1980)	52	All types	10
Mayo Clinic (1970–1978)	80	Related	7
	52	Cadaver	
Dialysis			
Downstate Medical Center (1976)	59		12
Hennepin County (1976–1981)	75*		2
European Dialysis and Transplant Association (1973–1980)	40		10

* All <60 years.

TABLE III. Percent Three-Year Patient Survival in Diabetic Patients Treated With Dialysis or Transplantation

Institution	% Survival	Type Graft	Reference
Transplantation			
Mayo Clinic (1970–1978)	80	Related	7
	52	Cadaver	
European Dialysis and Transplant Association (1973–1980)	44	All types	10
Dialysis			
Hennepin County (1972–1975)	40		2
European Dialysis and Transplant Association (1973–1980)	33		10
Hennepin County (1976–1981)	65*		2

* <60 years.

diabetic patients early in the course of renal failure. Many patients received transplants prior to the need for dialysis or shortly after dialysis was begun. Seventy-nine percent of such patients having good vision (20/50 or better) at the time of transplant maintained stable vision over a six-year follow-up period.[6] Recently, Kjellstrand et al[2] have reported a marked improvement in preservation of eyesight of diabetic patients started on maintenance hemodialysis. In their current series, 9% of the patients developed blindness during the first 18 months of dialysis. They suggest that their early results are now equivalent to results following transplantation. However, long-term follow-up is not available. The reported improvement may be due to a combination of better control of hypertension, more stringent control of diabetes, and improvement in dialysis techniques.

The incidence of amputation appears to be significantly higher after transplantation than after dialysis. Between 1968 and 1980, 65 of 373 transplanted diabetic patients (17%) at the University of Minnesota have required posttransplant amputations.[14] Of these, 72% were lower-extremity amputations, and two thirds of the patients required more than one procedure. In contrast, only 5% of the diabetic patients on chronic dialysis at Hennepin County have needed amputations. A higher rate of amputation (16%) in diabetic patients on dialysis has been reported by Avram et al[15]; however, all patients were over 50 years of age, and patients with juvenile onset and maturity onset diabetes were grouped together in this series.

Early rehabilitation data have favored transplantation. Over 80% of diabetic transplant recipients with functioning kidneys are active over three years post transplant (employed, homemaker, student). Activity is related to other manifestations of the disease. Inactive patients tend to be those with visual impairment, limb loss, and/or severe cardiovascular disease. There is no long-term follow-up on rehabilitation of diabetic patients on dialysis. Using a 15-month follow-up, Kjellstrand et al[2] reported that 65% of their patients were either disabled, retired, or unemployed. An interesting observation has been made by the European Dialysis and Transplant Registry. The Registry compared the number of days of hospitalization in 1979 for cadaver transplant recipients with the number of days of hospitalization for patients on maintenance hemodialysis. One quarter of both groups were never hospitalized in 1979, 60% were hospitalized for one to 90 days, and the remainder for longer than 90 days. Unfortunately, for the transplant group, the relationship of hospitalization to the time of transplant is not given. Also, as the majority of both groups were hospitalized between one and 90 days, it would be helpful to know if there are differences in hospitalization if this time period is subdivided.

Conclusion

An exciting change has occurred in the last 15 years in the care of the diabetic patient with end-stage renal disease. Whereas initially, these patients were refused treatment because of a hopeless outlook in the face of limited resources, we can now anticipate 90% patient survival after initiation of treatment. Transplantation and hemodialysis results have both improved significantly. Current survival and reha-

TABLE IV. Percent Four-Year Patient Survival in Diabetic Patients Treated With Dialysis or Transplantation

Institution	% Survival	Type Graft	Reference
Transplantation			
University of Minnesota (1966–1980)	86	HLA-identical	16
	63	Nonidentical	
	58	Cadaver	
Mayo Clinic	80	Related	7
	52	Cadaver	
European Dialysis and Transplant Association (1973–1980)	42		10
Dialysis			
European Dialysis and Transplant Association (1973–1980)	23		10

bilitation data continue to favor transplantation, but the differences are not nearly as marked as in the past. The best current treatment, if available, for management of renal failure in the diabetic patient is an HLA-identical sibling transplant.

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Renal Transplantation in Children

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Renal transplantation has become well accepted as an important alternative to chronic dialysis in children with end-stage renal disease (ESRD). At the New York Hospital–Cornell Medical Center, renal transplants have been performed under the supervision of the Division of Pediatric Nephrology since 1970. Methodology, personnel, and philosophic approach have changed little during this period. While a number of reports on the results of renal transplantation in children are found in the literature, few discuss long-term follow-up.[1,2] We wish to report an 11-year follow-up of the young recipients transplanted at our institution.

Methods

The patient population consisted of 85 children between the ages of 12 months and 19 years (mean = 12.5 ± 0.5 years). At this center patients up to 20 years of age are referred for pediatric care. There were 111 transplants performed in this study group. Of the 111 transplants performed, 42 were living related donor (LRD) transplants and 69 were cadaveric (CAD) transplants. In the cadaveric group, there were 39 first transplants, 21 second transplants, 6 third transplants, and 4 fourth transplants. Of the 21 second cadaver transplants, all but five patients received the initial transplant from a living related donor. All the transplants in this group were performed prior to January 1981. Thus, the minimum period of follow-up is one year.

The causes of end-stage renal disease in the study group can be seen in Table I. Obstructive uropathy and focal and segmental glomerulosclerosis were seen most frequently in these patients. Hypoplasia/dysplasia and medullary cystic disease or juvenile nephronophthisis were among the more common etiologies. Mixed lymphocyte cultures were used in an attempt to choose the best donor, but high-MLC donors were not rejected. HLA matching was at-

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TABLE I. Etiologies of End-Stage Renal Disease

Primary Renal Disease	No. Patients
Obstructive uropathy	17
Focal segmental sclerosis	13
Chronic glomerulonephritis (GN)	12
Hypoplasia/dysplasia	10
Medullary cystic disease/juvenile nephronophthisis	8
Familial nephritis	4
Interstitial nephritis	3
Membranoproliferative GN	3
Hemolytic uremic syndrome	2
Shönlein-Henoch purpura	2
Prune-belly syndrome	2
Rapidly progressive GN	2
Polycystic disease	2
Bilateral Wilm's tumor	1
Jeune's syndrome	1
Systemic lupus erythematosus	1
Anti-glomerular basement membrane GN	1
Membranous GN	1

TABLE II. Immunosuppressive Therapy

Time	Imuran	Prednisone
Pre op	5mg/kg/d	2mg/kg
Post op #1	4 mg/kg/d	2 mg/kg Q12H
Post op #2	3 mg/kg/d	2 mg/kg Q12H
Post op #3	2 to 2.5 mg/kg/d	Taper by 5 mg/d to 0.5 mg/kg/d div. bid
3 Months	2 to 2.5 mg/kg/d	0.5 mg/kg/d single dose
5 Months	2 to 2.5 mg/kg/d	0.2 mg/kg/d single dose
Rejection	2 to 2.5 mg/kg/d	5 mg/kg IV Q12 × 6

tempted but not required in cadaver transplants. During the study period transfusions were given as medically indicated. All patients had negative T and B cell cross-matches immediately prior to transplantation.

All patients received immunosuppression according to the format in Table II. Standard immunosuppression was used and did not vary during the study period. Patients were receiving 2 to 2½ mg/kg/d of azathioprine and 0.2 mg/kg prednisone by five months post transplant. Antirejection therapy consisted of methylprednisolone 5 mg/kg intravenously every 12 hours, 6 doses, with tapering on oral prednisone to the prerejection dosage over a ten-day period.

Data management and statistical analyses were performed with the Clinfo data system on a PDP 11-45 computer at the Department of Biomathematics, Mount Sinai Medical Center. Survival was evaluated by product-limit life table analysis. Life tables were compared with the generalized Wilcoxon test. Linear regression and Student's t-test (1 and 2 tailed) were performed where appropriate. In all instances $P < .05$ was taken as the level of statistical significance.

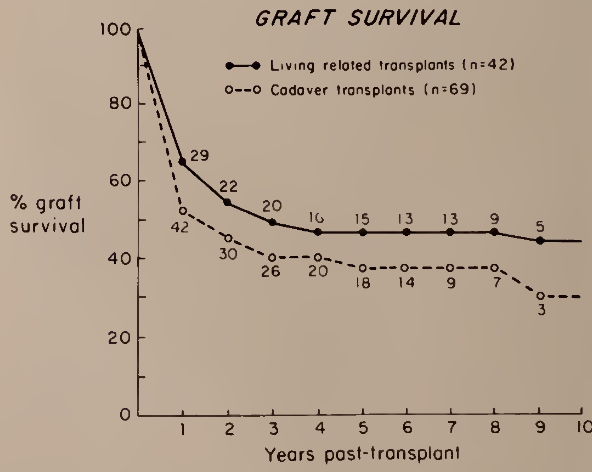
Graft survival was analyzed in all patients over the age of 17 months. A functioning graft was defined as one in which the patient had no dialysis requirement. Serum creatinine values measured within two months of the close of the study were utilized as an indicator of current renal function.

In addition to graft and patient survival, the effect of pretransplant transfusions, pretransplant time on dialysis, HLA-AB matching and pretransplant cytotoxicity were analyzed. HLA typing and cytotoxicity testing were performed by the New York Blood Center. Cytotoxic antibodies were determined by performing T cell and warm B cell cross-matches against a random panel of the population (usually 20 to 30 samples). A positive T cell cross-match and/or a positive warm B cell cross-match defined a patient as being cytotoxic. The proportion of the panel to which they responded was reported as percent cytotoxicity.

Results

Patient survival. During the study period, 14 deaths occurred among the 85 patients receiving transplants. Nine children died while on dialysis at least one year after their transplants ceased functioning. Immunosuppression was discontinued when dialysis was required. Five patients died with a functioning graft in place. One patient died five months post transplant (secondary to a subarachnoid hemorrhage of unknown etiology) with a perfectly functioning graft. A second died three years post transplant with chronic rejection, hypertension, and a myocardial infarct. Three patients did not survive the immediate posttransplant period. Causes of death in this group were cytomegalovirus, pneumonia, *Pseudomonas* sepsis, and a ruptured renal-artery anastamosis causing fatal hemorrhage. Cumulative patient survival is 94.1%.

Present graft function. Thirty-seven of the 85 recipients currently have functioning grafts. Seventeen LRD transplants and 20 CAD transplants are currently functioning. Of the CAD transplants, 16 of 39 first grafts (41%), 4 of 21 second grafts (19%),



Pediatric renal transplantation, New York Hospital 1970–1980.

TABLE III. Cadaver Source Graft Survival

Years Post Transplant	1st Cadaver Graft (n = 39)	2nd Cadaver Graft (n = 21)
1	65%	40%
3	55%	32%
5	53%	22%

and no third or fourth grafts are currently functioning. Most patients with functioning grafts have good renal function. In the LRD recipients, 88% have creatinine values between 2 and 5 mg/dL. In the CAD recipients, 82% have creatinine values between 2 and 5 mg/dL.

Graft survival. Life table analysis of graft survival of the living related and cadaver transplants can be seen in the Figure. Graft survival in living related transplants was 75% at three months, 65% at one year, and 46% at five years and ten years. Cadaver transplant survival including multiple grafts, was 71% at three months, 52% at one year, and 36% at five years and ten years. Graft survival of living related and cadaver transplants in our study group was not statistically different. Life table analysis comparing first and second cadaver graft survival is shown in Table III. Graft survival in first cadaver transplants was 65% at one year, 55% at three years and 53% at five years, while second cadaver transplant graft survival was 40% at one year, 32% at three years, and 22% at five years. Statistical comparison of these survival curves does not demonstrate a difference.

Obstructive uropathy. The most common diagnosis bringing children to transplantation in our study group was obstructive uropathy. This group of patients might have been considered to be at high risk because of multiple surgical procedures and longstanding urologic problems. In these 18 patients, a mean of 2.3 surgical procedures were performed prior to transplant. Ten required ilial conduits and bilateral nephrectomies because of grossly abnormal urinary tracts. Graft survival in these children was significantly better than in the remainder of the study population with three-month graft survival of 89%, one-year graft survival of 78%, and five- and ten-year survival of 66%.

Small children. A group of patients which we feel deserve particular attention are those children under the age of 5 years in whom renal transplantation has been considered experimental.[3,4] Thirteen transplants were performed in ten children under the age of 5. All weighed less than 14 kg and had grafts placed intra-abdominally. Three of these children have had graft survival longer than one year and six have died.

Cadaver transplants. Transfusion data was available in 48 cadaver transplants. Forty-two recipients received two or more blood transfusions and six recipients did not receive blood transfusions prior to transplantation. Five of the six nontransfused patients had graft function for greater than 36 months and four continue to function. These six patients had less than 50% cytotoxicity immediately prior to transplantation. Transfusion data is available for 28 first cadaver transplants. The six nontransfused recipients were in this group. Twenty-two recipients of first cadaver grafts received two or more transfusions. Graft survival in this group was 11 of 22 (50%) one year post transplant. No statistical difference in graft survival can be demonstrated between transfused and nontransfused patients.

Cytotoxicity data is available for 63 cadaveric transplants. Only seven patients received transplants who had cytotoxicity greater than 50%. Thirty-seven patients did not manifest cytotoxicity. No correlation was noted between graft survival and pretransplant cytotoxicity.

Pretransplant records were available for 66 cadaver transplants. Analysis by linear regression revealed no correlation between time on dialysis and graft survival. In addition, no difference in graft survival was noted between patients on dialysis for 0 to 6 months and those dialyzed 6 to 60 months pretransplant.

Forty cadaver recipients had data available for all three parameters—transfusions, cytotoxicity, and time on dialysis. When evaluated by linear regression, it was found that the number of transfusions correlated positively with both length of time on dialysis pretransplant and percent cytotoxicity. Also, the degree of cytotoxicity correlated positively with the length of time on dialysis. These correlations remained when data were limited to recipients of first cadaver transplants.

Details regarding HLA matching were available for 68 of 69 cadaver transplants. No correlation between graft survival and any level of HLA matching was noted.

Comment

Renal transplantation is a superior alternative to dialysis for most children. The growth and development of dialyzed children is generally delayed.[5] Although older children usually do not exhibit catch-up growth following renal transplantation, growth is significantly better in children with successful transplants and catch-up growth is noted in children under 7 years of age.[6,7] Also, the quality of life for children successfully transplanted is most often better than for children on dialysis. Data indicate long-term patient survival to be 90% to 95% in both dialyzed and transplanted children.[2] Difficulties with growth and psychologic adjustment make chronic dialysis a less acceptable alternative for children with renal failure than for adults.

Most literature regarding pediatric renal transplantation reports short-term follow-up studies. According to these reports, it is generally agreed that short-term graft survival in living related transplants is better than a cadaver. The long-term follow-up and analysis of our transplanted patients reveals that graft survival is not significantly better with a living related source as compared to those receiving first cadaver transplants. Several factors may be responsible for these differences. First, we examined the source of our living related grafts. Twenty-four of the living related grafts were donated by mothers, 12 were from fathers, 5 from siblings, and 1 from an uncle. Only the five sibling grafts were HLA identical donors. Four of these five recipients presently have functioning grafts from 35 to 104 months posttransplant. Therefore, lack of HLA identical donor-recipient pairs may account for decreased graft survival in our living related donor grafts. Second, 60% of the living related donor transplants performed with known mixed lymphocyte cultures (MLC) had stimulation indices greater than 7, a value which has been accepted by others as indicating a more highly immunologically responsive group. While we do not find a correlation between MLC and graft survival, other groups have reported such a correlation.[8] It is possible that transplantation of MLC-responsive patients may also contribute to decreased graft survival in LRD transplants. Third, if data reported from other institutions is examined after a five- or ten-year follow-up period, the differences between LRD and cadaver graft survival diminish and may not remain significant.[9] Caution is necessary when interpreting short-term results. The extrapolation of this data, by inference, to be similar over a long period may be incorrect. The graft survival data reported here for both LRD and CAD transplants does not differ significantly from that compiled in this country and in Europe. The San Francisco group reported ten-year graft survival of 55% at ten years for living related donor grafts and 31% for cadaver grafts.[2] The EDTA reported five-year graft survival of 40% for both LRD and CAD grafts.[7]

Irrespective of the conflicting data, we feel there are other advantages of living related transplantation that cannot be objectively assessed. The timing of transplantation for convenience and to avoid dialysis is important to the children and their parents. In addition, this timing allows for important emotional and physical preparation for the experience. Furthermore, LRD transplantation allows the possibility of avoiding a long period of dialysis.

Patients with obstructive uropathy, despite complicated histories, did well. These patients may be immunologically different, affecting their graft survival.

We report, as others have,[3] a generally poor outcome in the transplantation of very small children. However, it must be recognized that, although transplant success is low and mortality high, these children would otherwise have died or, more probably, done poorly on dialysis. Since the majority of the graft failures in very young children were related to the operative procedure, it is hoped that with improvement in technique these patients will fare better in the future.

Long-term graft survival (five and ten years) in our cadaver transplant patients is similar to that reported by other large centers. The reported correlation between blood transfusions and improved graft survival[10] was not noted in the analysis of our patients receiving cadaver grafts. A similar lack of correlation was reported by R. R. Riggio, M.D. (memorandum, December 1981) in an adult transplant population during the same period. The mechanism for the beneficial effect of transfusions on renal transplants is not well understood. The absence of this effect noted in this report may best be explained by the high degree of correlation observed between cytotoxicity, transfusions, and length of time on dialysis. Other groups have not noted the development of cytotoxicity with transfusions.[11] Cytotoxicity may play an important role in determining whether or not transfusions confer protection from allograft rejection. This, combined with the fact that we have been able to obtain cadaver kidneys for only seven of our children with cytotoxicity greater than 50% and the majority of our patients presently on dialysis are highly cytotoxic, leads one to question whether the benefits of transfusion reported by other centers outweigh the risk of creating highly cytotoxic, possibly untransplantable patients. The creation of a pool of untransplantable patients may be acceptable for adult patients. Dialysis, however, is not an acceptable alternative for many children.

We have also noted the poor correlation between HLA typing and graft survival. Frequently, patients are chosen to receive a cadaver kidney on the basis of HLA matching. It is likely that other forms of immunologic typing, including DR matching will help improve recipient selection and graft outcome.

In conclusion, we report a long-term follow-up study of renal transplantation in children. In the pediatric population we feel that renal transplantation is a superior alternative to the varying forms of dialysis for children with ESRD. We question the presently accepted approach of aggressive transfusion therapy on the basis that it may be creating a group of children who become untransplantable. Only via long-term follow-up using similar methodology can new modalities of approach and treatment be evaluated.

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Elimination of measles in U.S. likely by October 1982

A federal goal to eliminate measles in the United States by October 1982 is likely to be realized, according to a report from the Centers for Disease Control (CDC), Atlanta, published in the *Journal of the American Medical Association.*

Citing CDC statistics, a group of investigators headed by Alan R. Hinman, MD, director of the Centers' immunization division, writes that the nation now is virtually free of measles. During the first 39 weeks of 1981, more than 90% of the nation's counties had no reported cases, and only 86 counties (2.7%) had reported measles more than twice during the year. A total of 2,668 cases was reported during the first 39 weeks of 1981, a 79% decrease from the incidence reported during the same period in 1980 and a 99.4% decrease compared to the same period in 1962, the year before measles vaccine was licensed.

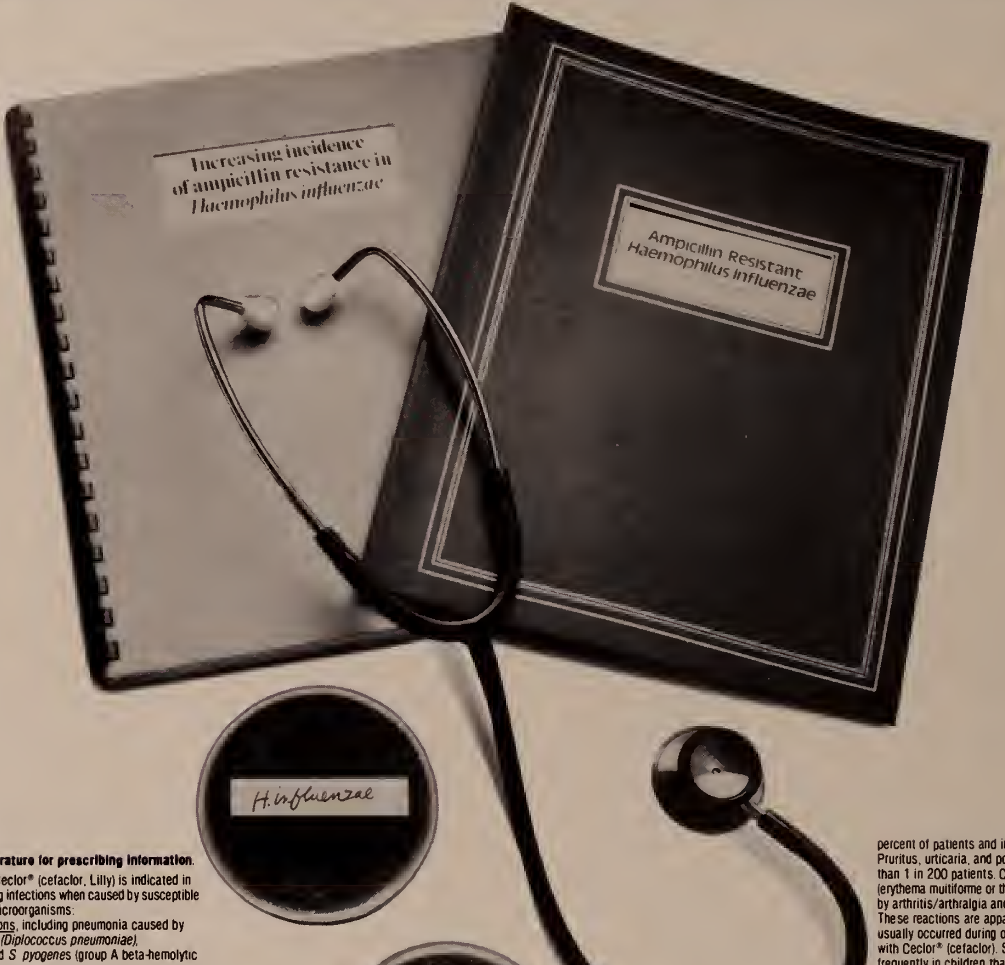
A nationwide childhood measles immunization program initiated in 1977 by the Department of Health, Education, and Welfare (now the Department of Health and Human Services) has made the most important contribution to the dramatic decline in measles, according to the CDC report.

Despite the extraordinary strides made in eliminating measles, the disease may be brought into the United States by people who have contracted measles in other countries and return home or visit while infected. CDC data from 1980 and 1981 indicate that these cases occur at the rate of about two per week. In recent months, United States citizens returning from abroad represent a high proportion of the imported cases.

Most imported cases of measles have not resulted in further outbreaks and appear not to threaten the elimination of measles in the United States. The fact that such cases do occur, however, indicates the need to maintain high immunization levels, continue surveillance and respond aggressively to reported cases, the CDC report warns. At present, in virtually every community in the United States, susceptible persons can receive measles vaccine free of charge at a local health department, the authors say. The vaccine also is available from private physicians.

"Achievement of the national target of measles elimination by October 1982 appears feasible," the CDC investigators conclude, "provided the current level of effort can be maintained."

An added complication... in the treatment of bacterial bronchitis*


Increasing incidence of ampicillin resistance in Haemophilus influenzae
Ampicillin Resistant Haemophilus influenzae
H. influenzae
S pneumoniae

Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*—are sensitive to treatment with Ceclor.[1-6]

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.[7]

Ceclor®
cefaclor

Pulvules®, 250 and 500 mg

Brief Summary.
Consult the package literature for prescribing information.

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Precautions: If an allergic reaction to cefaclor occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e g , pressor amines, antihistamines, or corticosteroids

Prolonged use of cefaclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coomb testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function Under such a condition, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly)

Usage in Pregnancy—Although no teratogenic or antifertility effects were seen in reproduction studies in mice and rats receiving up to 12 times the maximum human dose or in ferrets given three times the maximum human dose, the safety of this drug for use in human pregnancy has not been established The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus

Usage in Infancy—Safety of this product for use in infants less than one month of age has not been established

Adverse Reactions: Adverse effects considered related to cefaclor therapy are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70) and nausea and vomiting (1 in 90)

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Ceclor

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor® (cefaclor). Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients)

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200). [100281R]

*Many authorities attribute acute infectious exacerbation of chronic bronchitis to either *S pneumoniae* or *H influenzae*[8]

Note Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285
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200086

Sexually Transmitted Disease Morbidity in New York City

Analysis of trends 1980–1981

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Although statistical tables showing the incidence of sexually transmitted diseases (STDs) over any period of time appear to be self-explanatory, one should be aware that interpreting them should be done with caution. This is because the changes in incidence that occur over time can be the result not only of real incidence changes, but also of a variety of other factors, such as reporting completeness, case-finding efforts, changes in population patterns, and sexual preference. This article will examine the trends of the major STDs in New York City from 1980 through 1981.

As can be seen from Table I, there was an overall 7.7% increase in the number of reportable cases reported from all sources (the New York City Social Hygiene Clinics, private physicians, private hospitals, public hospitals, military and correctional institutions, neighborhood health centers, and federal nonmilitary institutions) of all STDs from 78,987 in 1980 to 85,097 in 1981. Except for four subcategories of syphilis and gonorrhea (cardiovascular syphilis decreased by two cases from seven cases in 1980 to five cases in 1981; asymptomatic cervical gonorrhea decreased by 1,084 cases or 26.8% from 4,040 in 1980 to 2,956 in 1981; asymptomatic urethral gonorrhea decreased by 94 cases or 23.4% from 401 cases in 1980 to 307 in 1981; and asymptomatic oral gonorrhea decreased by 25 cases or 12.6% from 198 cases in 1980 to 173 cases in 1981), all the remaining categories and subcategories increased. Despite these decreases within the syphilis and gonorrhea subcategories, total syphilis and total gonorrhea including pelvic inflammatory disease (PID), increased by 16.5% and 4.9%, respectively, to 6,878 and 45,859 cases reported in 1981. Within the total syphilis and total gonorrhea categories, the most noteworthy increases are: The 47.1% increase in symptomatic cervical gonorrhea, a 34.7% increase in PID, a 26.1% increase in late latent syphilis, a 17.4% increase in early latent syphilis, a 9.1% increase in primary syphilis, and a 6.7% increase in secondary syphilis.

In 1977 there were only 120 reported cases of gonococcal PID. This figure has increased steadily since then, until in 1981, 1,367 cases were reported amounting to a 1,039% increase since 1977 for this dangerous and costly complication of gonorrhea.

All of the other STDs showed increases. These included chancroid, up 132.7%; herpes simplex, up 30.9%; scabies up 40.8%; condylomata acuminata up 15.8%; candidiasis up 18.1%; nongonococcal urethritis (NGU), up 7%; and tinea, up 29%. It should be noted that over 98% of all the reported cases of "miscellaneous" STDs originated from the New York City social hygiene clinics. This has been the case since tabulation of these diseases was begun in New York City in late 1976.

Increased use of these social hygiene clinics is reflected in the increases shown in Table I in total clinic attendance, up 10.8%. Total registered patient visits up 11.1% (males up 13.4%, females up 5.3%), physician hours up 8.8%, and average registered patient visits/physician hours up 3.4%. Naturally, if the clinics are being accepted by and used by the public to a greater extent, one would expect that more cases of STDs would be diagnosed, treated, and reported.

The increases in these diseases in 1981 are thus probably attributable to heightened control activities by the City of New York Department of Health Bureau of Venereal Disease Control. These measures include better diagnosis and more efficacious methods of finding cases and tracing contacts.

Age breakdowns

There are many interesting features of the data when they are broken down by ages as Tables II and III and the following discussion indicate.

There was a reduction in the number of children with gonorrhea between 10 and 14 years of age by 75

TABLE I. Bureau of Health Statistics and Analysis—Monthly Report for December 1981*

Category	1981 Jan-Dec	1980 Jan-Dec	% Change 1980–1981
Clinic statistics			
Total clinic attendance	201,066	181,432	10.9
Total registered patient visits	198,782	178,892	11.1
Male	146,549	129,278	13.35
Female	52,233	49,614	5.3
Physician hours	33,361	30,655	8.8
Average reg. patient visits/MD hours	6.0	5.8	3.4
New case reports			
Syphilis, by stage			
Primary syphilis	971	890	9.1
Secondary syphilis	1,597	1,497	6.7
Early latent syphilis	1,683	1,434	17.4
Late latent syphilis	2,573	2,040	26.1
Cardiovascular syphilis	5	7	−28.6
Neurosyphilis	15	12	25
Late benign syphilis	0	0	0
Congenital syphilis	34	26	30.8
Total syphilis	6,878	5,906	16.5
Gonorrhea, by site			
Urethral gonorrhea, symptomatic	29,349	29,272	0.26
Urethral gonorrhea, asymptomatic	307	401	−23.4
Anal/rectal gonorrhea, symptomatic	1,347	1,335	0.9
Anal/rectal gonorrhea, asymptomatic	1,067	1,050	1.6
Cervical gonorrhea, symptomatic	9,001	6,119	47.1
Cervical gonorrhea, asymptomatic	2,956	4,040	−26.8
Oral gonorrhea, symptomatic	214	206	3.9
Oral gonorrhea, asymptomatic	173	198	−12.6
Gonococcal arthritis, dermatitis, conjunctivitis	57	48	18.8
Gonococcal ophthalmia neonatorum	21	15	40
Pelvic inflammatory disease	1,367	1,015	34.7
Total gonorrhea	45,859	43,699	4.9
Other STDs			
Chancroid	242	104	132.7
Granuloma inguinale	49	8	512.5
Lymphogranuloma venereum	73	38	92.1
Nongonococcal urethritis	21,708	20,280	7
Herpes simplex	1,419	1,084	30.9
Condylomata acuminata	1,017	878	15.8
Molluscum contagiosum	76	71	7
Pediculosis pubis	1,747	1,663	5.1
Scabies	414	294	40.8
Trichomoniasis	2,933	2,772	5.8
Candidiasis	1,543	1,307	18.1
Tinea	1,139	883	29
Totals	85,097	78,987	7.7

* Bureau of Health Statistics and Analysis, City of New York Department of Health.

cases (from 291 in 1980 to 216 in 1981) or 25.8%, and an increase of 42.9% in female children from 1 to 9 years (from 56 in 1980 to 80 in 1981). The number of male children between 1 and 9 remained the same—35. It should be noted that child abuse is a more important factor in the transmission of STDs in 1- to 9-year-old children than is precocious sexual activity. Among teenagers 15 to 19 years old with gonorrhea, there was a 2.9% decrease due mainly to a 10.6% decrease reported in the males; the increase in females of this age group was 5.1%.

In 1980, teenage (15 to 19 years old) gonorrhea in females accounted for 27.2% of all female gonorrhea, whereas this figure in 1981 was 24%. For males in 1980, the corresponding figure was 11.3%, and in 1981 10.2%. Thus, total teenage gonorrhea accounted for 15.8% of all cases of gonorrhea reported in New York City in 1980, whereas in 1981 it was 14.8%. Thus we see decreases for both male and female teenage gonorrhea in terms of its contribution to the totals.

For syphilis, there was a total of 47 cases for those between 0 and 14 years of age in 1980, whereas in 1981 there were 61 cases. Teenage total syphilis increased from 388 cases in 1980 to 455 cases reported in 1981—a rise of 19.1%. This was almost entirely due to the rise in female cases in the teenage group of 43.9%. Other increases occurred in the following age groups (male plus female cases): 20–24, up 20.5%, 25–29, up 10.4%; 30–34, up 6.3%; 35–39, up 18.4%; 40–44, up 21.8%, 45–49, up 13.6%, 50–54, up 35.1%; 55 and over, up 49.7%, and age not specified, up 3.3%. Thus, all age categories increased in the

TABLE II. Notifications of Venereal Disease, All Forms, by Type of Disease, Age Groups, and Sex, New York City, 1980

Age Group	Sex	Syphilis				Total Syphilis	Gonorrhea	CHAN	GRAN	LGV	NGU
		P/S	ELAT	LATE	CONG						
Under 1	M	0	0	0	6	6	1	0	0	0	0
	F	0	0	0	8	8	0	0	0	0	0
1–14	M	5	5	1	5	16	171	0	0	0	45
	F	6	5	0	6	17	211	0	0	0	0
15–19	M	128	70	35	0	233	3,520	9	0	3	1,569
	F	60	71	24	0	155	3,398	2	0	1	22
20–24	M	405	177	158	0	740	8,787	19	4	7	5,625
	F	98	105	79	0	282	4,168	4	1	0	61
25–29	M	519	233	226	0	978	7,215	16	1	11	5,346
	F	75	70	103	0	248	2,001	1	0	1	50
30–34	M	388	198	255	0	841	4,289	18	1	4	3,555
	F	52	47	101	0	200	831	1	0	1	25
35–39	M	199	156	188	0	543	2,140	14	1	4	1,800
	F	31	25	57	0	113	312	1	0	0	11
40–44	M	122	75	126	0	323	1,004	7	0	1	914
	F	12	10	54	0	76	143	0	0	0	0
45–49	M	71	40	91	0	202	467	5	0	0	408
	F	7	11	59	0	77	65	0	0	0	4
50–54	M	45	25	71	0	141	281	4	0	1	264
	F	4	3	57	0	64	37	1	0	0	2
55 & over	M	31	15	162	0	208	262	0	0	3	280
	F	4	6	124	0	134	54	0	0	1	1
Age not specified	M	113	70	67	1	251	3,064	2	0	0	296
	F	12	17	21	0	50	1,278	0	0	0	2
Total	M	2,026	1,064	1,380	12	4,482	31,201	94	7	34	20,102
Total	F	361	370	679	14	1,424	12,498	10	1	4	178

* *Service and Vital Statistics by Health Center Districts, New York City, 1980.* Bureau of Health Statistics and Analysis, City of New York Department of Health.

Abbreviations: P/S—primary and secondary; ELAT—early latent; LATE—late latent; CONG—congenital; CHAN—chancroid; GRAN—granuloma inguinale; LGV—lymphogranuloma venereum; NGU—nongonococcal urethritis.

TABLE III. Notifications of Venereal Diseases, All Forms, by Type of Disease, Age Groups, and Sex, New York City, 1981*

Age Group	Sex	Syphilis				Total Syphilis	Gonorrhea	CHAN	GRAN	LGV	NGU
		P/S	ELAT	LATE	CONG						
Under 1	M	0	0	0	10	10	1	0	0	0	0
	F	0	0	0	8	8	1	0	0	0	0
1–14	M	5	8	4	10	27	128	0	0	0	47
	F	3	3	5	5	16	201	0	0	0	2
15–19	M	129	76	27	0	232	3,148	11	1	5	1,653
	F	91	94	38	0	223	3,571	0	0	1	28
20–24	M	485	230	189	0	904	8,121	52	9	15	6,039
	F	109	123	95	0	327	4,605	2	1	2	63
25–29	M	507	265	263	0	1,035	6,951	51	13	16	5,716
	F	87	100	131	0	318	2,180	1	1	0	30
30–34	M	388	223	286	0	897	4,299	48	10	15	3,753
	F	43	58	109	0	210	940	3	0	0	31
35–39	M	250	143	236	0	629	2,017	30	3	8	1,944
	F	25	29	94	0	148	363	1	0	0	13
40–44	M	138	90	159	0	387	1,033	14	0	5	949
	F	17	22	60	0	99	164	1	1	0	8
45–49	M	72	42	129	9	243	484	12	3	0	537
	F	10	9	55	0	74	84	0	0	0	3
50–54	M	51	42	90	0	183	253	4	4	3	300
	F	9	4	81	0	94	30	0	0	0	4
55 & over	M	40	26	241	0	307	268	9	2	1	297
	F	4	4	197	0	205	74	0	0	0	4
Age not specified	M	96	76	76	1	249	4,303	3	1	2	282
	F	9	16	28	0	53	2,640	0	0	0	5
Total	M	2,161	1,221	1,700	21	5,103	31,006	234	46	70	21,517
Total	F	407	462	893	13	1,775	14,853	8	3	3	191
Totals		2,568	1,683	2,593	34	6,878	45,859	242	49	73	21,708

* *Service and Vital Statistics by Health Center Districts, New York City, 1981.* Bureau of Health Statistics and Analysis, City of New York Department of Health.

TABLE IV. Reported Cases of Venereal Disease, All Forms, January–December, 1980

Borough	Syphilis						Gonorrhea							VD Total
	P/S	ELAT	LLAT	LATE	CONG	Total	SX	ASX	Total	CHAN	GRAN	LGV	NGU	
Manhattan	1,083	611	728	9	6	2,437	11,840	1,451	13,291	69	2	9	7,220	23,028
Bronx	306	250	363	0	6	925	6,681	1,603	8,284	18	1	12	3,601	12,841
Brooklyn	572	292	568	5	9	1,446	11,439	1,638	13,077	9	5	12	5,468	20,017
Queens	312	196	225	4	2	739	3,509	316	3,925	6	0	5	3,229	7,804
Richmond	24	13	20	0	1	58	482	54	536	0	0	0	326	920
Nonresidents	5	0	14	0	1	20	191	32	223	1	0	0	226	470
Residence unknown	84	72	122	1	1	280	3,867	595	4,462	1	0	0	210	4,953
NYC residents	2,297	1,362	1,904	18	24	5,605	33,951	5,062	39,013	102	8	38	19,844	64,610
New York City	2,386	1,434	2,040	19	26	5,905	38,009	5,689	43,698	104	8	38	20,280	70,033

SX—symptomatic; ASX—asymptomatic

TABLE V. Reported Cases of Venereal Disease, January–December 1981

Borough	Syphilis						Gonorrhea							VD Total
	P/S	ELAT	LLAT	LATE	CONG	Total	SX	ASX	Total	CHAN	GRAN	LGV	NGU	
Manhattan	1,136	681	870	9	5	2,701	11,941	1,298	13,239	89	35	33	7697	23,794
Bronx	414	317	459	3	11	1,204	6,428	1,085	7,513	74	4	17	3856	12,668
Brooklyn	621	429	782	5	11	1,848	12,099	1,360	13,459	47	4	11	5435	20,804
Queens	336	215	331	2	3	887	4,489	412	4,901	23	1	9	3518	9,339
Richmond	29	11	30	0	1	71	528	44	572	1	0	1	341	986
Nonresidents	1	0	10	0	0	11	236	18	254	1	0	1	149	416
Residence unknown	31	29	91	1	3	155	5,602	280	5,882	7	5	1	712	6,762
NYC residents	2,536	1,653	2,472	19	31	6,711	35,485	4,199	39,684	234	44	71	20,847	67,591
New York City	2,568	1,682	2,573	20	34	6,877	41,323	4,497	45,820	242	49	73	21,708	74,769

number of reported cases of syphilis from 1980 to 1981. These increases are reflected in all the individual stages of syphilis in Tables II and III, where the only age groups showing (slight) decreases from 1980 to 1981 are: 1–14, 30–34, and age not specified (primary and secondary) and 35–39 (early latent). There were two categories showing no change: 25–29 (primary and secondary) and 45-49 (early latent). Late latent and congenital syphilis showed increases in almost all relevant age groups.

For chancroid, the only age category (male plus female) showing a decline from 1980 to 1981 was the 50 to 54 year old group. The decline in this category was almost negligible (one case). In the 15- to 19-year-old group, the number stayed the same. The major changes registered two-to threefold increases. These occurred in the following age groups: 20–24, 25–29, 30–34, 35–39, and 40–44.

For granuloma inguinale (donovanosis) and lymphogranuloma venereum, the picture is roughly the same. There are major increases in almost all age groups. There are some age groups that had shown no cases in 1980 which show a number of cases in 1981.

For nongonococcal urethritis (NGU), the only category (males plus females) showing a slight decline is the "age not specified," where 14 fewer male cases were reported in 1981 than in 1980.

Thus, there is seen a general, across-the-board increase in the number of cases for all the reportable diseases in New York City (Tables II and III) in almost all age groups.

Breakdown by borough

From Tables IV and V, one can see that all bor-

TABLE VI. Percentage Changes—Reported Cases of Venereal Disease, 1980–1981

Borough	Total Syphilis	Total Gonorrhea	CHAN	GRAN	LGV	NGU	VD Total
Manhattan	10.8	−0.4	30.0	1,650.0	266.7	6.6	3.3
Bronx	30.2	−9.3	311.1	300.0	41.7	7.1	−1.3
Brooklyn	27.8	2.9	422.2	−20.0	−8.3	−0.6	3.9
Queens	20.0	28.1	283.3	. . .	80.0	9.0	19.7
Richmond	22.4	6.7	. . .	0.0	. . .	4.6	7.2
Nonresidents	−45.0	13.9	0.0	0.0	. . .	−34.1	−11.5
Residence unknown	−44.6	31.8	600.0	. . .	. . .	239.0	36.5
NYC residents	19.7	1.7	129.4	450.0	86.8	5.1	4.6
New York City	16.5	4.9	132.7	512.5	92.1	7.0	6.8

. . . = undefined, since number of cases in 1980 is zero.

oughs, for each of the stages of syphilis (including total syphilis), showed increases from 1980 to 1981 except for the following: Manhattan—congenital syphilis, down by one case; and Richmond—early latent syphilis, down by two cases.

For total gonorrhea, Manhattan and Bronx decreased, but this was not enough to prevent a citywide increase from occurring.

Brooklyn registered decreases of one case each for granuloma inguinale and lymphogranuloma venereum, but for those two diseases, there were increases registered in the other four boroughs.

For NGU, every borough registered an increase except Brooklyn.

Table VI showed the exact percentage changes for total syphilis, total gonorrhea, and the rest of the reportable diseases by borough. It should be noted that the very high percentage increases shown for chancroid and granuloma inguinale are mainly due to the relatively low numbers of cases reported in 1980. When these low numbers are used in the calculation of the percent change from 1980 to 1981, they are put into the denominator. Thus even a relatively small absolute change from 1980 to 1981 can exert a large effect on the percent change in this case.

In New York City, physicians are required by the *New York City Health Code* to report diagnosed cases of syphilis, gonorrhea, nongonococcal urethritis, chancroid, granuloma inguinale (donovanosis), and lymphogranuloma venereum within 24 hours of diagnosis. The City of New York Department of Health provides physicians with reporting forms and franked envelopes. These materials may be requested from the Bureau of Venereal Disease Control, 93 Worth Street, Room 809, New York, NY 10013 or by telephone at (212) 966-6300. Public health advisors are also available for procedural advice from 9 AM to 5 PM, Monday through Friday at (212) 966-9741.

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German measles still a threat

The nationwide effort to immunize young children against rubella (German measles) has been so successful that rubella appears to be vanishing as a childhood disease.

But the immunization programs, which concentrate on preschool and young school-aged children, have not affected susceptibility to rubella among adolescents and young adults. According to articles in the *Journal of the American Medical Association*, that can mean a problem for the segment of the population that is most vulnerable to the disease—unborn babies.

Although rubella is a mild infection in adults and children, the rubella virus can cause severe abnormalities in a developing fetus. Heart defects, deafness and cataracts are characteristics of congenital rubella syndrome, which also can include mental retardation and other organ system abnormalities.

In a *JAMA* editorial, Walter A. Orenstein, M.D., Medical Epidemiologist, and Wayne L. Greaves, M.D., Epidemic Intelligence Service Officer, Centers for Disease Control, Atlanta, write that rubella incidence among young school-aged children decreased 89% between 1966–1968 (prior to the approval of rubella vaccine) and 1975–1977. Incidence in 1980 declined 67% from 1979, and the first 35 weeks of 1981 showed a 46% reduction compared with the same period in 1980.

Among young adults, however, overall susceptibility rates remain at 10 to 20%, unchanged from the rate existing before the start of rubella vaccination programs in 1969, according to two other articles in the current *JAMA*. Adolescents and young adults now account for a high proportion of all reported cases of rubella and have the greatest risk of disease. Before 1969, about 77% of cases occurred in children under 14 years of age. In 1979, 70% of cases occurred in persons older than 15 years.

Thus, susceptible women of childbearing age remain at high risk, explaining why the incidence of reported congenital rubella syndrome has not decreased substantially in recent years. Between 1975 and 1979 (the last year for which final data are available), an average of 39 cases of the syndrome were reported annually, write Orenstein and Greaves.

Vaccination programs proposed to protect this high risk group have been only partially successful, according to the editorial. Premarital screening does not reach women who become pregnant outside marriage, and prenatal screening is ineffective if hospitals do not follow up by vaccinating susceptible women after delivery.

Orenstein and Greaves place much of the burden of further prevention of congenital rubella syndrome on physicians. They urge doctors to educate their patients about the dangers associated with rubella during pregnancy, about the need for vaccination and about the success of vaccination in preventing congenital rubella syndrome. They recommend vaccination for every patient whose blood test reveals a lack of antibodies against rubella.

In all 50 states, laws require vaccination against rubella for school entry. In 38 states, students at all grade levels are covered. But some states waive the requirement for adolescent women because of the fear that they might be pregnant at the time of vaccination and deliver babies with congenital rubella syndrome. These fears are not supported by the available data, say Orenstein and Greaves.

The most aggressive, practical and ultimately successful approach to reducing the incidence of rubella, they suggest, would be comprehensive school laws requiring vaccination of all students from kindergarten through 12th grade.

To effect further reductions in the incidence of congenital rubella syndrome, mandatory requirements for rubella immunity should be considered for all institutions where adolescents and young adults study and work, such as colleges, hospitals and many commercial firms. Orenstein and Greaves point out that mandatory rubella vaccination in the military has essentially eliminated rubella in that community.

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Left Atrial Ball-Valve Thrombus

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The predisposition to intracardiac thrombosis derives from numerous etiologies, cardiogenic as well as noncardiogenic. The chief cardiogenic cause of left atrial thrombus formation is mitral valvopathy, especially when this is escorted by dysrhythmias.

Left atrial thrombi are very inconstant in topography, magnitude, configuration, consistency, and adhesive qualities. Depending on size, quantity, and location, thrombi may provoke either embolic or hemodynamic derangements. Detachable and soft clot capable of fragmenting and of negotiating the mitral opening is the sort that embolizes into the systemic circulation. Other thrombi tend to interfere with either atrial influx or efflux.

Atrial filling is hindered owing to the space-occupying effect of clot, or because of encroachment onto the pulmonary vein ostia. Atrial emptying is hampered, in the main, from actual extension of mural thrombus over the mitral aperture, constituting a protracted or fixed organic obstruction.

An uncommon obstacle to atrial outflow is from free-floating thrombi. These usually are spherical, relatively incompressible, and have diameters that exceed that of the mitral valve orifice; hence they ordinarily stay entirely within the atrium. They impede atrial emptying by periodic blockage of the mitral valve.

Such a species of mobile clot has various cognomens: ball thrombus, ball-valve thrombus, obstructing thrombus, and mass thrombus. The French version, *caillot en grelot*, graphically likens the motion of the thrombus to that of a bell-clapper. The designation, left atrial ball-valve thrombus (LABVT), is best, in my opinion, because it brings to mind simultaneously the location, shape, and physiologic consequences of the mass.

Although rare, LABVT figures in the differential diagnosis of conditions responsible for mitral obstruction. It is thought of particularly in the same context as left atrial myxoma, to which it bears several clinical and pathophysiologic resemblances.

As discussed elsewhere,[1] atrial myxoma has been receiving increased notice of late, especially since the widespread employment of echocardiography. A corresponding heightened interest in LABVT motivates this review of the subject.

Statistical data

In keeping with evidence that loose (ie, unattached) as well as pedunculated (ie, attached) free-floating thrombi can intermittently block the mitral orifice, LABVT for the purposes of this review encompasses both varieties.

Credit is due to Wood[2] for first distinguishing, in 1814, between loose and adherent antemortem left atrial clot. Survey of the medical literature, starting from Wood's article through December 1981, has uncovered 168 cases. Their analysis has yielded the statistics that are cited in this article.

Pathology

Characteristics of LABVT. In 84% of the 168 cases of LABVT a single mass was present; in the rest there were two or more masses.

Their dimensions varied greatly. The heaviest mass weighed 440 g; the bulkiest were a pyramidal one, 10 × 5 × 2.9 cm, and a spherical one, 10 cm in diameter.

The mass was entirely loose and without evidence of prior attachment in 33.8% of cases. In 21.8% it was loose but with markings at its surface or on the atrial endocardium indicative of prior attachment. It was suspended by a stalk of some kind in 39.4%.

The attachment sites of pendulous LABVT were: appendage, 26.6%; septum, 24.5%; free wall, 24.5%; mitral valve leaflet, 14.9%; unstated, 9.6%.

Presented in part before the 18th International Congress of Francophone Physicians of the American Hemisphere, Port-au-Prince, Haiti, April 14, 1982.

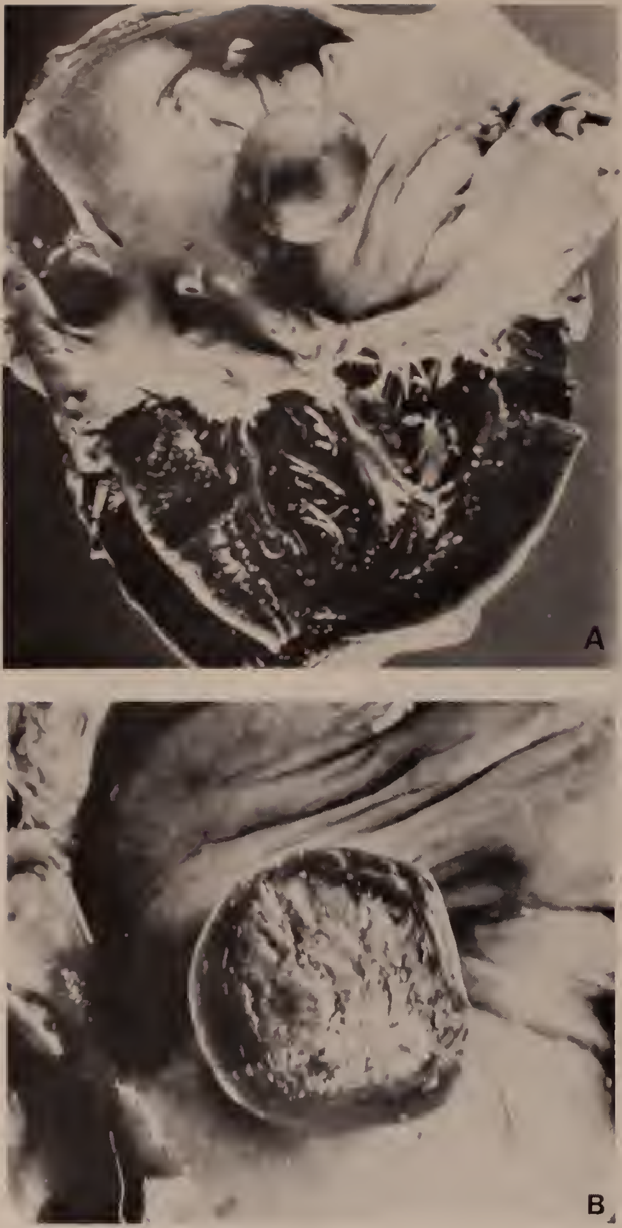

FIGURE 1. (A) Spherical ball-valve thrombus joined by short, slender fibrous pedicle to atrial septum just above mitral valve. (B) Cross-section of mass reveals thick hull of lamellated thrombus, with fibrin and degenerated blood elements in the interior. (*Courtesy*, Fidelio A. Jimenez, M.D.)

The consistency was solid, most often rubbery, but sometimes partly malleable or "doughy." Unusual masses comprised a couple of stone-hard calcified thrombi, and a very few, said to be soft, friable, or "like congealed agar."

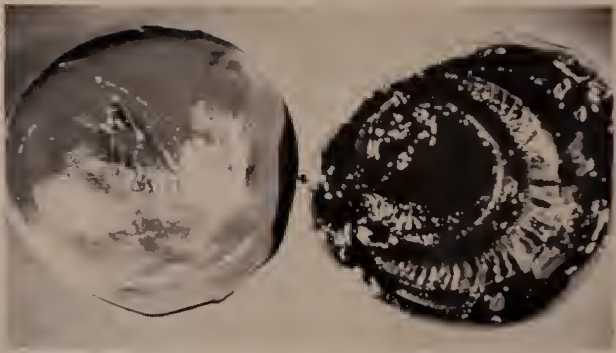

FIGURE 2. Unattached spherical LABVT with smooth exterior. Interior is composed of concentric layers of organized clot and liquefied blood. (*Courtesy*, Fidelio A. Jimenez, M.D.)

Although the majority of thrombi had grossly polished exteriors, the latter in fact usually displayed patchy or generalized surface irregularities due to either actual structural breaks or adherent fibrin aggregates (Figs 1A, B). Additionally, the surface of about two fifths of LABVT showed two other kinds of disruptions—(1) a papilla-like process, convex nubbin, or fibrous shred representing the remnant of a former tether; and/or (2) a relief of cuneiform ridges or imprinted indentations conforming to the contour of the mitral deformity that usually existed.

Regardless of shape, most LABVT were seen on cut section to be composed of organized blood clot which was compact throughout. However, several exhibited a thick, lamellated outer hull and central softening, vesiculation, or liquefaction (Fig 2).

Concomitant mitral valvopathy. Deformation of the mitral valve, either alone or in combination with other diseased heart valves, was present in 80.6% of cases. Mitral valvopathy was absent in 11.3%, and unstated in the rest. Most individuals without mitral disease manifested arterial hypertension.

Mitral involvement was invariably postrheumatic. It usually consisted of high-grade stenosis, but sometimes regurgitation also existed. At times the leaflets bore stigmas of recent or old bacterial endocarditis (Fig 3).

Peripheral thromboembolism. Clinical or necropsy evidence of thromboembolism was apparent in 54.4% of patients, absent in 21.3%, and unstated or unknown in 24.4%.

Embolization to multiple disparate vascular regions took place in four fifths of cases. Most often this was to the brain, kidneys, spleen, intestines, and lungs, and occasionally to the upper and/or lower limbs. Embolic events were successive, to different organs, at times with relatively long intervals of quiescence. Single embolic incidents usually were to the brain or extremities.

Clinical features

Females outnumbered males threefold. The youngest patient was aged 15 years; the oldest, 86 years. The mean age was 45.5 years, with 46.9% of patients from the second through the fifth decades, and a total of 63.8% through the sixth decade.

A background of rheumatic fever, heart murmur, and/or atrial fibrillation was known in 57.5%, absent in 13.8%, and unstated or unknown in the remainder.

The initial clinical presentation consisted of:

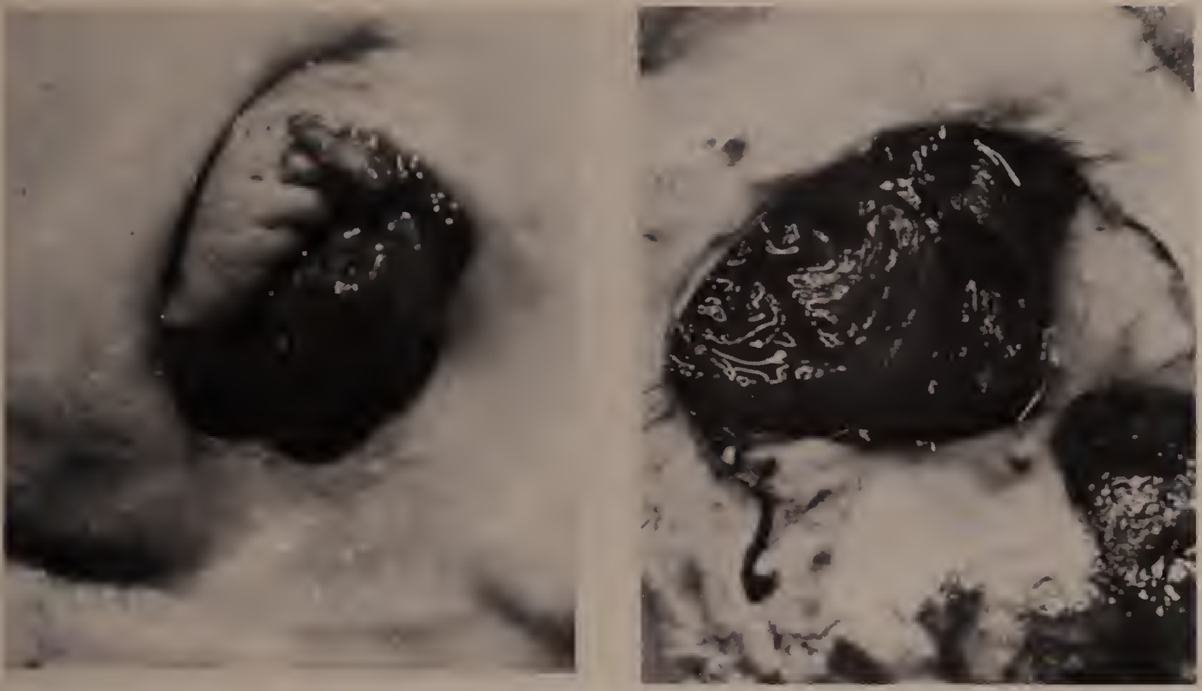

FIGURE 3. Two examples of free LABVT occluding mitral orifice. Lesions are irregular in contour and have rough surface.

some manifestation of heart failure in 60.6%; peripheral thromboembolism, 20.6%; sudden death, 5%; unstated or unknown, 12.5%. In 1.3% LABVT was an unsuspected necropsy finding after death from unrelated causes.

The duration of illness varied widely from sudden death without premonitory symptoms to a history spanning over two decades. Approximately one third of patients died or were operated on within one year from the onset of symptoms.

The semeiologic features of LABVT were, with few exceptions, nearly identical to those of mitral valve stenosis. The exceptions, which were exhibited in just a small minority of patients, pertained to: (1) temporal variability in symptoms and/or signs; (2) influence of postural changes on symptoms and/or signs; and, (3) appearance of nonemboligenic acral cyanosis to an inordinate degree (Fig 4).

Congestive heart failure initially responded appropriately to medicinal therapy in at least one half of the patients but often soon relapsed and eventually became intractable. Of the hospitalized patients 70% died from some cardiac catastrophe, usually insuperable heart failure, but frequently with abrupt circulatory failure or cataclysmic air hunger.

Irrespective of antecedents, 83.1% of patients at some time demonstrated an unmistakable mitral murmur. In another 5.6% the absence of a murmur was specifically emphasized. With regard to dysrhythmias, atrial fibrillation was documented in 58.1%, and normal sinus rhythm, supraventricular extrasystoles, or tachycardia in 20%.

Whereas in about 15% of instances an arterial thromboembolic crisis was the main reason for hospital admission at the outset, that number quadrupled during the same hospitalization or subsequent

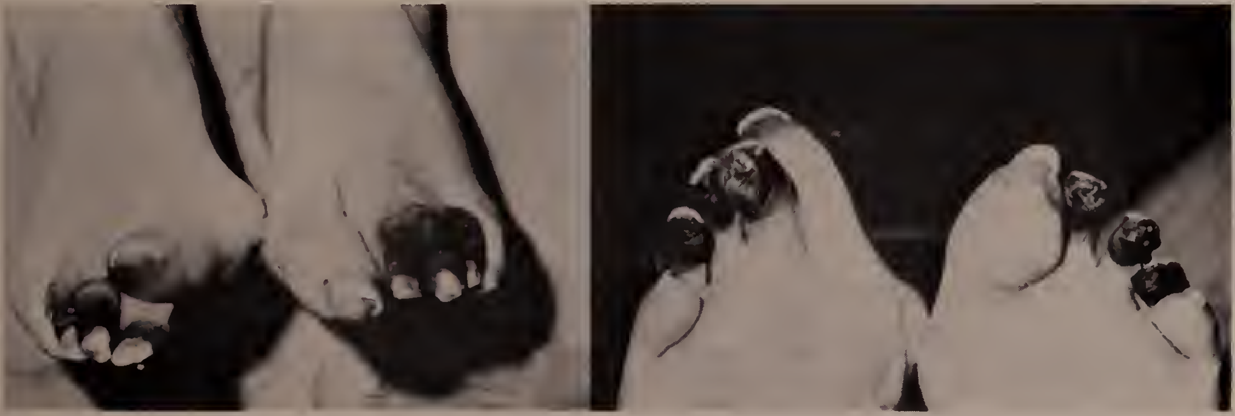

FIGURE 4. Symmetrical acral cyanosis which proceeded to gangrene. Proximal arteries did not contain clot.

ones from accruing multisystem embolism. Of the hospitalized patients 23.8% died from some embolism-related sequel. Approximately one third of these deaths were from stroke, one-fifth from limb gangrene, and the rest from infarction of lungs, myocardium, or abdominal viscera.

Temporal variability in symptoms and/or signs. Spontaneous appearance and disappearance of signs rarely occurred. When symptoms began they tended to progress inexorably, although sometimes with varying periods of respite accorded through the use of medication.

On the other hand, every so often some physical signs changed spontaneously without any clear relationship to therapy. This was manifest particularly with regard to cardiac murmurs and rhythms.

Influence of postural changes on symptoms and/or signs. In 5.2% of cases patients opted for certain kinds of positions to help relieve symptoms. Some persons sought to avert syncope or dyspnea by lying flat, while others breathed easier when either recumbent, propped up, or slumped forward. The mode of sudden death in a few individuals was described as having been precipitated by their sitting up.

Postural alteration in the character of murmurs, thrills, blood pressure, or the pulse was elicited a few times. Specific mention was made in a couple of articles about position having made no difference on symptoms or physical signs.

"Nonemboligenic" acral cyanosis. Excluding those patients with obvious peripheral manifestations of arterial thromboembolism or bacterial endocarditis, 32% of patients were noted to demonstrate cyanosis. This consisted of diffuse violaceous lividity or of mottled dusky blotches. Chiefly involved were the lips, nose, ears, cheeks, nail beds, and rarely the torso. The affected parts were cold and hypalgesic. Limb cyanosis usually was symmetrical.

The cyanosis frequently accompanied dyspnea, but sometimes did not. It occasionally waned, but more often persisted and intensified. In one instance a cyanotic nose became necrotic. Some of the cases of symmetrical lower limb cyanosis advanced to gangrene. Unrelenting peripheral cyanosis invariably heralded death.

The development and depth of cyanosis did not correlate with the severity of mitral stenosis or pulmonary hypertension. However, three fifths of cases of facial cyanosis were in individuals who had incurred lung infarcts. Some authors emphasized the absence of clot in the proximal vessels of their patients with limb cyanosis.

Neither chest radiography nor electrocardiography was helpful for uncovering LABVT. Both displayed features consistent with mitral valvopathy, including left atrial dilation and signs of pulmonary hypertension. The same nonspecificity appertained to phonocardiography, apexcardiography and other mechanographic methods, as well as to cardiac catheterization, echocardiography, and cardiac cineangiography.

Treatment

Any time that management of the disease was limited to pharmacotherapy it invaryingly failed, and death supervened. The only surviving patients were those who underwent surgery.

Documented in the literature are just 26 surgical interventions for LABVT, although probably more than that number have been done.[3-15] In all instances removal of the thrombus per se was the easiest part of the procedure, the mass practically dropping out of its own accord through the atriotomy or being simply severed from a fibrous stalk. As would be expected, either mitral valvoplasty or replacement usually was necessary and was done in all but two cases. The reported overall survival rate surpassed 90%. Probably, this extraordinarily good outcome owed as much to the relief of underlying mitral valvopathy as to getting rid of the LABVT.

Comment

Certain conclusions can be drawn from this survey:

1. Mitral stenosis, commonly extreme, is the template for the majority of cases of LABVT.
2. The clinical and hemodynamic expressions of LABVT are essentially analogous to those of mitral valvopathy with any other sort of large intraatrial clot.
3. Persistence in medical management alone is futile. The fundamental disturbance is a mechanical one, and therefore must be resolved mechanically.
4. In order to be comprehensive, surgery must be directed not only at removal of the LABVT but likewise at repair or replacement of the deformed mitral valve.
5. Surgical operation must be undertaken very soon after the onset of symptoms so as to put a halt to progressive cardiac decompensation and to avert thromboembolic accidents or sudden death.

Various other aspects warrant elaboration:

Formation of LABVT. All evidence points to the genesis of LABVT at some defect on the atrial endocardial lining or at the mitral leaflets themselves, distorted rheumatically beforehand or from superimposed bacterial endocarditis. When the nidus is at the mitral valve, and particularly when atrial fibrillation is established, clot starts at the atrial appendage or on the valve components. Whenever the etiology is arterial hypertension alone without accompanying mitral valvopathy, clot incepts at the atrial septum in the vicinity of the foramen ovale, sometimes at the free atrial wall, and rarely at the appendage. In either case the key determinant for continued clot accretion apparently is always alteration in normal blood flow through the left side of the heart.

It is probable that all LABVT are attached to begin with. Then, owing to circumstances which still defy facile explanation, clot is overlaid by degrees on the projecting end of the mass whereas its base becomes increasingly tapered. In time the stem dwindles to a slender fibrotic cord which holds on for a while and ultimately dehisces altogether.

The reason for the typically spherical or oval shape of LABVT is unclear. This configuration must come about from fresh clot being layered concentrically over the coagulum nucleus as it spins around in the atrium.

Were the blood to stream forcefully and in laminar fashion from atrium to ventricle there would be little inclination for fresh clot to form or remain bound. But the retarded and disorganized blood flow of mitral stenosis and atrial fibrillation doubtless fosters continual fibrin deposition. As the bulbous end of the pedunculated mass spins around, the stalk is lengthened and thinned further. Torque, together with the sheer weight of the enlarging thrombus, finally sunders the latter from its pedicle. The rotary motion of the intraatrial blood current thereafter smooths the mass to its characteristic spheroid shape.

Symmetrical peripheral cyanosis. The presentation of acral cyanosis, especially symmetrical, is a feature of LABVT which was stressed repeatedly by many of the early writers on the subject. The most commonly accepted explanation for that phenomenon is that it is provoked by paroxysmal profound debits in cardiac output trailed by intense peripheral vasoconstriction. Indubitably, this is exacerbated by sporadic trapping of the thrombus over the mitral aperture.

Symmetrical peripheral cyanosis, a familiar stigma of Raynaud's syndrome, may develop after myocardial infarction, pulmonary embolism, hypertensive heart disease, stubborn tachycardias, and shock states—ie, solely on the basis of extreme falls in cardiac output. Teleologically, the marked peripheral vasospasm causing cyanosis enables diversion of needed blood flow to vital organs.

In the reviewed series of 168 cases, the majority of patients who exhibited cyanosis had badly damaged mitral valves and were in the throes of heart failure. Only on 11 occasions was the mitral apparatus not defective or minimally so. For the most part, therefore, it appears likely that advanced mitral valvopathy was at least as important as a coexistent LABVT in the mediation of cyanosis. Reinforcing this premise is the high percentage of patients who had pulmonary hypertension or infarction coincidental with cyanosis—again denoting a low output state of great severity.

Prevalence of thromboembolic events. By definition LABVT is restrained to an atrial habitat. In contrast to myxoma or to the common variant of clot situated in the atrial appendage, there is no record of any LABVT ever becoming totally detached and traveling through the atrioventricular orifice. And yet the incidence rate of thromboembolism was distinctly greater and followed by graver clinical aftermaths than is customary with other types of thrombi associated with mitral stenosis.

Although the LABVT itself could not embolize, there is no reason to suppose that companion clots may not have done so. Indeed, the frequent presence of multiple thrombi and clumps of fibrin in the atrial cavities makes it likely that such an event occurred more often than was generally believed.

However, clotting sometimes took place in many disparate zones and evidently was not emboligenic. Such an eventuality was attributed to "thrombostasis," or the formation of marantic thrombi in peripheral vessels deprived of adequate circulation secondary to interference with blood flow in the heart.

Pathophysiology of LABVT. Since LABVT, unlike atrial myxoma, is incompressible it does not migrate across the mitral orifice and stays in the atrium throughout the cardiac cycle.

For the mass itself to cause mitral obstruction it must lie snug on top of either the inlet or outlet of the funnel-shaped valve apparatus. Obstruction ordinarily is incomplete because the configurations of the thrombus and of the mitral ring or orifice seldom match perfectly. Furthermore, whenever the mass comes to rest directly over the valve it probably does so fortuitously and intermittently, bouncing off at the next heart beat. Such obstruction as the LABVT does produce, nevertheless, is additive to the extant stenosing valvopathy. Its sporadic occurrence accounts for abrupt but transient circulatory stoppage responsible for "momentary death."

Many authors have described the postmortem finding of a LABVT fitting exactly over the valve aperture. Some also have pointed out how the resultant occlusive effect was so striking that no fluid could pass from atrium to ventricle. Observations such as these have served to explain the periodic precipitous declines in cardiac output and systemic blood pressure that are manifest clinically, of which the ultimate expression is sudden death due to a "hole-in-one" phenomenon. But the mass is loose and can be readily tumbled off the valve: hence, inasmuch as its "incarceration" is not really physical it must perforce be instigated by physiologic factors.

The actual conditions which conspire to render a LABVT immutable over the mitral valve and arrest the circulation are conjectural. Inferences about how those events may take place can be extrapolated from research with heart models.[16] The presumed scenario, albeit contigent on circumstantial factors, is thus:

In the presence of sinus rhythm the LABVT momentarily straddles the mitral valvar rim during atrial emptying and impedes outflow. The mass is pushed down even more by rising atrial pressure, but it is promptly rolled backwards into the atrium by ventricular systole. If the heart rate accelerates, the mass is thrown against the valve sooner, remains there longer, and requires more force to eject it. This is because tachycardia shortens the diastolic interval and magnifies the pressure gradient between atrium and ventricle at diastasis.

It can be readily envisaged how—translated to the setting of already entrenched mitral disease with atrial fibrillation, dilation, and hypertension—perhaps some relatively minor alteration such as palpitations, fluid overload, or position change could induce a convergence of mechanisms causing impaction of the LABVT between a distended atrium above and a near-empty ventricle below. Circulation effectively ceases during crises of that sort. The outcome—be it acute pulmonary edema, syncope, convulsions, stroke, or sudden death—hinges on whether this state of affairs lasts longer than a few seconds.

Diagnostic value of echocardiography. By now a substantial literature has accumulated on the detection of intraatrial masses by ultrasonocardiography. Unlike the generally favorable experience with regard to myxoma, results with atrial thrombus have been disappointingly inconclusive.

Although there have been several reports of intracardiac clots demonstrated by ultrasonography, I am aware of only a couple in which the texture, location, and mobility of the mass endowed it with features suggestive of genuine LABVT. Even two-dimensional real-time display ultrasound may miss or underestimate intraatrial clot that is small, unorganized, of homogeneous composition, or situated away from the mitral valve funnel. Conversely, LABVT may either be falsely diagnosed or camouflaged by the multitudinous reverberating echoes that often are artifactually perceived from within the atrium in cases of calcium-encrusted mitral valves.

Differential diagnosis from left atrial myxoma. Although a variety of disorders share certain features in common with LABVT, the lesion most often cited in the same context is left atrial myxoma. The following outline compares the two conditions.

Pathology	**Left atrial ball-valve thrombus**	**Left atrial myxoma**
Single mass	84.0%	88.2%
Multiple masses	16.0%	11.8%
Unattached	55.6%	None
Pedicled	39.4%	83.0%
Sessile	None	17.0%
Site of attachment		
Atrial septum	24.5%	88.6%
Free atrial wall	24.5%	3.2%
Atrial appendage	26.6%	0.15%
Mitral leaflets	14.9%	0.6%
Mitral annulus	. . .	0.05%
Pulmonary vein ostia	. . .	0.4%
Size		
Average	4 cm diam.	5 × 3 cm
Largest	10 × 5 × 2.9 cm	9 × 8.5 × 5.5 cm
Weight		
Average	50 g	60 g
Largest	440 g	466 g
Shape		
Globoid	46.2%	19.0%
Ovoid	29.2%	22.0%
Polymorphous	22.6%	59.0%
Consistency	Rubbery	Gelatinous
Composition	Organized clot	Myxoma neoplastic cells; mucoid ground substance; chronic inflammatory cells; hemosiderin; etc.
Concomitant mitral valve disease	80.6%	Less than 5%
Histologic consequences of embolism	Gangrene	Gangrene; microaneurysms
Pathophysiology		
Hindrance to left atrial filling	Rare	Common
Hindrance to left atrial emptying	Usual	Usual
Embolism	54.4%	63.0%
Constitutional derangement	Rare	Usual

Pathology	Left atrial ball-valve thrombus	Left atrial myxoma
Clinical features		
Age		
Range	15 yrs–86 yrs	3 mos–95 yrs
Median	45.5 yrs	44.5 yrs
Sex ratio (male:female)	1:3	1:3
History of rheumatic fever		
Present	57.5%	Less than 5%
Absent	13.8%	More than 90%
Postural variation in symptoms and/or signs	5.0%	6.0%
Duration of symptoms		
Range	Up to 20 yrs	6 mos–3 yrs
Mean	less than 1 yr in 33%	Less than 1 yr in 50%
Cardiac symptoms	60.6%	84.0%
Sudden death	5.0%	16.0%
Paroxysmal palpitations	50.0%	33.0%
Disorders of sensorium	40.0%	24.0%
Embolic symptoms	20.6%	58.0%
Constitutional symptoms	. . .	80.0%
Usual mode of death	Intractable heart failure	Intractable heart failure
Symmetrical acral cyanosis	32.0%	5.0%
Transient mitral murmur	17.0%	80.0%
Permanent mitral murmur	83.1%	15.0%
Transient atrial tachydysrhythmias	22.0%	86.0%
Permanent atrial tachydysrhythmias	78.0%	14.0%
Laboratory findings		
Accelerated erythrocyte sedimentation rate	. . .	57.0%
Anemia	. . .	44.0%
Thrombocytopenia	. . .	17.0%
Serum protein abnormalities	. . .	22.0%
Cardiologic studies		
Chest radiogram	Consistent with mitral valvopathy	Nonspecific
Electrocardiogram	Consistent with mitral valvopathy	Nonspecific
Phonocardiography	Consistent with mitral valvopathy	Suggestive
Apexcardiography	Consistent with mitral valvopathy	Suggestive
Radionuclide cardiac imaging	Nonspecific	Nonspecific
Computed cardiotomography	Nonspecific	Nonspecific
Continuous wave Doppler ultrasonography	Nonspecific	Nonspecific
Echocardiography	Nonspecific	Highly suggestive
Cardiac catheterization	Consistent with mitral valvopathy	Suggestive
Cinecardioangiography	Consistent with mitral valvopathy	Highly suggestive
Treatment	Surgical	Surgical

Information for this outline comparing left atrial ball-valve thrombus and left atrial myxoma is taken from the present survey of LABTV and data from a previous detailed review of myxoma.[1]

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Novel treatment of scoliosis may make back braces obsolete

Until recently, a child with progressive curvature of the spine faced either years of treatment with a brace or major corrective surgery. Now two orthopedic research teams have limited the progression of the scoliosis, as the condition is known, and sometimes actually reduced curvatures by using electrical devices to stimulate muscle contraction. The devices are designed to be used at home.

The results of clinical trials, representing the accumulated experience of both teams with the still experimental technique, show a success rate greater than 80%, according to a report in the medical news section of the *Journal of the American Medical Association.* The results were presented at an American Academy of Orthopedic Surgeons meeting in New Orleans.

Walter P. Bobechko, M.D., chief of orthopedic surgery at the Hospital for Sick Children in Toronto, and his colleagues implant a small receiver into the backs of their young patients, connecting wires to muscles on the convex part of the curve. A bedside radio transmitter activates the device, and treatment occurs only when the child is asleep.

In their eight-year experience with internal stimulation, they have achieved success in arresting scoliosis in 117 of 141 children.

"The kids love it," says Bobechko of the batteryless receiver. "They take the transmitters to school and say, 'See, I'm the bionic woman.' " (Girls are ten times more prone to scoliosis than boys for reasons unknown, he adds.)

A research team at Rancho Los Amigos Rehabilitation Engineering Center in Downey, Ca., led by orthopedist John C. Brown, M.D., favors external stimulation to achieve similar results.

In this technique, a portable battery operated stimulator sends electrical impulses through wires to disks placed over the convex side of the spinal curve. It is attached before the child goes to sleep and is removed on waking.

Both methods are being tried in Canada, various countries in Europe and, on a limited scale, in the United States, where Food and Drug Administration approval is still pending.

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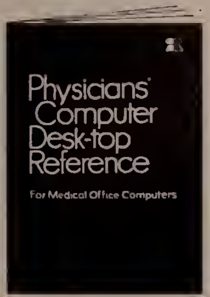
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Reflections—1963 to 1982

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The view from this porch is a panorama of several miles of calm, clear green water broken only by the reflections of the Berkshire Mountains in the west embossed by an early rising run; it is all so still and beautiful, truly a perfect setting for this attempt to look back and evaluate what effect, if any, the predictions made on the editorial pages of this *Journal* and the *Kings County Medical Society Bulletin* have had on the present and the future.

In 1971 I became impressed by the potential lifesaving effect of cardiopulmonary resuscitation (CPR).[1–3] At that time the American Heart Association (AHA) was training instructors, and the American Red Cross, as I recall, had not as yet accepted CPR. It was estimated that about 350,000 people died annually of cardiac arrest before reaching a hospital, and the site of each attack was impossible to predict. To increase the chance of sustaining life, I thought that during the initial four to six crucial minutes, most Americans would have to be professionally trained to perform the technique correctly. The total number of trained instructors was small but they could teach others, particularly physicians, who could then train civilians, and then the number able to perform the procedure would increase geometrically in a relatively short time.

Therefore, in 1972 at an annual session of the American College of Physicians I presented a resolution which was adopted unanimously. Briefly, it called for the entire membership, about 22,000 at that time, to join with the AHA to train every able-bodied citizen over the age of ten to perform CPR. The more people who knew the technique the more likely it would be for a victim to have someone knowledgeable by his side when stricken. *The New York Times*[4] reported the action and I was invited to present the plan at the AHA meeting in Dallas.[5] On the panel with me were Lee Cobb, M.D., from Seattle and Eugene Nagel, M.D., from Florida; the rest is history. In Brooklyn we helped train hundreds of policemen, thousands of high school students, many community board members, and many others. Dr. Cobb's success in Seattle was much more impressive. Although never acknowledged, it is reasonable to assume that the College of Physicians' action provided some motivation for the project in Seattle. If the Irish who started it all are correct, CPR, even if "inefficiently done," will salvage over 10 percent of the lives lost annually.[6] Using this conservative figure the mass training of laymen in CPR will save more than 35,000 lives each year by sustaining the vital functions in the cardiac arrest victim until sophisticated help and equipment arrive.

Since CPR requires only the use of the hands and mouths of the trainees it may well be described as the most efficient and inexpensive life-saving technique ever developed.

To treat at the site and enroute to a specific medical facility, one had to use mobile units of sufficient size and height to allow technicians to stand or walk about. The vehicle I designed, together with the late Ronald Halloway, M.D., and Mr. W. Zeins, was essentially a mobile emergency room (MERVAN) and was so well equipped that travel speed did not have to be increased, and treatment could be continued right into the hospital best equipped to treat each particular condition.[7,8] The van was the prototype of several, called baby MERVANS, built for and used by the fire department and ambulance services. They soon replaced the impractical Cadillacs, most of which were owned and operated by funeral directors and supplied over 70% of the ambulance service throughout the United States at that time.

Prevention is recognized as the most effective way to reduce costs. For example, vaccination against smallpox worldwide has reduced the incidence of that disease to "zero." The medical profession has actually saved billions of dollars by practically eradicating polio, diphtheria, pertussis, tetanus, and many other diseases. Why not exploit prevention to its fullest by adding mandatory health courses to the curricula in the upper grades of our elementary schools, high schools, and colleges?[9,10] Using physicians as teachers and visual aides we must instruct the young about diabetes, obesity, diet, drug abuse, alcoholic intoxication, exercise, etc. Many schools have already adopted health education courses. It is our best hope of reducing accidents, the leading cause of death between the ages of four and 40, by informing young people of the dangers of alcohol, uppers, downers, cocaine, angel dust, and other medications that dull one's senses and abolish normal reflex actions. Public health education will save lives and reduce the cost of medical care. Billions are at stake, and the medical profession can best serve this country by vigorously participating in an organized program. A disease prevention plan should be given the highest priority by educators, physicians, politicians, and members of the clergy.

These editorial pages have supported and suggested innovative methods of delivering health care to the disadvantaged: merging hospitals and sharing expensive technicologic procedures to reduce costs; risk management and educational courses for physicians to reduce professional liability litigation with the ultimate goal of reducing premiums; changes in undergraduate and postgraduate medical education to improve the technical knowledge and humane characteristics of new physicians; support of research by our profession directly and indirectly with the help of industry, which was suggested a long time ago.

Newer methods for reaching and caring for the underserved at a relatively low cost by using mobile units were suggested in the early 1960s and are just being implemented.

The maldistribution of physicians in the United States has been discussed, and the lack of high educational standards for those students trained in medical schools outside the country has caused us great concern; our opposition to the recent actions taken by the Regents in New York State has been stated candidly. Patient care was constantly in our thoughts and motivated every criticism made.

We addressed the problem of "Dying with Dignity," and the need for compassion and other humane characteristics in physicians attending the terminally ill.

Our strong opinions against nonphysicians practicing medicine were vindicated by the final judgment in the Illinois (Wilk) suit.

Following are brief summaries of the positions taken on controversial subjects from 1963 to 1982:

In 1963 in the *Kings County Medical Society Bulletin*[11] suggestions for obtaining hospital affiliations for "general practitioners" were made, as well as a plea for annual continuing medical education (CME) courses as a means of updating general medical knowledge for all physicians.[12] The former has been partially solved by the creation of the new "family physician" specialty, and the latter is now the order of the day. CME courses are available everywhere, are overabundant, and often are too expensive.[13-16]

In describing "our image" in 1964 I called for an increase in public health education and humanism in the practice of medicine.[17] I felt that the physicians' offices, together with personal and sympathetic care rendered to patients, serve as our best public relations instrument. My feelings concerning this were so strong that several editorials repeated the need for kindness, sympathy, and understanding in treating patients and their families.[18] Although polls continued to show that physicians were high on the list of the most respected, as individuals, the level of respect for all the professions was continually diminishing, and the statistics never adequately demonstrated that fact. The media and public responses repeatedly showed that the admiration for physicians was dropping, perhaps not as low as lawyers and politicians, but the trend was down, and still is.

Editorials in the *Kings County Medical Society Bulletin*, as well as in this *Journal*, made very clear my concerns about chiropractors[19,20]; organized medicine was urged to continue to oppose their attempts to practice medicine, because their training in diagnosis and treatment was inadequate or nonexistent. Our success in the Illinois (Wilk) suit justified that impression.

In "Thoughts for the Future" written in 1964[21] in the *Kings County Medical Society Bulletin*, I deplored the fact that physicians never used the potential political power available to them by virtue of their number, supplemented by that of their families and patients. Although never a member of a political action group, I continually presented our problems to patients with political influence. A specific example of a successful campaign was the effort made to save the Health Research Council when its existence was threatened by the former Mayor John V. Lindsay.

In 1969, in two articles,[22] I predicted that the ghetto care problems would not be corrected by the creation of departments of family practice or by increasing the number of minority students admitted to medical schools. Although I favored both and was a product of an Irish-Italian ghetto, I suspected that the well-educated black and Hispanic, like the educated Irish, Jew, and Italian, would use his knowledge to escape the ghetto and all it represents.

The solution offered was the improvement of the delivery of health services to the disadvantaged areas. I urged the creation of mobile units to visit each neighborhood on a regularly scheduled basis, and to screen, advise, and treat those discovered to have disease. Although this idea has been implemented more or less in some areas, much more must be done to efficiently and inexpensively satisfy all the medical needs of the poor.

In an article published in the *Bulletin of the American College of Physicians*, curriculum changes were discussed.[23] I argued against the popular proposal to reduce the standard four-year undergraduate course at a time when medical knowledge was expanding rapidly. Changes are once again under discussion, but the form differs. The controversy now involves humanism and technology, and where it should be taught, in college or in medical school.

We can sermonize constantly about the need for kindness, sympathy, and humanism in medicine. Ideal role models might be helpful, as will increasing premedical exposure to art, music, and cultural subjects. However, the home environment, family, friends, neighborhood, church, and personal characteristics will produce either a kind, compassionate, and sympathetic physician or an unethical, incompetent, or medically disabled practitioner. Even when exposed to the best of all of these, some people are innately unkind, discourteous, abrasive, and abusive, while others, who have experienced the worst kinds of background, are kind, gentle, and understanding. One's genes, as well as environmental exposure, are equally important.

I believe that the successful practitioner today needs more training in physics, computers, calculators, genetics, and biochemistry, preferably in college, so that more time in medical school can be devoted to their clinical application. In summary, we need both more humanism and more science, not less. The future physician will be lost without a strong foundation in the expanding basic sciences.

Two editorials published in successive months in 1973[24,25] listed over 20 reasons for the "explosive hospital costs" and 16 ways to help solve the problem. Although the figures have more than doubled, the "causes" and "solutions" are still relevant and applicable in 1982.

It is difficult to summarize the articles adequately, but, under "causes," some of the important factors mentioned were: the increase in the cost of hospital labor, decreased productivity, increased demand for medical services caused by Medicare and Medicaid, great dependence on emergency rooms, increased technology, excessive hospital bed use, duplication of services, excessive paperwork necessitated by ever-increasing regulations, wastage of supplies, and unnecessary procedures and high professional liability premiums.

The "solutions" suggested included increased ambulatory care (covered by insurers), more efficient record keeping and early completion of charts (reimbursement depends on both), shorter hospital stays, avoidance of unnecessary tests, careful prescribing with attention to costs when alternative medications are available, more efficient use of nursing services, centralizing and sharing procedures and services, merging of hospitals, mobile units for improving the delivery of health services at lesser costs, public education in preventive medicine, and reduction of legislated regulations for providers.

There were additional solutions listed, but these were the most important. Several of the "solutions" have been implemented, particularly the greater use of mobile units, sharing services, and merging or closing hospitals (when adequate care is available nearby), but much more should and can be done.

"The Primary Physician and Primary Care," written in 1974,[26] described the difference between the care rendered by the family physician or general practitioner and the then current attempt to introduce the "primary physician and primary care" as a new type of system better suited to care for the ill. The internist and most medical subspecialists were included as adequate providers of primary care. This idea, promoted and encouraged by many specialty societies including obstetrics and gynecology, was motivated to some extent by an attempt to win financial support from the government after the secretary of Health Education and Welfare (now Department of Health and Human Services) announced that a shortage of "primary physicians" existed in the United States.

A broadening of the training of all recent graduates in primary care was proposed, with an appeal for the continued use of subspecialists for teaching and to render special care when needed. The specialty societies were urged to do their own manpower studies and to inform the government as well as medical undergraduates as to specific needs in each discipline.

Recognizing the value of continued support of research, the veritable lifeline for medical progress, an editorial in 1974[27] deplored the reduced funding by government and called on the profession for direct contributions to a national or local research fund while also seeking continued financial support from industry, pharmaceutical companies, and foundations.

Sharing and pooling research ideas, funds, and facilities was suggested as another possible solution. This idea was suggested originally in 1971 in an article published in the *Annals of Internal Medicine.* Of course this will appear idealistic to some readers, but allocating funds for research and development is common in industry. Why not use the same successful method in our profession? Regional sharing of resources will also lower costs, another important problem still facing medicine in 1982.

In an editorial written in April 1975[28] I advised the formation of a self-insurance plan, preferably under the aegis of the American Medical Association. After an appropriate study, if that was found not to be feasible, then sponsorship by the Medical Society of the State of New York was urged. The latter has been implemented and, although the company formed has had problems, it still, in my opinion, was the best course to follow, and time will make that more and more evident.

In "Death, A Private Affair," written in 1976,[30] a plea was made for permitting the terminally ill to "die with dignity." The courts are not the place to make decisions concerning the interruption of artificial life-support systems except in very special situations, for example, when a criminal act is a known or suspected factor. The patient (if competent), together with the next of kin and the physician, should make the final decision. When either party wishes an additional consultant, such as a member of the clergy, the request should be granted. To give the courts the final decision-making power in most cases is an abdication of responsibility by our profession.

In 1977[31] "Assessing Clinical Performance" was one of the current problems. In an unsuccessful attempt to unravel this dilemma, specialty organizations and the AMA spent many hours and made this issue, in my opinion, more complicated than it is. Any good clinician needs at least three things:

knowledge (cognition), the ability to apply it to help the ill (diagnosis and treatment), and the humane characteristics to comfort those worried, disabled, or in pain.

Cognition, or cognitive knowledge if you will, can best be determined by written examinations. The logistics involved make oral examinations impractical, and the methods used by examiners are often too variable to be completely fair.

The clinical application of medical knowledge can be graded fairly only by a peer or superior using direct observation. The patient is fast becoming a good judge of this function. Although still understandably subjective, he is improving because of public education and the increased sophistication that accompanies it. Humane characteristics, or the lack of same, are readily detected by nurses, patients, students, and other hospital personnel.

Of course, this is an oversimplification because all but the written examination are not easy to evaluate. Those involved in the controversy tend to downgrade cognition. Without it all else is impossible in caring for the ill. How then can anyone denigrate CME? Of course a relatively few courses are worthless, but most are presented by reputable groups and permit the participant to learn "facts." Even if only a few are acquired, the course is worthwhile, and they must have some "good" effect on performance. An unknown fact cannot be applied. As we all know, a known fact may be used well or poorly depending on the individual physician.

In summary, continue the CME courses and the examinations, accept the program director's evaluation of performance, and weed out the inhumane and medically disabled practitioners. What else can we do?

In 1976[32] I thanked the "foreign medical graduates" who helped us, particularly in urban areas when physicians, in short supply, shunned the medically disadvantaged areas.

In 1977 we urged[33–35] the legislators to stop interfering in medicine by legalizing untried substances such as Laetrile, and by allowing the Regents to determine the educational standards in the Caribbean schools acceptable for their students' admission into our postgraduate training programs.

A call for credibility in the actions and statements of medical educators and a plea for treating our own medically indigent without the help of the National Health Corp was the basis for two editorials.

In 1980[36] the schism between the AMA and the specialty organizations—Council of Medical Specialty Societies (CMSS), American Hospital Association (AHA), Association of American Medical Colleges (AAMC), American Board of Medical Specialists (ABMS)—over CME was harming the profession. Two national CME accrediting bodies made no sense. Fortunately all concerned "saw the light" and we now have one. In my opinion this saved the AMA from a great loss of membership.

In 1981 two editorials,[37,38] "Resurrect Flexner" and "Why Regents Why?," expressed my gravest concern. The AMA has never received the credit it deserved for upgrading medicine after 1910 and effectively creating the best medical education system in the world. The excellence of our system, which is still improving, affected world medicine and saved millions of lives. Joined by the specialty organizations (CMSS, AAMC, AHA, ABMS) and others, a review of the entire system is under way to effectively integrate new technologies and disciplines within the system which, in my opinion, will create fantastic advances in medical care and help for all mankind.

In the face of all these events the Regents of the State of New York, in spite of an ample supply of physicians in the United States, are opening the doors of our superb graduate medical education programs to ill-prepared students from non-Liaison Committee on Medical Education (LCME) approved schools. What a pity!

Although official recognition of the *Journal's* pioneering efforts in many of these crusades has been lacking, the personal satisfaction that accompanied adoption of some was more than sufficient to justify the tremendous amount of thought, time, and effort needed to express them on these pages.

We have not always been right, but our motivation has always been that which we considered best for the ill and for our profession. We hope our readers understand and accept this overview as our way of saying farewell. We enjoyed the privilege of serving you.

Personally, I am grateful for the tremendous number of cards, letters, calls, and other expressions of good will and concern for my welfare received during my recent illness. I cannot possibly answer all that I should.

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The Family of the Cancer Patient

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> *Every physician must be rich in knowledge, and not only of that which is written in books; his patients should be his book, they will never mislead him.*—**Paracelsus (1493–1541)**

As we have gained a greater knowledge of the family structure, we have also come to realize its importance in the face of a serious illness. Our concern in this article is how to protect and utilize the family's strength when one of their members develops a neoplasm. Although every illness has its psychosocial implications, the diagnosis of cancer can create an overwhelming fear which ofttimes may immobilize the entire family. It is our responsibility as physicians to see that this does not occur. Cancer is no longer necessarily a sentence of death.[1]

Ideally, as soon as the diagnosis of a malignant condition is confirmed the psychological support for the family should also be planned. Projective tests should be done to identify which member may be at higher risk and will possibly require psychiatric assistance. The reactions that we have observed in patients are also experienced by the family, such as denial, anger, bargaining, depression, and, finally, acceptance. Kubler-Ross[2] has described these stages in the dying cancer patient with great sensitivity, but also recognized that they may be encountered in the family as well. Their reactions, I would add, do not necessarily succeed one another in clearly defined stages. More frequently they appear as alternating between acceptance and denial, with many confusing contradictory emotions in the endeavor to cope with this painful reality.[3]

In the past, the task of helping the family understand and continue functioning would be undertaken by their own family physician. It is still recommended that he continue this but, in view of the extensive specialized knowledge that exists today, the services of the psychiatrist should also be utilized as early as possible. The question of what to say to their loved one who is ill, and how or when, may at times be most difficult and agonizing. Here guidance and assistance are most essential and will prove rewarding for every member of the family. With a better understanding and as discussions become more free, the patient also will benefit and begin to feel less isolated and more comfortable.

Because of their own fears and anxieties, the family frequently may request that the patient not be informed of the diagnosis. For the physician, such situations emphasize the realization that he has a responsibility not only for the care of the patient but for the troubled family as well. Psychiatric attention is indicated here to help the family better understand their own anguish and pain, and also to learn how they can render greater support to the patient. However, there may be times when the physician does have to withhold the diagnosis from the patient, but it will be for a very different reason. Then it would be based on his professional judgment that the patient, emotionally, is not yet capable of tolerating this knowledge. Only under these circumstances should such information be withheld.

Usually the patient's readiness to deal with this problem will be revealed by the questions that begin to be raised. Just as the patient needs the time to come to terms with his illness, so does the family exhibit the same need for time. Slowly and painfully this knowledge will be accepted and recognized as another aspect of life. As the family is kept informed of the patient's treatment, and the progress or setbacks, as well as our own expectations, they will also feel included in what we are doing. Their support for the patient, which is so valuable and must be maintained, makes them, in fact, very much a part of the network of our care.[4]

For the family whose child is the patient, the question of how they should explain this illness becomes a problem even more distressing and painful. Generally their wish, also, is not to divulge the diagnosis. Although this practice was acceptable in the past, it no longer is today. Studies[5–8] carried out over the past two decades confirm the benefits of speaking openly and revealing the diagnosis to the child. It will be of interest to note that the children who were not told were under much greater stress, which diminished when the diagnosis was disclosed.

The child will usually sense the family's concern and fear, but not understanding, can misinterpret and react with feelings of being rejected and punished. Regrettably we continue to disregard the fact that the unknown may be by far more threatening than facing what is known. What is encouraged is a discussion of the illness as soon as possible, despite the limitations of the child's understanding. The importance is that the child will not feel alone or become distrustful.

To protect the family as well as the patient also requires transmitting such a philosophy to all who are involved in providing this care. They include not only nurses and physicians who may be in various

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specialties, but also psychologists and social workers, as well as members of the clergy. Weekly conferences are essential, for it is here that information will be exchanged and the strategy planned for the care of the patient and family. The work done by von Bertalanaffy[9] in his general systems theory serves as an example of the many benefits that can be achieved with a multidisciplinary approach.

Hospitals today have also introduced orientation sessions for the families of the cancer patient. Here there is a forum where they may ask all sorts of medical questions, learn about the routines of a hospital, and where they also begin to speak about their own fears. However, some may require more assistance and, for those, immediate referral for group or individual therapy is recommended. Brief care in this early period will achieve more and possibly also serve to avoid undergoing a more time-consuming therapy later on.

Another crucial period occurs when the family begins to observe the patient's decline. Hope, which until now has been necessary and valuable, will have to be relinquished and, instead, anticipatory grief must take its place. This should be encouraged, for it serves the purpose of lessening some of the pain of bereavement when death does occur. Despite recognizing that death is inevitable and awaits each of us, few human beings are able to accept it. More than three centuries ago, John Donne,[10] Dean of St. Paul's, reminded us of these very difficulties, when he wrote in his *Devotions*, "Now this Bell tolling softly for another, saies to me, 'thou must die'." These same preparatory steps, no different today than from centuries ago, enable the family to better tolerate the pain and grief and accept the inevitability of death.

The helpless child also has to grapple with this problem when a parent is terminally ill. The very concept of death is confusing and not yet understood as a permanent state. Heretofore, in both stories and games, the dead are quickly brought to life again, and yet at the present time this is not occurring. With the early feelings of omnipotence there is also an inability to differentiate between objective causation and wishful causation. To this there also will be added other experiences, which may provoke feelings of frustration and anger, as well as the destructive and annihilatory wishes. Now, with the imminent death of a parent, feelings of guilt become almost unavoidable. It is clearly evident that the most vulnerable member of the family is still the child who will require a great deal of support and love during this painful period. If the child does not appear to be responding and continues to be troubled, psychiatric care will be necessary.

Although death brings an end to the suffering of the patient, a multitude of problems will still continue for the family. The work of grieving is important and in a way was recognized by man early in his existence as he probed and struggled to understand himself and the world surrounding him. These memorable words in *Ecclesiastes*[11] reflect his degree of perceptiveness and awareness.

> To everything there is a season and a time to every purpose under heaven
> A time to be born and a time to die; . . .
> A time to mourn and a time to dance.

These are the thoughts that will have to be accepted by the family, not just intellectually, but emotionally as well.

Our concern now will be with the remaining members of the family and with assisting them in their grief work.[12] It will involve a painful reliving and reviewing the joys and sorrows, as well as the misunderstandings in their relationship with the deceased. The verbalizing of their feelings, which earlier could not be expressed, must now be undertaken if we are to avoid future emotional or physical difficulties. Most people, we should remember, can cope and make the necessary adjustment, but for those who are unable, again psychiatric assistance should be utilized as soon as possible.

The suffering of the family of the cancer patient has brought their grief and pain into the foreground of this article, but mention should also be made of hope—not as a wish that arises from despair and fear but from an understanding of life's advances and all the unforeseen possibilities of change. This is the hope that is so important for us to convey to them, together with an open and frank assessment of the illness. Both the patient and the family will be helped, and we in turn will have achieved what centuries ago in ancient Greece was greatly admired and described as Philanthropia and philotechnia.[13]

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Electrocardiograms of the Month

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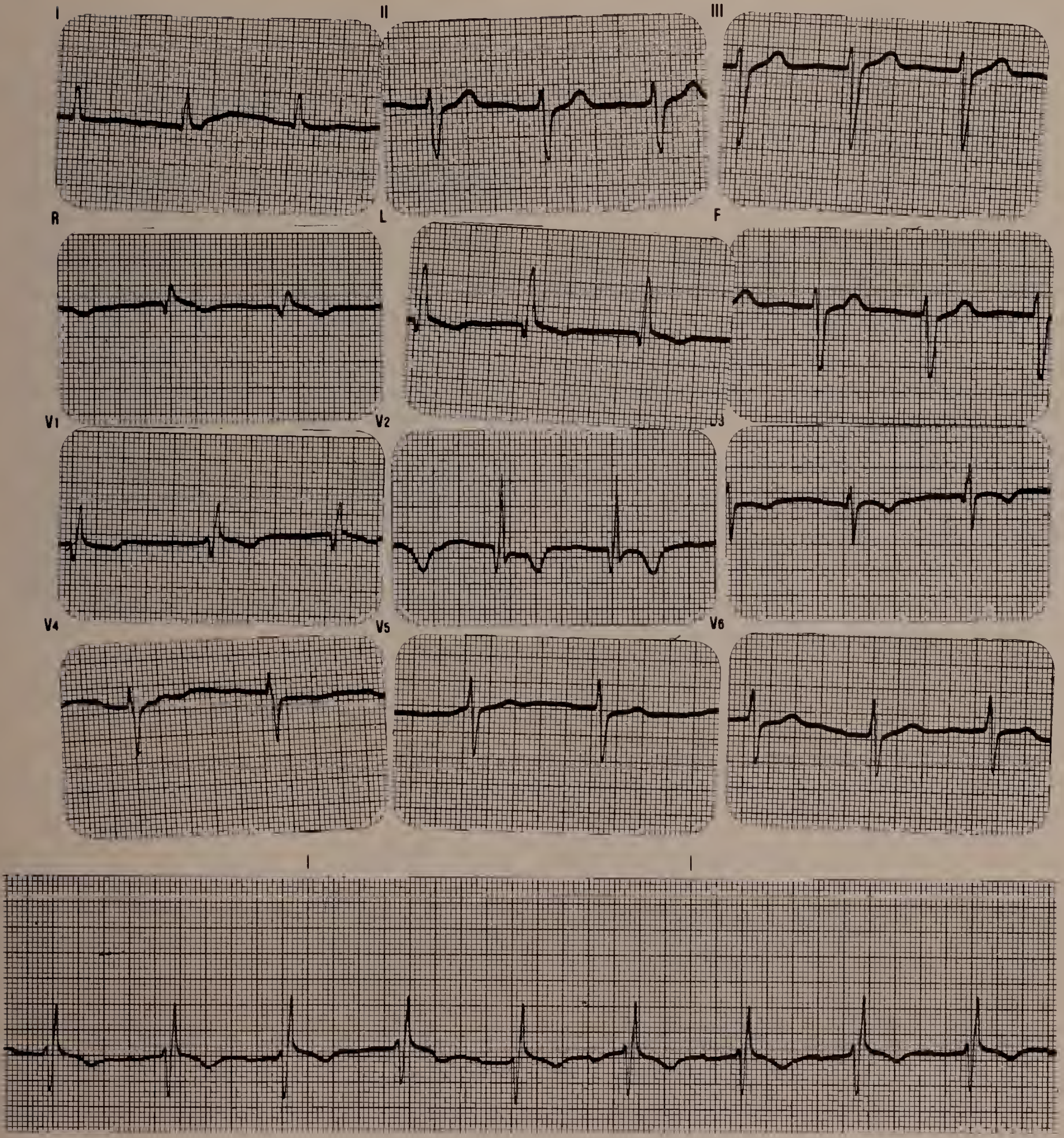
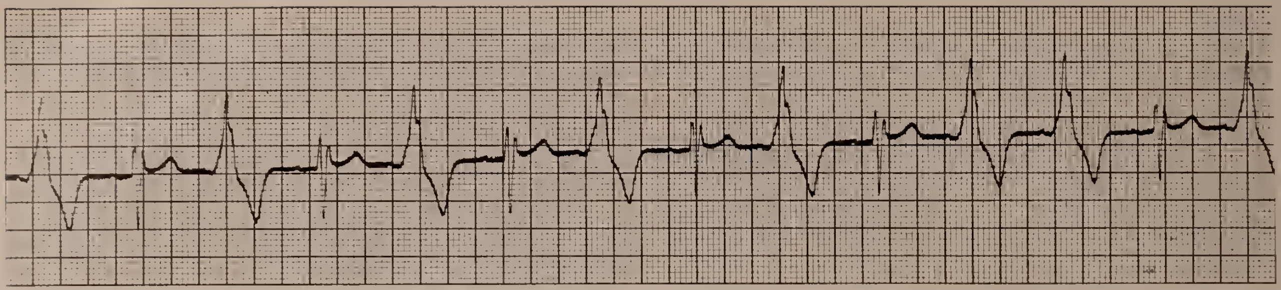


QUESTION 351. The patient is a 92-year-old man with a history of previous myocardial infarction. He is asymptomatic. What is the interpretation of his electrocardiogram? What treatment, if any, is indicated? The bottom strip is V_{3R}, doubly standardized.



QUESTION 352. Lead V_2. What is the rhythm?

Electro-
cardiograms
of the Month

ELUCIDATION

Answer 351. The ventricular rhythm is slightly irregular with a rate of 58 to 68/min. P waves are not clearly definable. Lead V_{3R} doubly standardized reveals P waves with a PR interval of 0.28 sec (1° A-V block).

The QRS measures 0.11 to 0.12 sec in duration. An rSR pattern is present in V_1 (right bundle branch block). The mean electrical axis in the frontal plane is −60° with a qR in lead I and rS in III indicating left anterior fascicular block. Right bundle branch block, left anterior fascicular block, and 1° A-V block are present, indicating either trifascicular block or bifascicular block with associated A-V nodal disease. Even in the absence of symptoms such as syncope, some cardiologists would insert a pacemaker; most would not.

The abnormal Q waves and deeply inverted T waves in V_2 and V_3 are compatible with anteroseptal infarction of indeterminate age.

Exploring the right precordium using double standardization may reveal P waves not discernible in the standard 12 leads.

Answer 352. The initial impression is that the rhythm is regular sinus with coupled unifocal ventricular premature depolarizations. The PP interval is regular; the atrial rate is 89/min. The PR interval of the normally conducted beats is 0.16 sec, of the aberrant beats is 0.10 sec.

Beats 11 and 12 are both aberrant and both are preceded by a P wave with a PR interval of 0.10 sec. Are the aberrant beats conducted from the atria to the ventricles or are they ventricular premature depolarizations? It is unlikely that ventricular premature depolarizations would occur at precisely the same rate as the sinus beats. Note the slurred upstroke of the aberrant QRS complexes.

The patient has Wolff-Parkinson-White pattern with alternating conduction between the A-V node and the aberrant pathway (bundle of Kent). Beats 11 and 12 are both conducted by the bundle of Kent.

Radiologic Problem of the Month

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Editor

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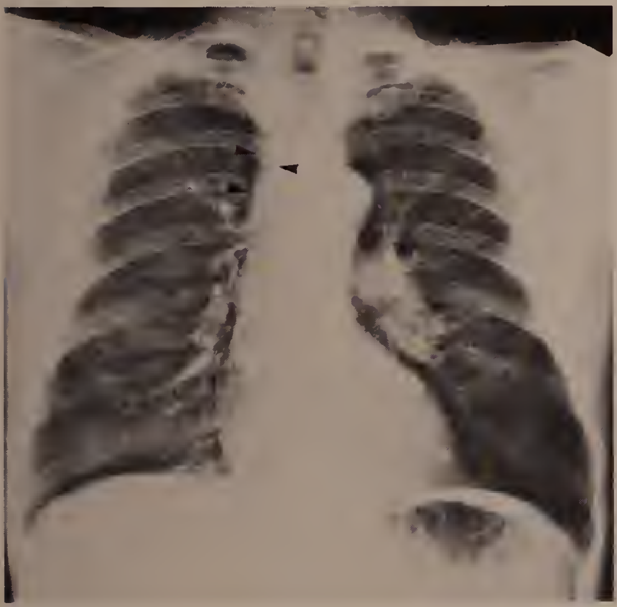
Large Left Hilum



A 34-year-old white man had mild cough of a few days' duration.

Elucidation

The posteroanterior view of the chest reveals asymmetry in the size of the hila, the left being considerably larger than the right. The hilar mass blends with the left pulmonary artery, and the arterial branching can be seen through the opacity, indicating a positive "hilum overlay sign" of anterior mass. In addition, the paratracheal stripe is widened, more so on the right side. The right paratracheal stripe appears as a thin water density between the air column of the trachea and the adjacent right lung (between the arrowheads). The thickness of this in normal individuals is 1 to 4 mm.[1] In this patient it measured from 6 to 8 mm; in the absence of pleural or tracheal wall abnormality, this may indicate adenopathy. The combination of paratracheal thickening and left hilar mass should suggest lymphadenopathy.[2] The common causes of mediastinal lymphadenopathy in a patient of this age without any parenchymal pathologic condition include adult type of primary tuberculosis or other infections, granulomatous disorders, sarcoidosis, lymphoma, or metastasis.[2] Primary tuberculosis is rare in adults but can present as mediastinal adenopathy and the nodal enlargement tends to be unilateral. This patient had negative results of a tuberculin test. The patient lived all his life in the Bronx and histoplasmosis and coccidioidomycosis are not common diseases in this area. Sarcoidosis typically shows as bilateral hilar and right paratracheal adenopathy. It is more common to see intrabronchial adenopathy in sarcoidosis, although asymmetry and unilateral enlargement may rarely be encountered.[3] At this age, metastasis either from malignant condition of the lung or from an extrathoracic site is uncommon without producing major symptoms. Lymphoma is more likely at this age and may show clinically as mild cough.

In the consideration of final diagnosis, Hodgkin's type of lymphoma was mentioned as the patient also had eosinophilia in the blood examination. However, one cannot differentiate radiologically the various types of lymphoma. Hodgkin's lymphoma has protean manifestations and at least 50% of patients first appear with mediastinal adenopathy.[2]

Histologically, the nodes contain varying number of lymphocytes, polymorphonuclear leukocytes, and eosinophils together with a characteristic giant cell, the Reed-Steinberg cell.

Radiologically, bilateral lymph node enlargement is commonly observed in routine views of the chest. However, tomography and particularly computerized axial tomography are fruitful in outlining the various groups of enlarged nodes. Lymphangiography is not fruitful for outlining intrathoracic lymphadenopathy. When the anterior mediastinal and retrosternal chain is shown to be involved, lymphoma is a more likely diagnosis. Calcific deposits are not present in Hodgkin's lymph nodes unless the patient had radiation therapy.

The differential diagnosis is as mentioned. The primary malignant conditions which metastasize to intrathoracic lymph nodes include tumors of the head, neck, genitourinary tract, breast, and melanoma.[4] The most frequently detected lymph node group is the right paratracheal chain.

This patient had a lymph node biopsy; it proved to be Hodgkin's type of lymphoma histologically.

Diagnosis

Hodgkin's lymphoma

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It's a long, hard run to better heart health

Running to promote cardiovascular health does work—but you may have to run at least 10 miles a week for almost a year before the benefits become apparent.

Researchers at Stanford University School of Medicine studied the effects of a one-year running schedule on lipids (fats) in the blood, on physical fitness and on body fat content. Paul T. Williams, M.S., of Stanford's Heart Disease Prevention Program, was principal author of a report appearing in the May 21 *Journal of the American Medical Association* that assesses findings in 48 healthy, previously sedentary men aged 30 to 55 years compared to 33 control subjects who did not participate in the exercise program.

Higher blood levels of high-density lipoprotein cholesterol (HDL-C) and lower blood levels of low-density lipoprotein cholesterol (LDL-C), both measurements associated with a reduced risk of heart attack, were not seen until after nine months of running at least 10 miles per week.

More encouraging news for reluctant runners is that changes in physical fitness and body fat content occurred earlier and at lower levels of activity than alterations in HDL-LDL distribution.

Fitness, measured by treadmill endurance and oxygen uptake tests, improved as early as three months into the running program at activity levels of five miles per week or less. Treadmill endurance leveled off after six months, regardless of increased running mileage, but oxygen uptake capacity continued to improve.

Decreases in body fat content also became apparent after only three months of exercise and continued, particularly at high activity levels, to the end of the one-year program.

Williams notes that because the study evaluated only healthy middle-aged men, the results might not apply to people with other characteristics.

Pneumopericardium

Unusual complication following open heart surgery

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Pneumopericardium, a rare entity first described in 1844,[1] apparently has not been reported following open heart surgery. This report describes our observation of a pneumopericardium following tricuspid and aortic valve replacement for infective endocarditis. Relevant literature is also reviewed.

Case report

A 30-year-old man with a long history of intravenous drug abuse underwent tricuspid valvulectomy in 1977 for *Staphylococcus aureus* endocarditis. He was admitted to Harlem Hospital Center in the spring of 1978, again with *S. aureus* endocarditis. Chest x-ray film revealed a collection of air in the upper mediastinum (Fig 1). He was treated with a long course of intravenous antibiotics and the infection resolved without complications. In October 1978, he was readmitted with a two-week history of fever and cough and a recent onset of hemoptysis, dyspnea, and peripheral edema. On admission, a diastolic murmur of aortic regurgitation was heard and he was in congestive heart failure. Blood cultures grew *S. aureus*, and he was treated with oxacillin, then nafcillin and gentamycin, in addition to a cardiotonic regimen. Chest x-ray film revealed a right middle lobe infiltrate, and at bronchoscopy there was bleeding from the medial segment of that lobe. The hemoptysis resolved spontaneously and the middle lobe infiltrate cleared. An echocardiogram showed an aortic root abscess. Cardiac catheterization confirmed the presence of aortic insufficiency with prolapse of a flail leaflet demonstrated on angiocardiogram.

Emergency open heart surgery was performed on November 30. Cannulation for bypass was carried out via the femoral artery and vein. A large cystic structure was found in the anterior and superior mediastinum encasing the great vessels. The cyst was entered at the time of superior vena canal cannulation and turbid fluid escaped (Fig 2). There was an aneurysm of the posterior aorta just superior to the aortic valve. An erosion at the base of the noncoronary cusp tunneled into the left atrium and left ventricle. The cystic mass was partially excised. An air leak from a small bronchus of the right middle lobe was noted, and thus was oversewn (Fig 3). Aortic and tricuspid valve replacement was performed, and epicardial pacemaker leads were placed. The excised wall of the cyst showed colonies of gram-positive cocci, with a histologic diagnosis of inflammatory cyst or abscess. On the sixth postoperative day, the patient experienced hemoptysis and precardial pain. A loud friction rub was heard, and chest x-ray films revealed a pneumopericardium (Fig 4A). The patient was reexplored, and a recurrent air leak from the right middle lobe bronchus was repaired (Fig 4B). The patient recovered and was discharged from the hospital, only to succumb a year later (1979) to recurrent endocarditis.

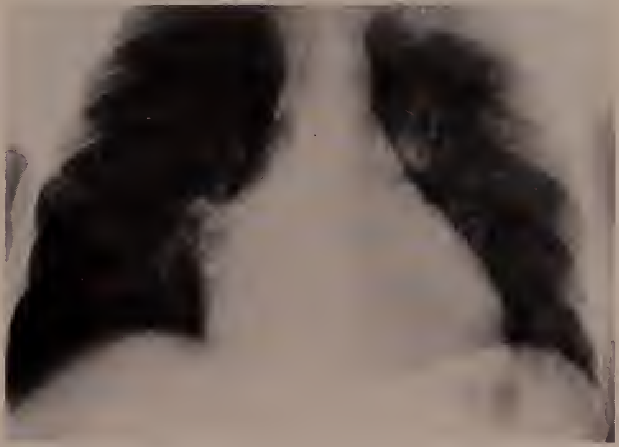

FIGURE 1. Chest x-ray film April 10, 1978, shows air in superior mediastinum in region of subsequent abscess.

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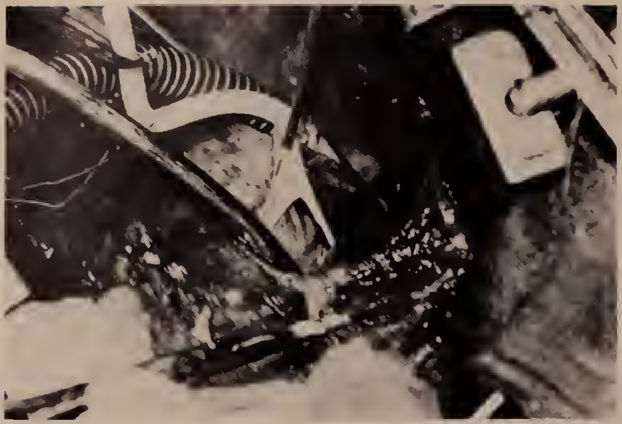

FIGURE 2. Metal suction tip inserted into abscess space in superior mediastinum, encountered during aortic and tricuspid valve replacement.

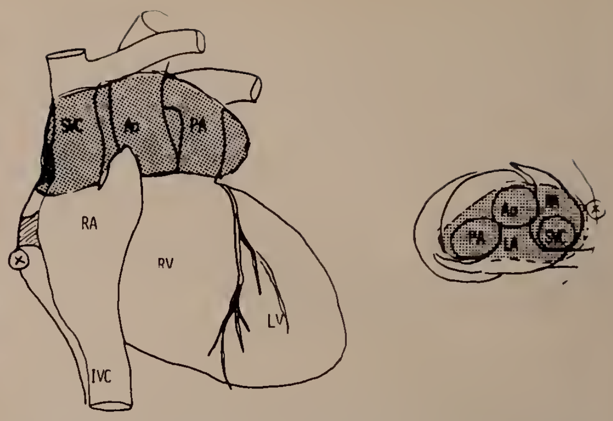

FIGURE 3. Schematic representation of abscess space encountered during aortic and tricuspid valve replacement, one year after tricuspid valvulectomy. X indicates location of bronchial fistula. Abscess encased the great vessels and was bordered superiorly by thymus and innominate veins.

Comment

This description demonstrates the relapsing course frequently characteristic of staphylococcal endocarditis, which led in this instance to the unusual postoperative complication of pneumopericardium. The presence of air in the superior mediastinum in the spring of 1978 (Fig 1) suggests pericardial abscess formation, most probably related to the tricuspid valvulectomy. The anatomic location of this air is closely related to the site of the abscess observed during later valve surgery (Fig 3). The presence of hemoptysis and a right middle lobe infiltrate in October 1978 suggest erosion of the abscess into the right middle lobe bronchus, with subsequent healing by adhesions and granuloma formation. The air leak initially observed at surgery November 30, 1978 appears to have resulted from disruption of the bronchial adhesions. Failure of the surgical repair of the middle lobe bronchus led, in turn, to the pneumopericardium demonstrated in Figure 4.

Pneumopericardium is a relatively rare lesion first described in 1844 by Bricheteau.[1] Since then this entity has been the subject of numerous reviews[2–4] and case reports. Pneumopericardium has resulted from blunt or penetrating trauma,[4–6] inflammatory lesions,[7–9] and asthma or positive pressure ventilation.[10–13] Iatrogenic[14,15] cases have been described as having fistulas resulting from an inflammatory[15–24] or neoplastic[25–27] process in neighboring tissue or organs. There were 87 cases of spontaneous pneumopericardium reviewed by Dickson et al.[28] Although hemodynamic compromise secondary to pneumopericardium has been described,[4,9] this was not a feature of the patient described in this report. However, reexploration was required to repair the bronchopericardial fistula and to avoid a chronic contaminated space which could lead to a recurrent pericardial abscess. Pneumopericardium remains a striking and unusual roentgenographic finding which occasionaly requires urgent surgical intervention.

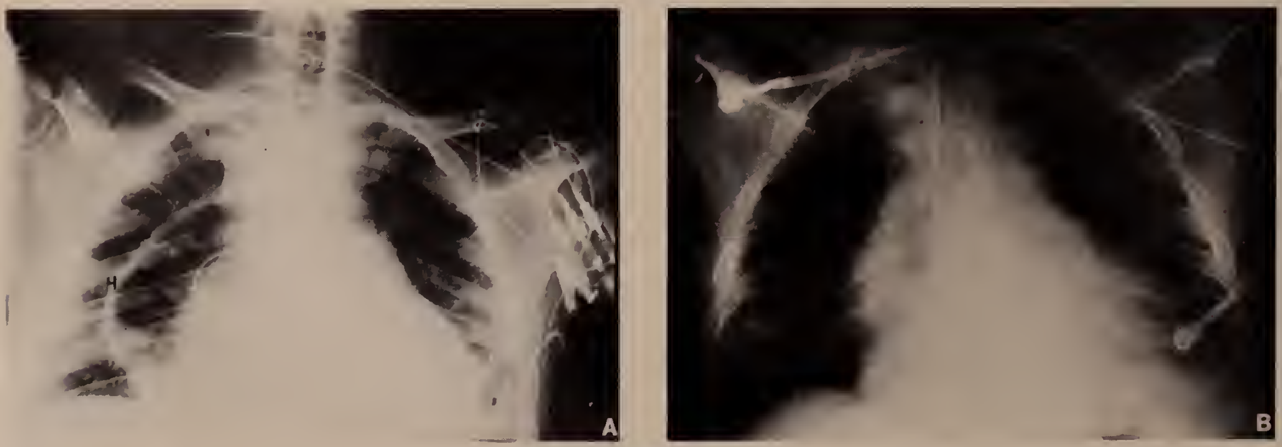

FIGURE 4. (A) Pneumopericardium resulting from bronchopericardial fistula after aortic and tricuspid valve replacement. Patient was asymptomatic despite loud friction rub and muffled heart tones. Air is present in region of pericardial dissection for valve surgery. (B) Portable chest x-ray film after closure of bronchial fistula and evacuation of pneumopericardium.

Summary

This case report describes pneumopericardium as a complication of open heart surgery for bacterial endocarditis and a pericardial abscess. Acute surgical intervention was required to repair a bronchopericardial communication.

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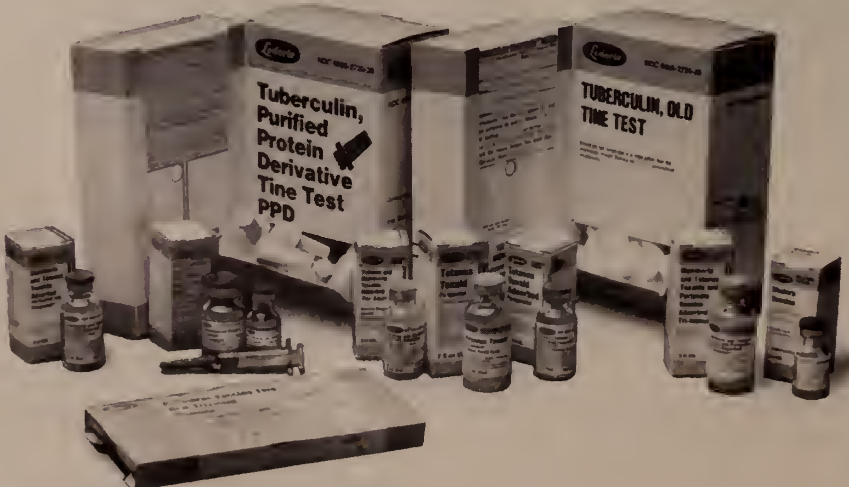
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Neck Abscess Causing Horner's Syndrome

A rare manifestation

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An inflammatory neck mass in a five-month-old girl resulted in a Horner's syndrome (Fig 1). Antibiotics failed to resolve the neck mass, and Horner's syndrome persisted. Computerized axial tomography (CAT) scan revealed a parapharyngeal mass in connection with the lateral cervical mass with a central region of necrosis. Surgical intervention of an incision and drainage of the neck mass successfully drained the abscess with total resolution of the Horner's syndrome.

Case report

A five-month-old girl was admitted to a community hospital in early September 1980 because of periorbital edema, Horner's syndrome, a tender cervical mass, otitis media (all on the left side), fever, and leukocytosis. She was started on intravenous (IV) ampicillin, and showed a very good clinical response. She was afebrile in 12 hours, but due to persistence of the neck mass, and a question of a mass in the retropharyngeal area, she was transferred to a larger center in mid-September 1980.

On physical examination there was a 3 cm × 3-cm firm mass in the cervical area on the left side, with edema of the soft tissues. Horner's syndrome was evident on the left side, with no edema. The pharynx showed a normal appearing palate with no evidence of mass in the nasopharynx. The posterior pharyngeal wall showed edematous swelling of the lateral wall on the left side, but there was no evidence of an abscess.

The neck mass persisted, along with the Horner's syndrome (Fig 2). A CAT scan showed a lucent area in the region of the edematous posterior pharyngeal wall (Fig 3). Biopsy of the cervical lymph node mass on the left side, along with incision and drainage of the parapharyngeal mass, was performed. She was then placed on dicloxacillin. The postoperative course was satisfactory and she was discharged in late September 1980. Postoperative follow-up in the office showed total resolution of Horner's syndrome.

Comment

The clinical presentation created several confusing issues in diagnosis. The history suggested an inflammatory cervical adenitis with a persisting posterior neck mass despite extensive antibiotic treatment. Although this mass occurred posterior to the sternomastoid muscle, an obvious Horner's syndrome, noted early in the clinical course, persisted. This sign is usually thought to indicate a neoplasm, rather than an inflammatory process. However, on direct laryngoscopy the mass was found to extend into the parapharyngeal area and appeared, radiologically, as a soft tissue mass with a central lucent area. The lytic characteristics of the mass as seen on the CAT scan suggested an inflammatory component. This was confirmed by surgical exploration and drainage of the abscess, supporting the benefit of the CAT scan procedure in these cases. Cervical

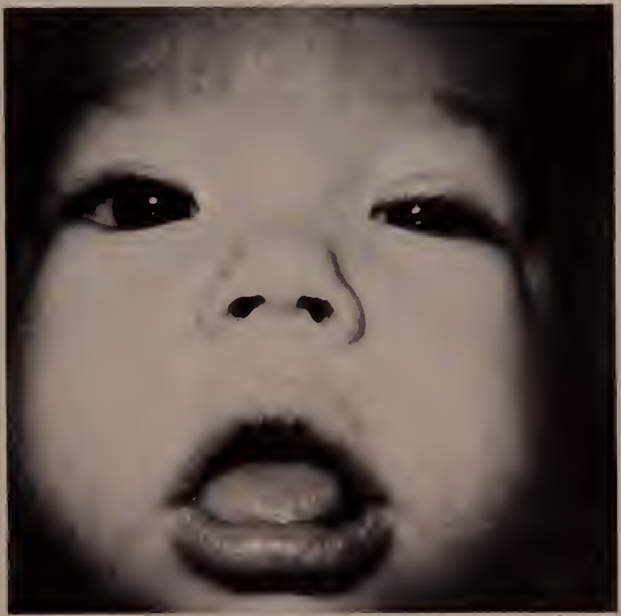

FIGURE 1. Clinical photograph showing Horner's syndrome (miosis and ptosis) on left side.

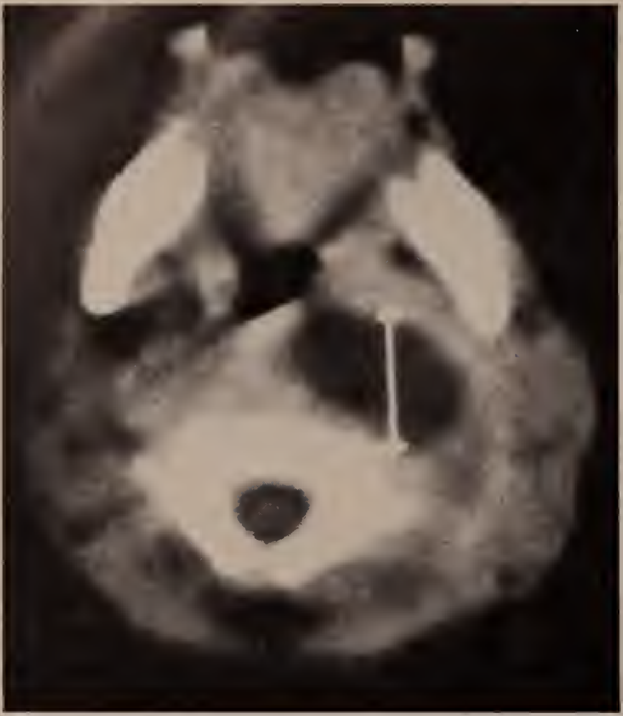

FIGURE 2. X-ray lateral neck showing parapharyngeal mass.

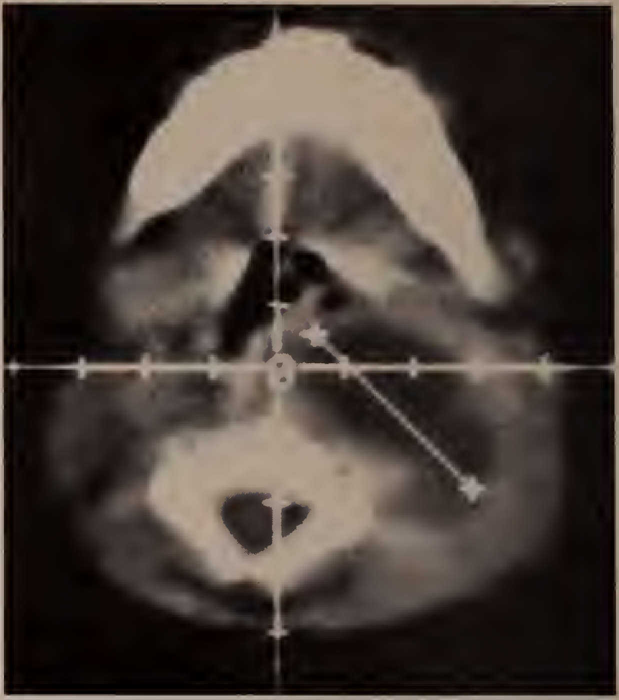

FIGURE 3. CAT scan showing parapharyngeal mass.

lymphadenitis frequently results in space abscesses of the neck. Wright[1] reports that the highest incidence of cervical infection occurs in children between one and four years of age. In 50% a focus of infection could not be found; in 20% it was from the tonsils; and in 10% it was found in the teeth. In all these cases drainage was to the upper deep cervical lymph nodes. Local trauma or skin focus were found as the cause in the remaining 20%, and these abscesses drained to the upper superficial or lower cervical nodes.

If resolution of cervical adenitis does not occur with adequate antibiotic coverage, or if systemic symptoms persist, then incision and drainage of the nodes or appropriate neck space will be required. In performing this procedure one must realize the potential complications of vascular thrombosis or vessel necrosis with hemorrhage.

The clinical differential in this case was between a cervical adenitis and a possible neurogenic tumor. Horner's syndrome suggested a tumor, since neurologic sequellae are extremely rare in inflammatory conditions. Open biopsy or drainage is indicated in either situation. Two previous authors[2,3] have reported recurrent laryngeal nerve paralysis in association with cervical lymphadenopathy. Horner's syndrome or other carotid sheath compartment nerve paralysis resulting from inflammatory cervical lymphadenopathy has never been described.

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Listeria monocytogenes Sepsis Complicated by the Adult Respiratory Distress Syndrome

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***Listeria monocytogenes* infections** are uncommonly seen in clinical practice and usually occur in neonates, the elderly, or other immunocompromised populations.[1] The adult respiratory distress syndrome (ARDS) is a diffuse pulmonary process caused by diverse etiologies and characterized by refractory hypoxemia and a reduction in lung compliance.[2] A review of the literature revealed only one previous report of *Listeria* sepsis complicated by ARDS.[3]

We recently cared for a previously healthy young female who manifested such an association and present her case here to alert physicians to this potentially fatal complication of *Listeria* sepsis.

Case report

A 21-year-old white female was admitted to the Nassau County Medical Center for headache, fever, vomiting, and lethargy. She was a resident of Yorkshire (England) and had been working as a housekeeper on Long Island for three months. Two weeks prior to admission she had spent a weekend at a farm in Pennsylvania, but reported no animal contact. Three days prior to admission she developed fever, malaise, headache, nausea, and vomiting and a local physician referred her for admission when she became progressively more lethargic. Past history was essentially negative except for an episode of spontaneous pneumothorax. She had never been pregnant.

On admission she was lethargic and disoriented. Temperature was 39°C, respirations 24/minute, pulse 128 beats/minute, and blood pressure 130/80 mm Hg. Pupils were equal and reactive, and funduscopic examination was normal. Ears and throat were clear. There was marked nuchal rigidity. Examination of the heart, lungs, and abdomen was negative. On neurologic examination, Kernig's and Brudzinski's signs were positive. Deep tendon reflexes were equal and symmetrical. The white blood cell count was 15,800/mm^3 with 79% neutrophils, 1% bands, 5% lymphocytes and 15% monocytes. Hemoglobin was 13.5 gm/dL, and hematocrit 38.9%. Platelet count was 96,000/mm^3. Blood chemistries were normal.

Lumbar puncture yielded xanthochromic cerebrospinal fluid with an opening pressure greater than 500 mm H_2O. Glucose was 45 mg/dL (blood glucose 140 mg/dL) and protein 169 mg/dL. Cell count revealed 80 white blood cells/mm^3 with 88% polymorphonuclear leukocytes. Gram stain was negative. Chest x-ray and cranial computed tomography were normal. Admission blood and cerebrospinal fluid cultures subsequently grew *Listeria monocytogenes* type I A, sensitive to penicillin.

About 12 hours after admission, respirations became labored and an arterial blood gas on room air revealed PO_2, 26 mm Hg; PCO_2, 27 mm Hg; and pH, 7.51. The patient was intubated and placed on a respirator with an IMV circuit. Over the next four days she required inspired oxygen concentrations of 0.5 with end expiratory pressure levels of 10 to 15 cm H_2O to maintain adequate oxygenation. Bilateral diffuse pulmonary infiltrates were seen on chest x-ray.

The patient was treated initially with intravenous penicillin, 24 million units daily, and chloramphenicol, 2 gm daily. After initial culture results became known, chloramphenicol was discontinued and the patient was maintained on penicillin. Repeat blood and CSF cultures obtained on the first hospital day were sterile.

There was progressive improvement in mental status and by the sixth hospital day a satisfactory level of gas exchange permitted extubation. Penicillin was continued for a total of three weeks and the patient was discharged in excellent condition. She remained well at a clinic visit two months later.

An immunologic screen included normal serum concentrations of immunoglobulins, antibody titers to diphtheria and tetanus, and third and fourth complement components. Serum hemolytic complement activity was also normal. Positive skin tests were obtained from mumps and streptokinase-streptodornase antigens.

Comment

Listeria monocytogenes is a facultative, gram-positive rod that is ubiquitous in nature and found in many animal species.[4] Meningitis, the most common manifestation of *Listeria* infection in humans, is associated with increased mortality in patients with septicemia or underlying debilitating illnesses. Case fatality rates of 62% and 32%, respectively, have been noted in two large series of *Listeria* meningitis.[1,5] ARDS occurs in association with severe infections, including bacterial sepsis,[2] miliary tuberculosis,[6] mycoplasmal pneumonia,[7] and Rocky Mountain spotted fever.[8]

Previous information on *Listeria* sepsis associated with ARDS is limited to the report of a young female who manifested these clinical entities along with shock and evidence of disseminated intravascular coagulation following a spontaneous abortion. Progressive respiratory failure resulted in the patient's rapid demise.

We present our patient, who had no other predisposing factor for ARDS and is apparently immunocompetent, to emphasize this clinical association and the importance of monitoring the pulmonary status of patients with *Listeria* sepsis. Appropriate antimicrobial and respiratory therapy resulted in a favorable clinical outcome.

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Little likelihood of death from jogging?

What is the risk of dying from a heart attack during a jog in the park? Quite low—at least in Rhode Island—according to a report in the May 14 *Journal of the American Medical Association.*

Although the study by four Rhode Island physicians adds to the growing body of evidence implicating exercise as a risk factor in sudden death from coronary heart disease, the authors indicate that the absolute risk of death while running is small. A total of 12 men died while running or jogging in Rhode Island between 1975 and 1981.

Paul D. Thompson, M.D., assistant professor of medicine, Brown University Program-in-Medicine, Providence, who headed the research team, estimated the death rate at only one per 7,620 middle-aged joggers annually during the six-year study period. This rate is at least four times greater than the estimated incidence of death due to chance alone during exercise.

Even so, the actual number of deaths is so low that Thompson and his colleagues recommend ending the use of exercise testing as a screening procedure to identify apparently healthy people who might be at risk for exercise-related death. Although exercise testing has been widely recommended for middle-aged adults who want to begin an exercise program, from 2,000 to 13,000 tests would have to be done in order to identify one potential victim, the authors claim.

In an accompanying editorial, Richard J. Jones, M.D., director of the AMA's Division of Scientific Policy, hesitates about accepting their recommendation because certain limitations in the study make its findings still inconclusive. Further, Jones added in a separate interview, "an exercise test is not the only way to detect hidden heart disease. This can be done in the doctor's office with a thorough medical history and physical examination."

"A visit to the doctor is still a must for any middle-aged individual thinking of starting strenuous exercise, especially one who's avoided regular exercise in the past," Jones advises.

Occult Undescended Testis

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Impalpable undescended testes are a commonly encountered clinical problem, representing as much as 20% of the entire cryptorchid population.[1] Surgical exploration for impalpable testes usually involves an inguinal and retroperitoneal search, but intraperitoneal exploration is omitted by some surgeons.

Four recent cases have been encountered in which patients with impalpable testes underwent previous surgical exploration and no testis was found, yet proper criteria for documenting testicular absence were not met. At subsequent reexploration, in each case, a testis was found and was successfully brought into the scrotum.

Case Reports

Case No. 1. A 4-year-old boy presented with a right impalpable testis. Exploration within the inguinal canal revealed it to be devoid of any testis or spermatic cord structures. The internal ring and retroperitoneum were not explored, and the peritoneum was not opened.

Nine and one-half years later, the patient requested a testicular prosthesis. The old incision was reopened, and the peritoneal cavity was explored. A right testis was present and was brought into the scrotum utilizing the Fowler/Stephens technique of orchiopexy by testicular vessel transection.[2]

Case No. 2. This patient presented with bilateral impalpable testes at the age of 4 years. He was initially treated with HCG therapy without any testicular descent being noted. A right-sided exploration failed to reveal testes or spermatic cord structures within the inguinal canal. The internal ring was opened, and the retroperitoneum was explored locally and up the lower pole of the kidney. No testis was found. Six years later, the patient presented with intermittent swelling and pain in the right groin. The right testis could now be palpated at the pubic tubercle, along with an inguinal hernia sac. Right inguinal hernia repair and orchiopexy were performed. The left side was explored and an intraabdominal testis was isolated and brought into the scrotum, utilizing standard orchiopexy techniques.

Case No. 3. At the age of 4 years, this patient presented with an impalpable left testis. Upon opening the inguinal canal, a structure resembling a mini-spermatic cord and vas deferens was noted and excised. Subsequent pathologic examination revealed fibroadipose tissue. No vas or testicular tissue was identified. Three and one-half years later, the child was seen because the right testis, initially palpable, became impalpable. Surgical exploration of the right side revealed the testis to be at the level of the pubic tubercle and orchiopexy was done. The left side was reexplored due to a lack of documentation of a testis or spermatic cord structures at the previous surgery. The old incision was reopened and extended. On opening the peritoneum, a testicle was identified in an intraabdominal position just within the internal ring. Orchiopexy by testicular vessel transection technique was accomplished successfully.

Case No. 4. A 41-year-old male initially presented with bilateral impalpable testes and a left inguinal hernia. Exploration of the left inguinal canal revealed a blind-ending spermatic cord, which was excised and confirmed histologically as showing vessels and epididymal tissue but no testicular tissue. Extensive search of the right side for a testis, extending from the scrotum to the renal hilus, was done retroperitoneally and failed to reveal a testis, vas deferens, or any structure resembling a mini-spermatic cord. The peritoneum was not opened. Bilateral absent testes were clinically diagnosed.

At age 51, the patient was reassessed medically due to a lack of complete eunuchoid features. His serum testosterone level was 54 ng/dL. A retained testis was suspected. He underwent complete endocrinologic evaluation, which revealed functioning testicular tissue.[3] Bilateral gonadal venography revealed an atrophic left gonadal vein ending blindly at the level of the L-5 vertebral body. On the right, a gonadal vein and pampiniform plexus were demonstrated extending down toward the scrotum. The testis remained clinically impalpable at this time. At surgical reexploration, a right atrophic (5-ml volume) testis was noted at the neck of the scrotum and right orchiectomy was done. The left inguinal canal and internal inguinal ring were reexplored, and the previously biopsied structure was excised. Bilateral testicular prostheses were placed. Pathologic examination of the right testis revealed it to be atrophic without spermatogenesis. No tumor was noted. Postoperatively, the patient's plasma FSH and LH become elevated, as was expected and as is seen in anorchic individuals.[4]

Comment

Unique management problems are posed by the impalpable testis. What criteria must be fulfilled to say whether these testes are present or absent? If present, how are these impalpable testes best treated? Specific criteria must be followed to prevent management errors and optimize care of the patient with this problem.

The importance of these questions are obvious. Current optimal management of the undescended testis includes placement of the testis within the scrotum after the first year of life if spontaneous descent has not occurred by then, since histologic and functional deterioration begins at that time.[5] Furthermore, the retained impalpable testis has a high proclivity for malignant degeneration, its occurrence seemingly directly proportional to the length of time spent in an extrascrotal position.

The clinical finding of an impalpable testis raises the question as to whether the testis is absent or not. Yet, statistically, in 80% of cases it has been shown that the testis will be present at exploration.[1] Though many different radiologic imaging techniques have been attempted in order to localize impalpable testes, their diagnostic accuracy remains far less than the 100% needed for evaluating this condition. Surgical exploration, therefore, is necessary in all cases in which an impalpable testis exists.

Surgical treatment of impalpable testes can be both difficult and confusing if not based on an orderly, progressive, surgical exploration. In children, an inguinal skin-crease incision is generally adequate to allow for satisfactory exposure. This approach will detect the 80% of impalpable testes that are present. If the testis or spermatic cord structures are not found within the inguinal canal, a thorough exploration within the region of the internal inguinal ring and retroperitoneum is indicated. Most impalpable testes will be found in this area. Though the testis is a retroperitoneal organ, it is often best visualized from an intraperitoneal location. Therefore, when a testis is not found in an intracanalicular or retroperitoneal location, it is mandatory that the peritoneum be opened and that a thorough "intraperitoneal" search take place. This can satisfactorily be done in children through the confines of the original inguinal incision.

These explorations will localize and identify a testis 80% of the time when a testis is clinically impalpable. In the remaining 20% of cases, the testis will be absent. The surgical criteria for establishing absence of the testis are well defined. Blind-ending spermatic vessels constitute the sine qua non of testicular absence. No cases have been recorded to date in which a testis was found after blind-ending spermatic vessels were identified. Therefore, the finding of a blind-ending tuft of spermatic vessels is a signal to terminate the exploration. A blind-ending vas or epididymis, found in approximately 11% of explorations, does not exclude complete separation of the vas or epididymis from a retained intraabdominal testis. Therefore, the finding of a blind-ending vas alone mandates further exploration, tracing the vas proximally towards its origin and opening the peritoneum to search for an intraabdominal testis. Several cases of complete vas separation with an intraabdominal testis present are on record.

It is important to emphasize that the findings within the inguinal canal are occasionally misleading and, therefore, a thorough exploration within the region of the internal ring is necessary, even when it appears that an atrophic testis has been located. A structure resembling a mini-spermatic cord may suggest the presence of an inguinal or scrotal testis, when the testis actually is within the abdomen. If no testis or definite blind-ending spermatic vessels are found, the peritoneum should be opened after extending the incision superolaterally through the conjoined tendon and also incising the transversalis fascia. The findings of no vas or vessels in the inguinal canal or retroperitoneum similarly mandates intraperitoneal exploration, since the testis may be enveloped in the posterior peritoneum, which makes it difficult to find by extraperitoneal dissection alone.

Summary

Four patients with clinically impalpable testes were found to have retained testes present after previous surgical exploration had led to a diagnosis of testicular absence. Lack of an intraperitoneal search and misinterpretation of groin structures thought to represent an atrophic spermatic cord were common diagnostic errors in the initial surgical exploration.

Since 80% of patients with impalpable testes will be found to have a testis present at surgical exploration, before monorchia or anorchia can be diagnosed, a carefully planned exploration is necessary in which strict attention is paid to established criteria for testicular absence.

The findings of an unsuspected retained testis in these four patients after an initial surgical determination that the testis was absent raises the spectre of many other similar patients with retained impalpable testes after previous negative explorations. Such testes are subject to continued functional deterioration and increased risk of malignancy. Adherence to the principles outlined herein should prevent future similar cases from arising because of incomplete surgical exploration.

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Infant walkers can be hazardous

Special seats for children riding in automobiles and toxic substances left where children can get hold of them have been well publicized in articles directed at safeguarding the welfare of children. Now comes another hazard for youngsters: the infant walker.

According to two pediatricians writing in the March issue of the *American Journal of Diseases of Children*, not only is there no proven benefit from the use of walkers, but also these seats on wheels can actually be dangerous.

In their survey of parents of 150 children between the ages of five and fifteen months — all users of infant walkers — Carol A. Kavanagh, M.D., and Leonard Banco, M.D., found that 47 children suffered mishaps in their walkers. Most had bruises and abrasions, but some had serious head injuries when the walkers either tipped over or fell down stairs.

Kavanagh, who is with the Joseph C. Wilson Health Center in Rochester, N.Y., and Banco, who is with Hartford Hospital in Connecticut, admit that their study lacked a control group who did not use walkers for comparison. Nevertheless they conclude in their report that infant walkers are associated with a significant risk of injury, at least with their present design.

Infants, they said, certainly learn to walk without the practice they get in an infant walker; and they cite a study done elsewhere which found that infants who did not use walkers were walking slightly earlier than their siblings.

Medicine and Music

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Medicine is a possessive mistress. There are few members of society whose work makes their intimacy with what has been exquisitely termed "the sad music of humanity." The physician strives for the beautiful, motivated by that admirable feeling termed virtue. Even the ages destroy not a man's virtue as they destroy not his evils.

As civilization began to extend through the world and the minds of men became enlarged from the contemplation of the works of nature, the sciences and arts were cultivated by civilization.

The basis of all things, animate and inanimate, follows definite laws of nature. Such laws are as certain as time itself and will prevail long after the sun grows cold. All such laws are mathematically rational and precise.

Albert Einstein brought order out of chaos in the universe and the fundamental fact that matter is related to energy in a precise way. Furthermore, as far as is known, the total mass and energy of the universe never change; they are only shuffled about, even minimally by man, and not much at that. This finally and resolutely applies to all that we are and all that we do.

Other equiponderance of the products of creation are the mathematical patterns as the increase of the blastomeres by exponential division. Another is Newland's hypothesis (Law of the Octaves) of the chemical periodic system.' All molecular elements show a repetition of properties by octaves or each successive eighth element. Sound demonstrates such similar phenomenon.

Sound and its music is a phenomenon fashioned by a system of octaves based on mathematical fundamentals. To the listening ear, music may be likened to a psychical storm. It reaches the fathomless depths of the past within us.

Although no exact figures are available, there seems to be far more than a coincidence between the comparatively large numbers of those interested in medicine as well as in music. Additionally, music and medicine have a great commonality in that they both apply the communication of meaning.

Music and medicine have come a long way from their primitive stages. They both share joy and sorrow, tension and release, the feelings of sickness and health, and even those of life and death. Both have shared thousands of years of human experiences as well as man's existence and his place in nature and society.

Music holds a reverent place in the tradition of both high and primitive civilizations. It occupied a central place in the mythology and religious system of the ancients. Similarly so for the Pythagorean philosophers of Greece, the Australian aborigines, the African tribes, and even the ancient Vedic rites of India. Sound was considered to be one of the primeval forces of creation—the voice of the priest, the beat of a drum—and it provided that talisman to bring order out of chaos.

Pythagoras of Crotona was a philosopher of Greek antiquity. His birth was considered an attribution similar to that of Christ. He was known as "the son of God" and was supposed by the multitudes to be under the influence of a divine inspiration. He lived for almost 100 years between 600 and 590 B.C.

Although the early Chinese, Hindus, Persians, Egyptians, Israelites, and Greeks employed both vocal and instrumental music in their religious and social ceremonials as well as to complement their poetry and drama, it remained for Pythagoras to explain the science and mathematical basis of music.

Pythagoras noted variances in pitch between sounds made by large hammers dropped on anvils and discords resulting from the combinations of these sounds. He thereby gained the first clue to the musical intervals of the diatonic scale. To prove his observation, he constructed an arm of wood, extended from a wall. At regular intervals along this arm he attached four cords, all of like composition, size, and weight. To the first of these he attached a 12-pound weight, to the second a nine-pound weight, to the third an eight-pound weight, and to the fourth a six-pound weight.

Additionally, the Pythagoreans reasoned that harmony must be explained, not by the sound perceptions, but by mathematical reasoning. Recognizing the profound effect of music on the senses and emotions, Pythagoras did not hesitate to influence the mind and body with what he termed "musical medicine."[1]

In the evolutionary process of medicine, there exists a duality of interests and purposes in many physicians. The number of physicians who are accomplished musicians, musical composers, medical artists, physiologists, and poets, among others, give color to Huxley's claim that "medicine has been the foster mother of all sciences." That St. Luke, Copernicus, Clemençeau, Schweitzer, and, more contemporarily, Alexander Porfirivich Borodin, among others, were all musicians as well as physicians lends credence.[2]

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The essentially mathematical nature of music was discoursed on by the great mathematician Sylvester.[3] He expounded that the men of medicine who excelled in mathematics and music have mainly been physiologists. This may be explained by the fact that experimental physiology is in itself an analytic science, turning in the first instance on one's ability to count and measure, while diagnosis and general bedside reasoning are intellectually synthetic.

Helmholtz[4] stated "to connect the boundaries of the two sciences, which although drawn towards each other by natural affinities, have hitherto remained practically distant—I mean the boundaries of physical and physiologic acoustics on the one side, and of musical science and esthetics on the other."

Early in the history of western music, various instruments, particularly the strings, were used to support vocal music. Gradually, from the individuality of musical instruments emerged a specific instrumental idiom. Music evolved from churches to noble residences, to concert halls, and thence to the streets. Mechanisms, sounds, and the dynamic ranges became essential. Most of this was done by "experimental intuition." This is particularly true of Antonio Stradivari and Giuseppe Guarneri, who made instruments whose quality has scarcely been excelled.[5]

FIGURE 1. Alexander Porfirivich Borodin, M.D.

Borodin

Alexander Porfirivich Borodin was born in 1833 at an opportune time and place (Fig 1). This was commensurate with the liberal reforms of Tsar Alexander II (1855–1881). Previously the retarded development of Russian music was due to the whole feudal Russian state in which the great bulk of the population had little to say in art development entirely controlled by the upper classes. Until the 19th century, Russia had no symphonic music of her own to speak of—that is, in comparison with the western European countries. She had no rival, however, in the abundance of her folk songs.

Mikhail Ivanovich Glinka, who was a trained musician, was the first to realize the immense potentialities of this store of musical wealth. Glinka gathered four other young men who, with him, were to become "The Mighty Five."[6] None of the latter four had had any serious musical education. Moussorgsky was an army officer, Evi a military engineer, Nikolai Rimsky-Korsakoff a naval officer, and Borodin a physician and chemist. Never in the history of music has so much been accomplished by a handful of amateurs with so little background.

To Borodin, art and science were inseparable throughout his life. His mother had him tutored in French, German, and music and gave him every educational advantage. At the age of nine, he composed a polka entitled *Helene.* At the age of 12 he received lessons on the flute and cello. At this early period he wrote a concerto for flute with piano accompaniment and also a string trio for two violins and cello.

During his adolescent years Borodin became fascinated with the study of chemistry. These boyhood leanings toward music and science later developed into absorbing interests. At the beginning of the 1850s, when Borodin was 16 or 17 years of age, a new era in higher education was evolving in which the study of science was beginning to be emphasized in the university curricula. Borodin entered St. Petersburg Academy in 1850 and studied chemistry. He was brilliant; the only criticism offered by his examiners pertained to his habits of quoting the scriptures too often.

After completing his medical studies, he obtained an internship at the military hospital in St. Petersburg. Shortly thereafter, he went to Heidelberg to work in Erlenmeyer's laboratory. During his three years there, he did research in organic chemistry. During his first years as a graduate student, he made contributions which led to the clarification of the molecular structure of benzidine, hydrobenzamide, and benzanilide. Much of the time spent on his traveling fellowship was devoted to a study of organic

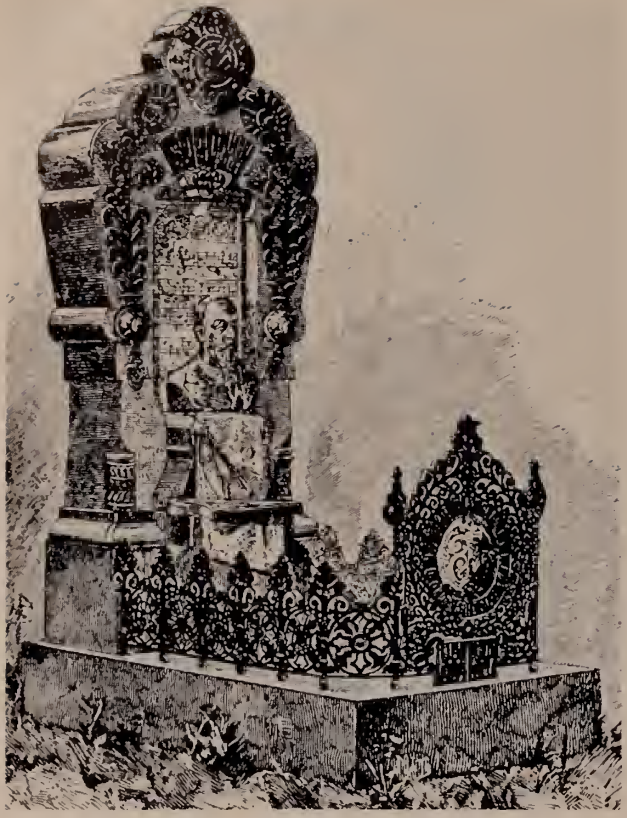

FIGURE 2. Tombstone of Borodin in the Alexander Nevsky Cemetery.

halogens, especially fluorides. He was the first chemist to prepare benzoyl chloride, and he studied the rather violent action of zinc ethyl on chloriodoform. He published a small handbook dealing with the simple methods for urinalysis known at the time. He also developed a rather primitive azotometer to measure urea and nitrogen in body tissues designed as a contribution to the study of protein metabolism, a subject then in its infancy.[7] Borodin was appointed as associate professor of physiologic chemistry and professor of chemistry in the school of forestry in 1862 at the St. Petersburg Academy of Medicine.

The musical compositions of Borodin's life are comparatively extensive. The *Symphony No. 1* in E flat was finished in 1867. He began work on the opera *Prince Igor* in 1869–1870, laid it aside for a few years, then worked on it intermittently from 1874 to his death in 1887, leaving it unfinished; we know it today in the version completed by Rimsky-Korsakoff and Aleksandr Glazunov; it was first performed in 1890. During the years of 1869 to 1873, when he had laid *Prince Igor* aside, Borodin did most of the work on his *Symphony No. 2 in B minor*, finally completing it in 1876. The *String Quartet No. 1 in A minor* was composed at intervals between 1874 and 1879 and the tone poem "In the Steppes of Central Asia" in 1880, and the *String Quartet No. 2 in D major* in 1881. Two movements of the *Symphony No. 3* were composed in 1886–1887; they were in rough form when Borodin died, and Glazunov finished the scoring. Between 1867 and 1885 Borodin wrote a dozen songs, some of the most beautiful in the Russian literature.

Another aspect, and particularly contemporarily so, was Borodin's interest in medical education for women. Borodin, Professor Roudness, and Mme. Tarnovsky founded the Women's Medical College of St. Petersburg in 1827. Borodin assumed the duties of professor of chemistry and treasurer. He was deeply committed to the cause of medical education for women at a time when it was almost unheard of in western Europe. Although women's medical education later faltered under Alexander III (1881–1894), in the long run the course of history was on Borodin's side. After the 1917 Revolution this trend was reversed and today the U.S.S.R. has the highest proportion of women among its medical graduates of any major country in the world.

In 1936, R. P. La Combe, M.D., in his doctorate thesis "Le Cas de Borodine," undertook a psychohistorical analysis of the life of Borodin.[8] He concluded that Borodin chose the most and best of both worlds of music and medicine to satisfy his emotional needs.

Borodin died in 1887 and was buried in the Alexander Nevsky Monastery. In death, his place lies with the arts and not the sciences.

In 1889 Borodin's friends erected an elaborate tombstone. The design consisted of a bust of Borodin, embellished with inscriptions of the structure of organic compounds which he had studied and of the main themes of some of his musical compositions (Fig 2).[9]

"The poets did well to conjoin music and medicine in Apollo: because the office of medicine is but to tune this curious harp of man's body and to reduce it to harmony."[10]

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Nicholas Culpeper, M.D. (1616 to 1654)

Medical maverick in seventeenth-century England

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Nicholas Culpeper, M.D., lived in the first half of the seventeenth century. His achievements in translating medical tomes into English, his pursuit of medical care for indigent ill, and his nonconformist behavior within the medical establishment and social structure of seventeenth-century England form the substance of this essay.

At the beginning of the century bourgeois capitalism emerged from crumbling feudalism in England. Medical care for the impoverished was provided by the parishes, which under the Elizabethan Poor Law of 1601 were responsible.[1] Culpeper incurred the wrath of the elite College of Physicians when he declared that medical care for ill and needy persons is the responsibility of physicians.[2]

Humanitarian

Culpeper's sympathy for the plight of the poor was nourished not by religion, the stimulus for good works to attain redemption, but by genuine humanitarianism.[3,4] The social disparity in medical care was evident to Culpeper. He saw the indigent deprived of the benefits of health, man's most valuable asset, unable to pay either for the physician's services or the apothecary's drugs.[5]

Medicine in the seventeenth century, although notable for its advances, was still governed by ancient tradition. Pulse craft was exalted, etiology of disease was regarded as alterations in the humors, as elaborated by Hippocrates and Galen, astrology was given credence, and uroscopy was an extensively practiced delusion until kidney pathology was described by Richard Bright (1789 to 1858). Materia medica included the lancet and a polypharmacy of bizarre and costly items (human and animal parts and excreta, powdered gems, and bezoar).

Physician attitude

Physicians in seventeenth-century England were aloof, wigged, richly dressed, carried a cane, and rode to their patients in a carriage preceded, not infrequently, by a servant who walked or trotted in front of the horses. At the same time there were many "uncunning and unapproved" persons who practiced medicine and generated chaos.[6]

Culpeper censured and severely abused physicians for neglect of the indigent ill. He mocked the pomposity and foppery that deterred them from touching the ill with their hands. He described physicians as "ignorant and avaricious retailers of medicine" who benefit from those whose fortunes are ample; he denounced them for making patients "dupes of the secrets of trade," and charged them with prolonging an illness by excessive or improper use of drugs for the purpose of fees and apothecary's bills, a danger to which the poor were not exposed "due to the unfeeling inattention of physicians." He accused them of deference to art for their knowledge, selling secret remedies for profit, and in epidemics abandoning patients and fleeing the city. Since the fee was 10 shillings, an angel, he gibed: "Physicians of the present day are like Balaam's ass, they will not speak until they see an angel." [2,7]

Humanitarian practice

Culpeper gave money to the needy and treated their ailments gratis.[4]

In his practice, he followed Hippocratic-Galenic theories and therapy, the common practice of his time; only occasionally did he venture to prescribe chemical drugs in the manner advised by Paracelsus (1493 to 1541).[8] He believed in the influence of the planets and that emanations of heat, light, and occult power from the stars determined effectiveness of plants.[2,8]

To assure better health and medical care for the poor, he embarked on a unique and startling program for England in his time.

Education of indigent

Culpeper was the first to write tracts to instruct the poor on how to cure themselves in illness with "the natural remedies found in the vegetable world provided by the Creator." [2,3,5] Culpeper's *Herbal* listed human diseases and herbs for their cure, instructions on how to use the book, how to compound medications, and astrologic tables. It was a pioneer text in the "do it yourself" book trade.

Culpeper's *Herbal* was one of three herbal authorities brought to the colonies by pioneer women who found them useful for "meate and medicine." Ingredients for nostrums came from their gardens and were concocted in their kitchens.[3,5,9–11]

Medical publications

The London Dispensatory, Culpeper's English translation of the *Pharmacopoeia Londinensis*, appeared in 1649.[2,12] At a time when methods of cure were still haphazard and far from successful, the book was an exceedingly popular and useful guide for the indigent ill. It defined medical terms; herbs and plants were juxtaposed to astral bodies; and herbs suitable for different ailments were listed in various forms as waters, conserves, syrups, pills, electuaries, and troches.[7] He ridiculed the vile and repulsive medicines in the pharmacopoeia (91 animal substances were incorporated), which eventually were weeded out by William Heberden (1710 to 1801). In his 1653 edition, Culpeper wrote, "Papists and the College of Physicians will not suffer Divinity and Physic to be printed in our mother tongue." [5]

This infuriated the College of Physicians because it interfered with fees and exposed secret remedies. They responded with lacerating abuse through a journalist who described Culpeper as "frowsy-headed coxcomb who gallimawfried the Apothecaries book into nonsense." [2,13] It is of interest that a similiar reaction from French physicians was experienced by Laurent Joubert (1529 to 1583) when he published in 1578 "Erreurs populaire au fait de la medécine et régime santé" for the public to maintain and restore health.[14]

The English Physician combined with the *Dispensatory* (1652) was the first medical book reprinted (1708) in the American colonies where presses were reserved for religious literature.[7,9] It preceded the earliest American pharmacopoeias—the *Lititz* (1778), and the *Edinburgh New Dispensatory*, Philadelphia, 1791.[15]

Pediatric contributions

Many health hazards were common in children in Culpeper's time; of his own seven children only one survived. Culpeper made a significant contribution to pediatrics. His *Directory for Midwives* incorporated a 39-page treatise "Cure of Infants," which expressed his concern for children and provided the first description of laryngeal spasm, simple medications, and warm, sensible advise to mothers.[16,17] He charged that when "people are sick and have herbs in their gardens conducive to the cure . . . they know not their virtues due to the covetousness of doctors." He promised to lay down rules "whereby a man may prevent a sickness and a remedy when it comes." [17]

Culpeper, who was 38 years of age when he died, spent the last 10 years of his life frequently bedridden with pulmonary tuberculosis. Nonetheless, he popularized medical knowledge in 79 published books, many of which appeared after his death. His translations from Latin constituted a complete library of medicine that, for the first time, made available to the English physician the best medical literature in his own language. They included, among many other authors, Thomas Bartholin, Francis Glisson, Jean Fernel, and several Paracelsians for their "usefulness for young practitioners of physic and alchemy." The translations were sparked with proverbs and comments.[2] Culpeper[12] advised those who intend to "study physic without turning fool or knave to be skilled in our books presented in English";[12] and the physician should lay the foundations of his work "in the cottages of poor men." [4]

Comment

Few medical historians have treated Culpeper with the justice due him; they have either ignored him or repeated slanderous attacks.[9] It is chiefly due to the bibliographic research by Harvey Cushing, John Fulton, and F. W. L. Poynter that the writings of Culpeper and the purpose of his life are better understood. It is Poynter's opinion that in the history of medicine in the seventeenth century Culpeper is an important figure and that he had a far greater influence on medical practice between 1650 to 1750 than did either William Harvey (1578 to 1657) or Thomas Sydenham (1624 to 1689).[2,8]

In the active pursuit of medical care for the indigent ill, Culpeper was a lone contender on their behalf at a time when trained physicians were few and England was negligent in its social responsibilities to increasing numbers of poor. Culpeper took seriously the function of a physician, which he carried out dutifully and with ardent advocacy on behalf of the needy with the skills he possessed.

Culpeper died January 10, 1654, and lies buried in the new churchyard of Bethlehem. Like Xavier Bichat (1771 to 1801), he crowded much, both bad and good, into his short life.

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The sweet and sour tastes of life

A widely held belief that our sensitivity to taste diminishes markedly with age has been challenged by investigators at the National Institutes of Health, according to the latest research findings reported in *The Journal of the American Medical Association* this week.

New studies conducted by investigators at the National Institute of Aging (NIA) and the National Institute of Dental Research (NIDR) have revealed that age produces only a modest decrease in taste sensitivity and that it does not equally affect the four basic taste qualities.

Earlier studies, which determined that taste declines sharply with age were found to be flawed by the failure to control for possible age-related variations in willingness to report a taste experience and by the failure to control for possible age-related salivary changes.

In the latest study on taste thresholds, the researchers found that the decreases in taste acuity that occur with aging are small, though clearly measurable for salty and bitter tastes. But they found no change in the sensitivity to sweet and sour tastes, contrary to what has been believed.

The study subjects — 81 men and women between 23 and 88 years of age — were participants in the NIA's Baltimore Longitudinal Study of Aging, an ongoing study of more than 800 healthy people who are tested periodically for biomedical and sociobehavioral changes as they age.

Because the taste of foods and beverages are complex mixtures, it was speculated that the loss of taste sensitivity that does occur with aging could distort rather than simply diminish perceptions of the pleasantness and edibility of food.

Drug Information*

Questions and Answers

Do you have information on cyproheptadine as an appetite stimulant?

Cyproheptadine (available as Periactin, Merck Sharp and Dohme) is an antihistamine with antiserotonergic properties used in allergic disorders. Prior to 1971, MSD promoted cyproheptadine for the stimulation of appetite in children aged 2 to 14 years. Subsequently the FDA questioned adequacy of evidence for this effect and as a result, MSD removed this indication for cyproheptadine and does not plan to reinstitute it at the present time, according to a letter (July 27, 1981) from J. J. Whalen, M.D., Director of Professional Information.

Lavenstein et al[1] in 1962 were the first investigators to show that cyproheptadine increased weight gain in chronic asthmatic children.

Bergen,[2] in a 15-week study, compared appetite-stimulating properties of cyproheptadine, 4 mg four times a day, with placebo in a group of 12 asthmatic children. The cyproheptadine-treated group demonstrated significant increases in appetite, food intake, and weight gain. Termination of therapy was followed by decrease in appetite and rate of weight gain, or by an actual weight loss.

Aikman,[3] in a 12-day multicenter double-blind trial, compared cyproheptadine to placebo in 89 adults and 41 children who were underweight and exhibited anorexia. Cyproheptadine-treated adult patients had a significant increase in appetite followed by a significant increase in weight gain. There were no significant differences between active agent and placebo in the children.

Goldberg et al[4] conducted a randomized placebo controlled, double-blind study involving 81 adult female patients diagnosed as having anorexia nervosa. The investigators reported that cyproheptadine was effective in inducing weight gain, especially in a subgroup of anorexia nervosa patients with history of birth-delivery complications and prior outpatient treatment failure.

Other investigators[5–8] have reported significant weight gain associated with cyproheptadine therapy.

Adverse effects associated with cyproheptadine therapy in the studies reviewed were not serious and included drowsiness and lethargy.[1–8]

In conclusion, although the proposed mechanism for this effect has not been clearly elucidated, cyproheptadine appears to cause an increase in weight gain in certain patients, at least on a short-term basis.

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Please comment on the significance of the purity of the newly released insulin preparations.

Commercially available insulins differ widely with regard to duration of action, source of origin, purity, and cost (the Table highlights these differences). The introduction of several new highly "purified" insulin preparations (Lilly, Nordisk, Novo, Squibb), defined by the FDA as having a proinsulin content not exceeding 10 PPM[1] may cause some confusion concerning the clinical significance of purity. Insulin's "purity" is based solely on proinsulin concentration (the biologic precursor of insulin) and may be categorized as <10 PPM, <3,000 PPM, and 10,000–50,000 PPM. However there are many other impurities in insulins besides proinsulin, such as somotostatin, glucagon, arginine insulins, pancreatic polypeptide, esterified and monodesamido insulins, that are not accounted for in the rating.[2]

The rationale for decreasing the proinsulin concentration is to reduce antigenicity which has been implicated in insulin resistance, allergic reactions, and lipodystrophy.[3] The clinical significance of antigenic differences of commercial insulins has not been clearly established. The new highly "purified" insulins are less antigenic than the older products, but lessened antibody formation does not appear to decrease either the incidence or severity of insulin resistance nor does it affect the clinical course of insulin allergy.[2,4,5] In addition, insulin itself, as well as the contaminant products, has been shown to be antigenic.[4]

One advantage of the highly "purified" insulins is their possible benefit to patients with lipodystrophy at injection sites since these complications have not yet been reported in conjunction with these newer products.[2]

In conclusion, the increased cost of the new highly purified insulins may not be justified for patients who are adequately controlled with conventional insulins.

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* This "Questions and Answers" column is compiled by the International Pharmaceutic Drug Information Center (IDIC) affiliated with the Arnold and Marie Schwartz College of Pharmacy and Health Sciences of Long Island University, 81 DeKalb Avenue, Brooklyn, NY 11201. The Director is Jack M. Rosenberg, Pharm.D., Ph.D., Associate Professor, Clinical Pharmacy. The Consultant is Walter A. Modell, M.D., Emeritus Professor of Pharmacology, Cornell University Medical College. The Center is available from Monday through Friday from 9:00 AM to 5:00 PM. For quick response to your questions, call (212) 403-1064.

Comparison of Some Insulin Products

Product	Source	Insulin (PPM)	Onset of Action (hours)*	Duration of Action (hours)	$ Cost (10 mL vial)†	Strengths
Rapid acting						
Actrapid–Novo	Pork	≤1	½	8	11.40	U-100
Iletin II–Lilly	Pork	<10	½–1	5–7	9.60	U-100–U-500
Velsulin–Nordisk	Pork	≤1	½	8	8.40	U-100
Mixtard (30% reg, 70% NPH)–Nordisk	Pork	≤1	½	24	8.40	U-100
Purified insulin–Squibb	Pork	<10	½	6	9.24	U-100
Iletin II–Lilly	Beef	<10	½–1	5–7	5.99	U-100
Iletin I–Lilly	Beef-pork	<3,000	½–1	5–7	5.03	U-40, U-100
Insulin Zinc Suspension–Squibb	Beef-pork	No	½–1	6	4.32	U-40, U-100
Semitard (semilente)–Novo	Pork	≤1	1½	16	11.40	U-100
Iletin 1 (semilente)–Lilly	Beef-pork	<3,000	1–3	12–16	5.38	U-40, U-100
Insulin (semilente)–Squibb	Beef-pork	10,000–50,000	½–1	12–16	4.97	U-40, U-100
Intermediate acting globin						
Insulin NPH–Squibb	Beef-pork	10,000–50,000	2	24	6.07	U-40, U-100
Insulatard–Nordisk	Pork	≤1	1½	24	8.40	U-100
Insulin–Squibb	Beef-pork	10,000–50,000	1–1½	24	4.97	U-40, U-100
Purified Insulin Zinc Suspension–Squibb	Beef	<10	1–1½	24	7.34	U-100
Monotard (lente)–Novo	Pork	≤1	1½	22	11.40	U-100
Lentard (lente)–Novo	Beef-pork	≤1	2½	24	11.40	U-100
Iletin II (lente)–Lilly	Pork	<10	1–3	24–28	9.60	U-100
Iletin II (lente)–Lilly	Beef	<10	1–3	24–28	5.99	U-100
Iletin I (lente)–Lilly	Beef-pork	<3,000	1–3	24–28	5.38	U-40, U-100
Insulin (lente)–Squibb	Beef	10,000–50,000	1–3	24–28	4.97	U-40, U-100
Purified Insulin (lente)–Squibb	Beef	<10	1–3	24–28	7.34	U-100
Long acting						
Ultratard (ultralente)–Novo	Beef	≤1	4–6	36	11.40	U-100
Iletin II (PZI)–Lilly	Pork	<10	4–6	36+	9.60	U-100
Iletin II (PZI)–Lilly	Beef	<10	4–6	36+	5.99	U-100
Iletin I (ultralente)–Lilly	Beef-pork	<3,000	4–6	36+	5.48	U-40, U-100
Insulin (ultralente)–Squibb	Beef	10,000–50,000	4–8	36+	4.97	U-100
Insulin (PZI)–Squibb	Beef-pork	10,000–50,000	4–8	36+	4.97	U-100

* Onset and duration can vary widely with different doses and different patients.

† Cost to the pharmacist for a 10-mL vial.

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A CONTEMPORARY APPROACH TOWARD HEALTHFUL DIETS

Part III of three views on the diet–heart issue

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An objective of public health education is to recommend a maintenance program which will improve the health of Americans. Most professionals agree that diet is an important part, but only a part, of such an overall program of preventive medicine.

The Food and Nutrition Board (FNB) of the National Academy of Sciences (NAS) has been giving such advice to the public since 1943 when it issued the first Recommended Dietary Allowances (RDA). In this publication and eight revised editions,[1] the American public was advised to follow a nutritionally adequate diet. The RDAs have been accepted by public health officials, nutrition educators and by a variety of government and federal agencies.

Elaboration of Dietary Guidelines

As part of its concern about dietary practices in the U.S., the FNB decided to review a number of dietary guidelines which were issued by health agencies, consumer advocates and various government agencies to prevent a number of chronic degenerative diseases. The principal question was whether these guidelines were based on scientific evidence of sufficient strength to justify making recommendations to the general public.

The FNB reviewed some 400 medical papers dealing with the epidemiology, clinical investigations, relevant annual studies and preventive clinical trials of 5 chronic degenerative diseases, i.e., obesity, cardiovascular disease (principally coronary heart disease), hypertension, cancer and diabetes mellitus. Its report, *Toward Healthful Diets,* was ratified unanimously by the 15-member Board and published in May, 1980. Its recommendations appear in Table I.[2]

Table I
Dietary Guidelines for Adult Americans

- Select a nutritionally adequate diet from the foods available by consuming each day appropriate servings of dairy products, meats or legumes, vegetables and fruits, and cereals and breads.
- Select as wide a variety of foods in each of the major food groups as is practicable in order to ensure a high probability of consuming adequate quantities of all essential nutrients.
- Adjust dietary energy intake and energy expenditure so as to maintain appropriate weight for height; if overweight, achieve appropriate weight reduction by decreasing total food and fat intake and by increasing physical activity.
- If the requirement for energy is low (e.g., reducing diet), reduce consumption of foods such as alcohol, sugars, fats and oils, which provide calories but few other essential nutrients.
- Use salt in moderation; adequate but safe intakes are considered to range between 3 and 8 g of sodium chloride daily.

These guidelines were supported by the American Medical Association.[3] Other groups such as the American Heart Association (AHA), consumer advocates, the Departments of Agriculture and of Health, and many journalists were quick to attack the report. The furor illustrated the emotion, politics and food mythology that has captured the thinking of many health agencies in developing their programs of preventive medicine.

Criteria for Guidelines

The FNB report considered dietary modification as only part of preventive medicine.[2] Other measures include breast-feeding, immunization, prevention of accidents, avoidance of smoking and alcohol abuse, and improved physical fitness. Assessment by health professionals of risk factors is also advised. Secondly, the FNB believes that proof of benefit should be demonstrated before recommendations are made to the public. Finally, epidemiologic data should not be the sole basis for recommending public health action. Epidemiology, which seeks to associate factors in the person or in the environment with a disease, cannot by itself prove cause and effect. Although epidemiology can establish associations between an environmental or host variable and occurrence of a disease, such proof must come from other kinds of biological experiments.

In the field of the chronic degenerative diseases, the agents of atherosclerosis, hypertension, cancer and stroke are not known at this time. Epidemiological studies of coronary artery disease have shown statistically valid associations with dietary fat, protein, sugar, cholesterol, plasma cholesterol and low density lipoprotein (LDL) cholesterol, smoking, obsessive-compulsive competitive (Type A) personality, lack of exercise, soft drinking water, family history of heart disease and the per capita usage of television. The epidemiology of hypertension has revealed associations with dietary salt, genetic predisposition, social stress, renal disease, both high and low plasma renin, and both adrenal cortical and medulary overactivity. In the southern U.S., blacks have more hypertension than whites. High-fat diets are associated with cancer of the stomach and low serum cholesterol levels are associated with increased risk of cancer in men and strokes in women.[4,5,6]

The Role of Dietary Cholesterol and Fat in Coronary Heart Disease

The data linking dietary cholesterol with cardiovascular disease are very weak. The intake of dietary cholesterol in the U.S. does not correlate with the rise in incidence of coronary heart disease (CHD) that occurred in this country between 1920 and 1963, nor with its fall from 1963 to the present time.[7] In the U.S., no correlation exists between any dietary component, including cholesterol, and risk of CHD. Furthermore, altering dietary cholesterol over a wide range has little, if any, effect on serum cholesterol in free-living populations.[8]

The FNB does not deny the importance of serum cholesterol, in particular LDL-cholesterol, as a risk factor for CHD. It also supports the view that HDL-cholesterol is a protective form of the sterol. It believes, in company with expert committees from Canada, England, Australia, New Zealand, and Norway,[9] that dietary cholesterol is *not* a risk factor for CHD.[10,11]

Table I
Serum Cholesterol Levels and the Rate of Coronary Events*

	Serum Cholesterol (mg/dl)						
	<175	175-199	200-224	225-249	250-274	275-300	>300
	Coronary events/1000/10 years						
First events	45	52	53	67	112	115	162
Sudden death	14	17	17	18	30	29	27
All CHD[1] deaths	24	28	25	24	47	45	58

* From the National Cooperative Pooling Project,[11] serum cholesterol level at entry and 10-year age-adjusted rates per 1,000 men for any major coronary event, sudden death and any coronary death Any major coronary event includes nonfatal MI[2], fatal MI, sudden death due to CHD, U S white males age 30-59 at entry All rates age adjusted by 10-year age groups to U S white male population, 1960 [1]CHD = coronary heart disease [2]MI = myocardial infarction

Table II
Grouped Incidence of Coronary Heart Disease as a Function of Hypercholesterolemia*

Group	Serum Cholesterol mg/dl	% Incidence of [a]CHD	% Incidence of CHD due to Hypercholesterolemia
I	<175	0 45	
	175-199	0 52	
	200-224	0 53	0 00
		Average 0 51	
II	225-249	0 67	[b]0 16
III	250-274	1 12	
	275-300	1 15	0 62
		Average 1 13	
IV	>300	1 61	1 10

* From the National Cooperative Pooling Project[11] [a]CHD = coronary heart disease
[b] = Group II - I

in risk with increase in serum cholesterol at all levels.

Indeed, Table II indicates a *distribution* of the incidence of CHD into four distinct serum cholesterol groups. In group I (175-224 mg/dl) which represents 40% of the male population above 35 years, the incidence of CHD is only 0.5%. Since group I cannot be considered hypercholesterolemic, it is likely that a CHA experienced by this group is not due to cholesterol. In groups II-IV (above 224 mg/dl), therefore the incidence of a CHA attributable to hypercholesterolemia can be determined by difference (Table II). These results suggest that a CHA in groups II-IV will occur in approximately 0.16%, 0.62% and 1.10%, respectively, of men above age 35. By further calculating (steps a,b,c below), using the incidence values for groups I-IV, one can estimate the total number of Americans over age 35 who will experience a CHA due to hypercholesterolemia:[17,19] (a) By extrapolation of appropriate data from the HANES Report,[18] it may be found that on an average, of all U.S. men and women above age 35, 20%, 28% and 12% fall into serum cholesterol groups II-IV, respectively. (b) From U.S. census data in 1970, there were 85 x 10^6 individuals in this age group.[19] Therefore, the total number of people that comprise each of the serum cholesterol groups II, III and IV would be 17, 24 and 10 x 10^6 individuals, respectively. (c) By multiplying these values by the percent incidence values (Table I), it is estimated that the number of first CHAs that occur annually for these serum cholesterol groups amount to 20.4, 140.2 and 103 x 10^3, respectively, or a total of 264,000 individuals. (d) The important question is how many of the 264,000 CHAs would not have occurred had all Americans above age 35 adhered to the AHA dietary recommendations? There is a dearth of experimental data but it can be conservatively estimated that not over 25% of all hypercholesterolemic persons (above 240 mg/dl) can reduce serum cholesterol to below 225 mg/dl by conscientiously following the AHA recommendations.[6,7,8,9,10,11] It then follows that of the 264,000 CHAs, approximately 66,000 CHAs may not occur if all 220 million Americans adhered to the AHA dietary recommendations. This is approximately one in every 3,300 people or 0.03% of the total population.

Admittedly, the actual values for these estimates may vary depending on the nature of the studies from which the data is gathered but even if doubled, the number is very low. On the other hand, these calculations probably overestimate the actual risk of a first CHA since serum cholesterol levels above 240 mg/dl and the incidence of a CHA is not a linear, but a curvalinear, relationship. Regardless of variation, it is likely that these estimates are reasonably accurate and thus raise some interesting points. First, does the reduction of this number of first heart attacks justify recommendations for major changes in the diet of all Americans? Second, in light of the present lack of knowledge concerning the role of diet in the genesis of atherosclerosis, is it responsible policy for health professionals, organizations, and government agencies to attempt to modify the basic dietary habits of the U.S. population? The overall negative ramifications that could result from eliminating such nutritious foods as meat, eggs and dairy products have not been adequately considered. Further, it is uncertain whether agricultural technology is currently advanced enough to make the necessary adjustments. Paternalistic dietary advice based on incomplete knowledge and misinformation, therefore, is not the "prudent" approach for all Americans.

Conclusion

The ingestion of any food constituent involves a long series of physiological and biochemical events from the point of ingestion through metabolism to the point of excretion. These events are modified by the nature and amounts of the total diet plus a large degree of biological variation between individuals. So, a single set of dietary recommendations is simplistic. Everyone is not alike and hence may not respond similarly to the same dietary recommendations.

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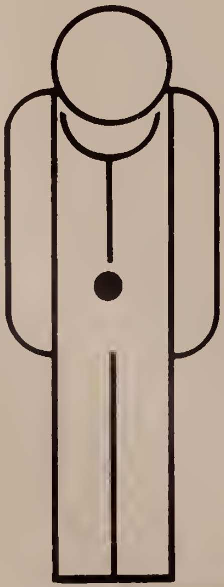

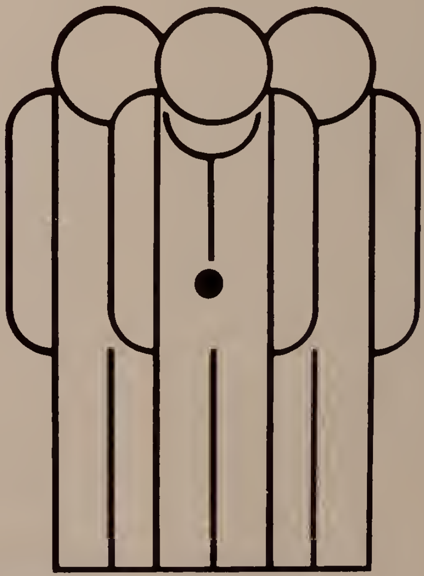

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(*continued from page 1792*)

obtained a more rapid response, a higher cure rate, a lower relapse rate, and an absence of early carrier cases with amoxicillin as compared to chloramphenicol. Our limited experience in this jungle hospital also shows amoxicillin to be superior to chloramphenicol and ampicillin in the treatment of typhoid fever (unpublished data).

While amoxicillin may initially be more expensive than chloramphenicol or ampicillin in a developing country such as Ecuador, it is cost-effective. The patient is restored to health sooner, the number of contagious carrier states is reduced, and there are fewer relapses requiring further treatment and expense. Further experience with amoxycillin may well prove it to be the drug of choice for typhoid fever.

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DIANE HAVLIR, B.A.
Duke University Medical School

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Dr. Cunha's reply

To the Editor: I would like to thank Dr. Brown and Ms. Havlir for emphasizing the importance of amoxicillin therapy in the treatment of typhoid fever.

Of course, the article was written from a *historical perspective* standpoint, and for this reason was not intended to emphasize therapy.[1] If the intent of the article had been to emphasize therapeutic modalities, then other antimicrobials that have been useful in the treatment in the typhoid fever would have included, ie, nalidixic acid/oxolinic acid, cefazolin, and furazolidone. With the exception of cefazolin, cephalosporins are inactive in vivo against *Salmonella typhi*, as is polymyxin and the aminoglycosides. Furthermore, the importance of resistant organisms in the treatment of typhoid fever would have been mentioned in a more complete discussion of the treatment of the disease.[2–6]

Although amoxicillin provides a useful alternative to chloramphenicol in developing countries, its high cost is a proper concern of Dr. Brown and Ms. Havlir. In developing countries chloramphenicol is one of the most inexpensive antibiotics. Trimethoprim-sulfamethoxazole (TMP-SMX) may be preferable to chloramphenicol and would certainly provide a more suitable cost-effective treatment for typhoid fever in the tropics than amoxicillin.[7]

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The 'history and physical' dilemma

To the Editor: I have been troubled by recent events in medicine that have relegated the once highly regarded "history" and even more pertinent "physical examination" to the medical back burner.

As a medical student and later during internship the point was constantly stressed that proper histories and physicals were the foundation of a truly sound schedule for the work-up and subsequent treatment of patients. I still firmly believe that to be true. The ability to do a proper physical examination has its foundation in the knowledge gleaned from the in depth study of anatomy, physiology, histology, and biochemistry plus training in physical diagnosis.

It seems that we have chosen to forget all about this, be it for reasons of convenience, avarice, laziness, or the pressure of governmental and/or other agencies in the name of cost control. For this oversight I indict the medical profession's abdicating its responsibility and medically shortchanging the American public.

It has always appeared to me that what placed some doctors a notch above the rest were their ability to take meticulous histories followed by thorough physical examinations on which they base their diagnosis and treatment. However if we are willing to accept as proper medical practice the assignment of a patient's history and physical to nonphysicians, then I must conclude the MDs are overeducated and that we are obligated to reorganize our system of medical education. Four years of medical school and a minimum of three years of residency are just too much training and a waste of time and money.

Don't be taken in by those who claim that patient care has not suffered by this new medical approach. Physicians must be ever mindful of the fact that the average undiagnosed and untreated case would get well without a doctor's attention though probably not as rapidly or as comfortably. Proper medical care will seek out and treat the difficult and unusual case thus saving lives and preventing unnecessary suffering.

I just cannot convince myself that the system of American medical training that has made American medicine the best in the world has now become obsolete. May I suggest that doctors sit back, take medical inventory, and reevaluate the direction American medicine is heading? We enjoy a fine medical heritage. Let us not sacrifice it on the alter of expediency.

MARTIN MARKOWITZ, M.D.
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Books Received

VETERINARY MEDICINE

Mechanisms of Disease—A Textbook of Comparative General Pathology. By David O. Slauson, D.V.M., Ph.D. and Barry J. Cooper, B.V.Sc., Ph.D. Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, 420 pages. Hardcover, $36.00.

NURSING

The Nurse's Story. By Carol Gino. New York, The Linden Press/Simon & Schuster, 1982. Hardcover, 410 pages. $14.95.

NEUROSURGERY

Head Injury. Edited by Paul R. Cooper, M.D. Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, 412 pages. Hardcover, $49.00.

RADIOLOGY

Introduction to Clinical Radiology. By Wallace T. Miller, M.D. New York, Macmillan Publishing Co., Inc., 1982. Illustrated, 291 pages. Hardcover, $24.50.

UROLOGY

Aspects of Male Infertility. Edited by Ralph deVere White, M.D. **International Perspectives in Urology.** John A. Libertino, M.D., Series Editor. Baltimore, Maryland, Williams & Wilkins, 1982. Volume 4. Illustrated, 281 pp. Hardcover, $38.00.

GASTROENTEROLOGY

Physicians' Guide to the Etiology & Treatment of Diarrhea. By Horacio Jinich, M.D. and Teodoro Hersh, M.D. Oradell, New Jersey, Medical Economics Books, 1982. Illustrated, 367 pages. Hardcover, $19.95.

LITERATURE & MEDICINE

Literature & Medicine. Edited by Kathryn Allen Rabuzzi. Albany, New York, State University of New York Press, 1982. Volume 1. Illustrated, 111 pages. Softcover. One Year Subscription $12.95.

ENDOCRINOLOGY

The Interferon System: A Review to 1982—Part I. Edited by Samuel Baron, Ferdinando Dianzani, and G. John Stanton. Austin, Texas, The University of Texas Printing Division, 1982. Softcover, 411 pages. $30 for Parts I and II.

ANESTHESIA

Common Problems in Pediatric Anesthesia. By Linda C. Stehling, M.D. Chicago, Year Book Medical Publishers, Inc., 1982. Illustrated, 361 pages. Hardcover. $35.00.

Scientific Foundations of Anaesthesia. Third edition. Edited by Cyril Scurr, CBE, MVO, FRCS, FFARCS and Stanley Feldman, BSc, MB, BS, FFARCS. Chicago, Year Book Medical Publishers, Inc., 1982. Hardcover, $74.50.

CANCER

Guidelines for a Voluntary Cancer Organization. Edited by M. A. Wood. Geneva, Switzerland, International Union Against Cancer, 1982. Volume 65. Softcover, 161 pages. $14.00.

UICC Multidisciplinary Project on Breast Cancer. Reports of the four meetings held at Leeds Castle (Kent, UK) in 1980, 1981, and 1982. Geneva, Switzerland, International Union Against Cancer, 1982. Volume 69. Softcover, 22 pages. $7.00.

Evaluation of Methods of Treatment and Diagnostic Procedures in Cancer. By T. B. Grage, G. A. Higgins, S. W. Lagakos, et al. Edited by R. Flamant and C. Fohanno. Geneva, Switzerland, International Union Against Cancer, 1982. Volume 70. Softcover, 146 pages. $12.00.

PAIN CONTROL

Journey to the End of Pain. By Bern Wheeler. London; Ontario, Canada, St. George Press, 1982. Hardcover, 119 pages. $10.95. (Distributor: Harbor Publishing, Inc., San Francisco, California).

ECONOMICS

ABCs of Investing Your Retirement Funds. Second edition. By C. Colburn Hardy. Oradell, New Jersey, Medical Economics Books, 1982. Hardcover, 241 pages. $22.50.

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* Books received for review are acknowledged promptly in this column. No other obligation is assumed for the courtesy of those sending them for this purpose. Selection for review is made on the basis of merit and reader interest.

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DRUGS

Drug Interactions Index. By Fred Lerman, M.D. and Robert T. Weibert, Pharm.D. Oradell, New Jersey, Medical Economics Books, 1982. Softcover, 290 pages. $17.50.

INFECTIOUS DISEASE

Infectious Disease for the House Officer. By James C. Allen, M.D. and Thomas R. Beam, M.D. Baltimore, Maryland, William & Wilkins, 1982. Softcover, 184 pages. $9.95.

TRAUMATIC SURGERY

Principles and Practice of Trauma Care. Edited by Melvin H. Worth, Jr., M.D. Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, 428 pages. Hardcover, $39.95.

Books Reviewed

Physicians' Guide to Oculosystemic Diseases. By William V. Delaney, Jr., M.D. Oradell, New Jersey, Medical Economics, 1982. Hardcover, 499 pages. $49.50.

This book is a compendium of years of lectures on the subject to medical students. The book is well organized, highly structured, and has good illustrations. It consists of 499 pages divided into eight chapters. The organization is largely anatomic. The strict anatomic division leads to a good deal of duplication; for instance, foreign bodies are considered in three separate chapters. The division also leads to some artificiality. Diseases of the retina and choroid are considered separately. The divisions, however, are mitigated by good cross-references and by interspersed representative bibliographic suggestions. The index is satisfactory. The book should prove to be an excellent introduction and guide to oculosystemic diseases, particularly for medical students, beginning residents, and for the medical profession at large. **Ira Snow Jones, M.D.**

(continued on page 1878)

Advances in Neurology: Neurofibromatosis (Von Recklinghausen Disease): Genetics, Cell Biology, and Biochemistry. Edited by Vincent M. Riccardi, M.D. and John J. Mulvihill, M.D. New York, Raven Press, 1981. Volume 29. Illustrated, 282 pages. Hardcover, $29.50.

This volume is based on a workshop sponsored by the National Cancer Institute. Since this disease is a disorder of cytodifferentiation of the neural crest (a neurocristopathy and because the clinical information about the disease is rather meager, the volume is mostly research-oriented. There is a clear overview of the known facts about the disease, a rather short discussion of clinical aspects, and several reports dealing with the relationship of neurofibromatosis (NF) to neoplastic diseases, especially in younger patients. There are a number of reports dealing with various factors capable of influencing cytogenetic development. Many of these are rather esoteric and of primary interest to investigators in this and related fields. Genetic considerations and problems with diagnosing the NF are included, and the volume concludes with an interesting historical comment on Von Recklinghausen. A translation of his original case reports is included.

The volume is well organized and edited, well illustrated, and referenced. It provides a little bit for everyone, the clinician as well as the researcher, and will be of interest to the neurologists, oncologists, geneticists, and cytobiologists.

Its price is at the level one has gotten used to in the past few years. **Ladislav P. Hinterbuchner, M.D.**

The Ureter. Edited by Harry Bergman. New York, Springer-Verlag, 1981. Illustrated, 780 pages. Hardcover, $78.50.

This text book is one of the very few exclusively devoted to the ureter. Contained within its 35 chapters are indepth discussions of every aspect involving the ureter. The editor has gathered about him authors of recognized expertise in the area. The initial chapters deal with the anatomy and physiology of the ureter, with a chapter devoted to pathology. Those clinical aspects which one assumes will be included in the text of this nature are indeed present and are well presented. Of special interest is the inclusion of separate chapters on newly emerging areas of ureteral dysfunction. There is a separate chapter on the uropharmacology of the ureter as well as hydrodynamics of the ureter and renal pelvis. A chapter is devoted to transurethral endoscopic surgery of the ureter and renal pelvis, which will be an exploding field over the next ten years. Autotransplantation has been presented in many articles, but this is one of the few urology textbooks that devotes a chapter to it. A sign of the times is that two chapters are devoted to medicolegal aspects of ureteral surgery. The final unusual chapter is one devoted to the ureteral stump. In summary, I think this is a superb text book and is a useful addition to the library of any urologist. Certainly a copy should be on the shelf of every medical library. **Richard J. Macchia, M.D.**

The USP System of Drug Use Information. Volume 1. **Drug Information for the Health Care Provider.** 982 pages. Volume 2. **Advice for the Patient.** 793 pages. By authority of the United States Pharmacopeial Convention, Inc. Rockville, Maryland, 1982. $37.95.

The **USP DI** is a work in progress in that the drug information is under constant revision. The 1983 version is an expansion of the 1980 edition, which has been reviewed for changes, revised, and updated by the staff of the USP Drug Information Division under the guidance of its 26 advisory panels. The new edition is in two distinct sections—Volume 1, **Drug Information for the Health Care Provider,** contains monographs arranged in alphabetic order by official and other established names or by family groups. Each monograph supplies information for a particular substance when used for a specific clinical effect (eg, systemic, topical, and ophthalmic. Each monograph covers, in a highly structured format, the major subcategories: Pharmacology, Precautions to Consider, Side/Adverse Effects, Patient Consultations, General Dosing Information, and Dosage Forms. Each major category has numerous subcategories of information. As an example, under Precautions to Consider, there are subcategories such as Cross-Sensitivities, Pregnancy, Breast Feeding, Pediatric and Geriatric Precautions, Drug Interactions, Diagnostic Interferences, Medical Problems, and Patient Checkups.

The second volume, **Advice for the Patient**, includes the lay-language versions of the Patient Consultation Guidelines found in Volume 1. These versions, for which permission has been granted to photocopy, are intended to be used at the discretion of the health care provider as an aid to patient consultation.

The indexing of both volumes is outstanding. Volume 1 is indexed by established names, categories of use, and selected medical information such as pregnancy warnings and breast-feeding warnings. It includes cross-references by brand names, both U.S. and Canadian, and older nonproprietary names. Volume 2 is cross-indexed by brand and generic names.

I highly recommend the 1983 **USP DI** to all who require drug information. It is a handy, authoritative, easy-to-use compilation of a large amount of useful drug information. A minor drawback is that the references utilized to compile the data are not available in this publication. **Jack M. Rosenberg, Pharm.D., Ph.D.**

Cardiology 1982. By William C. Roberts, M.D., Mary Allen Engle, M.D., and Lawrence H. Cohn, M.D. New York, Yorke Medical Books, 1982. Illustrated, hardcover, 464 pages. $45.00

The authors of this text are all well qualified and respected in the fields of adult cardiology, cardiac pathology, pediatric cardiology, and cardiovascular surgery. The intent of the book is to review recently published papers and to provide abstracts of the important papers within a comprehensible context. The authors attempt to do this by grouping the articles under major subjects and by introducing each abstract with a one- or two-sentence background review to provide necessary perspective. In addition, there are discussions of current techniques and topics in which recently published papers are referenced and quoted.

I found the authors were basically successful in providing what is a great deal of numerical and statistical data in a comprehensible context. The book is of value to individuals who wish to review quickly major contemporary studies. In my opinion it requires the individual to be familiar with the field of study in question, since each of the articles is highly specific and presumes a background that cannot (within this context) be provided by the authors. The book is not a substitute for a textbook in cardiology.

In summary, I think the authors have carefully abstrated and logically grouped some of the important major studies in the field of cardiology over the past year and have presented them in a referenced and "subject-grouped" format, which is both logical and functional. **Richard A. Stein, M.D.**

Diagnosis and Management of Uveitis: An Atlas Approach. By Alan H. Friedman, M.D., Maurice H. Luntz, M.D., and Walter L. Henley, M.D. Baltimore, Maryland, Williams & Wilkins, 1982. Illustrated, hardcover, 116 pages. $95.00.

The Diagnosis and Management of Uveitis: An Atlas Approach should be of value to physicians dealing with inflammatory ocular problems.

Uveitis is still a poorly understood disease despite the large amount of experimental and clinical research performed in the last few years. The **Atlas** has six chapters and 119 pages which present a capsule summary of most of our knowledge at this time.

Chapter 2, Uveitis and Immunology, is a particularly lucid presentation of current immunology as it pertains to eye disease. The clarity is achieved through numerous well-done figures shown such things as the complement cascades, structure of immunoglobulin properties, etc.

The rest of the book deals with specific uveitis syndromes and uveitis associated with systemic disease. In these chapters each disease entity is presented as a capsule summary with many good-quality photographs demonstrating significant features. For example, in the section on rheumatoid arthritis we see pictures of deformed hands, histologic sections of the inflammatory ocular nodules, and even ultrasound photographs of the thickened ocular coats.

I found the book interesting and well done. It should serve as a good overview to people who need an introduction and summary of present knowledge. As with most atlases, it has little energy devoted to the controversial aspects of uveitis. The references are good and adequate as a basis for further investigation.

Chapter 6, the one dealing with management, is only seven pages long, and probably indicates how limited are our treatment modalities.

The only criticism one can make is the high price ($95.00), but that is not the authors' fault; it undoubtedly is due to the printing of so many colored photographs. **Emil Wirostko, M.D., D.M.S.**

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(*continued from page 1789*)

The professions, he noted, "have a long and impressive record of self-regulation in the public interest." Edmisten pointed out that the Justice Department and the states would retain their antitrust authorities over the professions.

The attorney general said the substitute plan offered by Representative James Broyhill (R-NC) "is the antithesis to Luken-Lee and would clearly give the FTC new authority. I urge Congress not to grant the FTC power to pre-empt state laws."

In the ophthalmic case, Federal Appeals Court Judge Carl McGowan wrote that the FTC in issuing regulations "has at least approached the outer boundaries of its authority and may have infringed" on states rights to regulate activities.

Meantime, the Administration formally supported the Broyhill Amendment. Vice President George Bush wrote Broyhill a letter to "reaffirm and reemphasize the Administration's support . . ."

*** *** ***

Blue Cross and Blue Shield Association in a major expansion of its Medical Necessity Program has provided its member plans with guidelines to eliminate unnecessary use of respiratory care.

About 25% of all hospital inpatients receive respiratory therapy, one of the fastest growing components of hospital care, with cost estimated as high as $4 billion a year. In making the announcement, the Association said implementation of the guidelines could save hundreds of millions of dollars annually in respiratory therapy costs.

The guidelines, which were approved by the Association's Board of Directors, also have the endorsement of several national medical organizations within their specialty areas. These are the American College of Physicians (ACP), the American College of Surgeons (ACS), and the American Academy of Pediatrics (AAP).

The guidelines establish definitive criteria for respiratory therapies to help assure quality patient care by ascertaining that the correct procedure is used on the right patient at the proper time.

Procedures covered by the guidelines — all of which can be an effective part of patient care — include intermittent positive-pressure breathing (IPPB), limited and complete pulmonary function tests (PFTs), incentive spirometry, postural drainage, aerosol therapy, arterial blood gas analysis, and oxygen therapy, according to the Blue Cross-Blue Shield Association.

"The respiratory therapy guidelines are intended to raise the level of cost-consciousness of our subscribers, physicians and hospitals," said Bernard R. Tresnowski, President of the Association, the coordinating agency for the nation's 103 Blue Cross and Blue Shield Plans.

"Any effort which helps control costs without lowering the quality of care will benefit everyone."

Tresnowski emphasized that the Medical Necessity Program, which previously dealt with outmoded or unproven procedures and tests as well as routine hospital admission batteries, does not mean a reduction in benefits or immediate denial of claims for subscribers. Rather, he said, "Plans will watch patterns of utilization on a hospital-by-hospital basis, and seek changes in these patterns where necessary."

The program is designed, he added, to assure that care received by patients is not only the best available but also the most cost effective.

Commenting on the program, William Y. Rial, M.D., AMA President said the Association has reviewed a preliminary version of the guidelines on respiratory therapy and has found them to be useful and reliable recommendations.

The new guidelines spell out specific circumstances when use of the various respiratory procedures is appropriate or should be limited. They also identify circumstances when payment for routine use will be limited in the absence of special justification.

For example, many patients routinely undergo preoperative pulmonary screening, which includes a complete battery of pulmonary function tests, for possible pulmonary disease without regard for either symptoms or history. Under the guidelines, Plans are advised not to pay for PFTs unless the patient has a known pulmonary problem, has a history of smoking or an occupational history which might suggest the possibility of lung disease, or unless other special circumstances are identified.

When oxygen therapy is prescribed, documentation of need would be required after certain prescribed time periods of usage for continuation of the therapy in acute myocardial infarctions or other medical emergency situations such as acute pneumonia, pulmonary embolisms, heart failure, drug overdoses or hepatic failure.

Work to develop the new guidelines included a 1981 conference sponsored by the Blue Cross and Blue Shield Association to solicit professional opinion on the medical efficacy and cost-effectiveness of the several respiratory therapies. The one-day conference was attended by representatives of numerous national medical specialty and institutional organizations, who addressed both diagnostic and therapeutic procedures.

*** *** ***

A landmark public health endeavor providing physicians with drug information instructions for patients was launched this month by the American Medical Association.

At a Washington, D.C., news conference announcing the Patient Medication Instructions (PMIs) program, Arthur Hull Hayes, M.D., Commissioner of the Food and Drug Administration (FDA), said the AMA initiative will give patients across the nation information on drugs "from impeccable sources" with data "that can be relied upon." Dr. Hayes described the program as "terribly important, terribly exciting," and "well-thought-out."

The PMIs are 5½″ by 8½″ sheets printed on both sides with instructions in clear, simple language detailing the purpose of the drug, how it is to be taken, and its possible side effects. Space is provided to write in the dosage and any special instructions the physician may have for the individual patient. PMIs for individual drugs or drug classes are bound in pads of 100 sheets. They will be updated periodically.

Available now are PMIs for 20 of the most widely prescribed drugs or drug classes. Physicians may obtain them from the AMA for a nominal charge that covers shipping and handling costs. Eventually the program will provide PMIs for as many as 100 drugs or drug classes that will represent the vast majority of all prescriptions written.

Participating with the AMA in the PMI program are the United States Pharmacopeial Convention, Inc., and the

American Pharmaceutical Association.

James Sammons, M.D., Executive Vice President of the AMA, told reporters PMI is "among the most important programs the AMA has ever initiated." Dr. Sammons said the benefits to patients and physicians "will be very significant."

Joseph Boyle, M.D., Chairman of the AMA Board of Trustees, said "we believe the program will help physicians and better the health of the patients we serve."

Dr. Sammons said the MA strongly believes that patients need information about drugs prescribed for them. "And we believe just as strongly that it is the proper and vital role of the practicing physician to provide this information.

He noted that at one time the FDA was planning a mandatory program of package inserts for all prescription drugs, "but it is now encouraging support for the voluntary PMI program."

The PMI program is sponsored by the AMA Education and Research Foundation, which is seeking a broad base of financial support, including pharmaceutical firms. Contributions have passed the $1.8 million level, including $900,000 from the AMA.

William Apple, Ph.D., President of the APhA, commended the AMA for the program which he said is "a cost-effective means for providing needed drug therapy-related information to patients."

"This is another landmark contribution to the public health and welfare that the medical and pharmacy professions have been able to accomplish through cooperative effort," said Apple.

William Heller, Ph.D., Executive Director of the United States Pharmacopeial Convention, said the AMA program is "a breakthrough effort" in the development of an economical and effective system of getting the information to the patient, getting the patient to read it, and to act on it. He said the U.S. Pharmacopeia (USP) "is pleased to provide its computerized patient drug use information as the basis for the PMIs."

Companies that have provided financial support for PMI so far include: Bristol-Myers Co.; Mead Johnson Foundation; Hoechst-Roussel Pharmaceuticals, Inc.; Hoffman-La Roche, Inc.; Johnson and Johnson; Eli Lilly and Co.; Revlon, Inc.; Upjohn Co.; Warner Lambert; American Home Products Corp.; Smith Kline and French Laboratories; Burroughs Wellcome; Organon Diagnostics and Pharmaceuticals, and G. D. Searle.

The AMA is drawing not only upon its own publication, *AMA Drug Evaluations*, but also on sources such as the *United States Pharmacopeia* for information. The United States Pharmacopeial Convention, Inc., is an independent, non-profit corporation that sets official standards of purity, strength and quality for drugs.

*** *** ***

The Administration is considering a specific treatment grouping scheme as the basis for the prospective reimbursement plan for Medicare.

The plan to reimburse hospitals by rates set in advance drew immediate criticism from the American Hospital Association (AHA) as "exactly the wrong way to go." Congress would have to approve the plan.

The "diagnostic related groups" idea would set advance rates that hospitals would receive for 467 diseases or conditions. Treatment of a Medicare patient with ulcers, for example, would net a hospital a predetermined sum, adjusted for different types of hospitals and regional variations.

Congress this year ordered the Administration to recommend a detailed prospective reimbursement plan designed to encourage hospitals to economize.

Health and Human Services (HHS) Secretary Richard Schweiker talked about present Administration thinking on the subject at a get-together with a few reporters. Later, he met with officials of major interested organizations, including James Sammons, M.D., AMA Executive and J. Alexander McMahon, AHA President.

The input of the interested organizations will be considered by the Administration before it makes its final decisions on prospective reimbursement.

However, Schweiker made clear the diagnosis related groups (DRG) method of payment is at the center of present HHS Department plans.

Hospitals have accepted the concept of prospective reimbursement but there are wide differences about how the plan should work. McMahon told reporters DRGs are valuable for analyzing use of services, but under the Schweiker proposal "they are being twisted for use in a payment mechanism and that is exactly the wrong way to go."

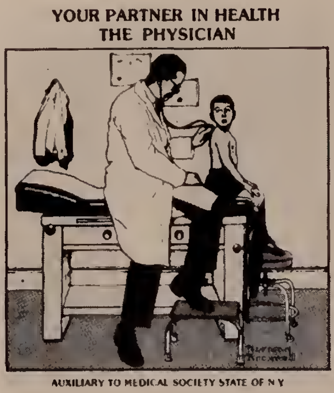
Another AHA spokesman said DRGs are unsatisfactorily in grouping patients with complications and do not take into account intensity of treatment.

The extent of the Administration's commitment to DRGs was shown by recent publication of regulations providing that federal support for state reimbursement experiments with Medicare would be limited to plans involving DRGs.

An AHA proposal earlier this year would have based reimbursement on average costs per discharged patient. The health insurance companies have proposed a cost-containment plan that would place a set limit on Medicare reimbursement increases for hospitals.

Prospective reimbursement is just one of a host of Medicare-Medicaid economy moves the Administration will ask the next Congress to approve. The issue is expected to stir controversy and heated debate among the lawmakers.

Physician Recognition Stamp



The stamp has been created by the Auxiliary to MSSNY as one way of promoting a positive image of physicians. The 4-color stamp, shown here in full size, was made from a Norman Rockwell drawing. Physicians are urged to use it in their correspondence. Stamps are .03¢ each. Check is payable to Auxiliary to MSSNY. Mail to: Mrs. Ezra A. Wolff, 70 East Gate, Manhasset, N.Y. 11030.

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1983 CME CRUISE/CONFERENCES on Legal-Medical Issues—Caribbean, Mexican Riviera, Alaska, Mediterranean. 7–14 days in January, April, July, August. Seminars led by distinguished professors. Approved for 18–24 CME Category 1 credits. Free Roundtrip Airfare on all Caribbean, Mexican, Alaskan Cruises. Excellent group fares on finest ships. All conferences, scheduled prior to 12/31/80, conform to IRS tax deductibility requirements under 1976 Tax Reform Act. Registration limited. For color brochures and additional information contact: International Conferences, 189 Lodge Avenue, Huntington Station, NY 11746. Phone (516) 549-0869.

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PHI LAMBDA KAPPA MEDICAL FRATERNITY'S Annual Scientific Session and National Convention, our Diamond Jubilee, is scheduled for March 3–13, 1983, at the Carillon Beach Hotel, Miami Beach, Florida, and is accredited for 25 hours C.M.E. credit under the sponsorship of North Detroit General Hospital. For further information, please contact the national office of Phi Lambda Kappa, Room #800, 1015 Chestnut Street, Philadelphia, PA. 19107. Phone: (215) 627-3403.

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DERMATOLOGIST, OPHTHALMOLOGIST AND Otolaryngologist needed: 50 miles north N.Y.C. Modern professional building. Available January 1983. Contact Dr. B. Poritzky, 22 Putnam Professional Park, Mahopac, N.Y. 10541. Tel. (914) 628-3473 or (914) 628-8454.

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PHYSICIANS NEEDED FOR 75 SUMMER children's camps located in the Northeast July and August or a single month. Contact: Association of Independent Camps (M) 157 West 57th Street, New York, N. Y. 10019. (212) 582-3540.

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INTERNAL MEDICINE RESIDENT completing training June 1983 seeks purchase of, or partnership in, an established general internal medicine practice in Nassau County vicinity. Reply Dept. 270, c/o NYSJM.

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IN
CONTINUING MEDICAL EDUCATION

NEW YORK STATE **JANUARY 1983**

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420 Lakeville Road, Lake Success, New York 11042
Telephone 516-488-6100.

Compiled by the Division of Scientific Activities
George J. Lawrence, Jr., M.D., Director
Mrs. Tina Koty, Editor
Philip Keating, Director, Division of Finance

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NEW YORK

Albert Einstein College of Medicine of Yeshiva University Department of Surgery

1300 Morris Park Avenue
Bronx, NY 10461
* Van Etten Hospital
Room 523
January 7, 1983—4:00 PM–5:30 PM
ONCOLOGY FOR THE FAMILY PRACTITIONER
A PATHOLOGIST LOOKS AT CANCER
I. M. Ratner, M.D.
CREDIT: AAFP Cat. 1
January 21, 1983—4:00 PM–5:30 PM
PAIN CONTROL IN CANCER PATIENTS—CASE STUDIES
R. Kanner, M.D.
CREDIT: AAFP Cat. 1
For further information contact Margot L. Wulf, Admin. Secy. to Dr. Herbert Volk, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461. Tel: 430-2000.

The Jewish Hospital & Medical Center of Brooklyn in association with the American Cancer Society, New York Division, Brooklyn Unit, SUNY, Downstate Medical Center, Sponsored by the Division of Hematology/Oncology

555 Prospect Place
Brooklyn, NY 11238
* B-51 Conference Room, Basement
Leviton Building
January 5, 1983—3:30 PM–4:30 PM
ADVANCES IN HEMATOLOGY AND ONCOLOGY
SALIVARY GLAND TUMOR
Elliot Strong, M.D.
January 12, 1983—3:30 PM–4:30 PM
TREATMENT OF FACTOR INHIBITORS IN HEMOPHILIAC AND NORMAL PATIENTS
Margaret Hilgartner, M.D.
January 19, 1983—3:30 PM–4:30 PM
CHEMOTHERAPY IN GYNECOLOGICAL MALIGNANCIES
Thomas Hakes, M.D.
January 26, 1983—3:30 PM–4:30 PM
MONOCLONAL ANTIBODIES TO HUMAN TUMOR ANTIGENS
Soldano Ferrone, M.D.
NO FEE. CREDIT: AMA Cat. 1
For further information contact The Jewish Hospital and Medical Center of Brooklyn, 555 Prospect Place, Brooklyn 11238. Tel: 212/240-1211 or 1212.

College of Physicians & Surgeons of Columbia University

630 West 168th Street
New York 10032
January 8—April 2, 1983 (Every Saturday)—9:00 AM–NOON
NEUROANATOMY, NEUROPHYSIOLOGY & NEUROPHARMACOLOGY
FEE: $395. CREDIT: AMA Cat. 1 (39 Hrs.)
For further information contact Dr. Elizabeth Gerst, 630 W. 168 St., New York. Tel: 212/694-3682.

Saint Mary's Hospital of Brooklyn Department of Medicine

170 Buffalo Avenue
Brooklyn, New York 11213
* Third Floor—Board Room
January 5, 1983—Wednesday—8:00 AM–9:00 AM
CT SCANNING AT ST. MARY'S HOSPITAL: THE FIRST YEAR
Allen Rubenstein, M.D.
CREDIT: AMA Cat. 1
January 12, 1983—Wednesday—8:00 AM–9:00 AM
WHAT ELECTROMYOGRAPHY CAN TELL US
Steven Horowitz, M.D.
January 19, 1983—Wednesday—8:00 AM–9:00 AM
STUPOR AND COMA
George Vas, M.D.
January 26, 1983—Wednesday—8:00 AM–9:00 AM
TREATMENT OF IDIOPATHIC AND ALCOHOLIC WITHDRAWAL SEIZURES
David Rosenbaum, M.D.
For further information contact the Department of Medicine at St. Mary's Hospital—774-3600 ext. 2044 or 2045.

The Page and William Black Postgraduate School of Medicine of the Mount Sinai School of Medicine (CUNY)

One Gustave L. Levy Place
New York, NY 10029
* Mount Sinai Medical Center
Monthly—By Arrangement
CARDIOPULMONARY RESUSCITATION REFRESHER
Douglas Distefano, M.D., James M. Corry, Ph.D.
FEE: $35.00. CREDIT: AMA Cat. 1 (6 Hrs.)
Twice Monthly—By Arrangement
CARDIOPULMONARY RESUSCITATION FOR HEALTH PROFESSIONALS
Douglas Distefano, M.D., James M. Corry, Ph.D.
FEE: $50.00. CREDIT: AMA Cat. 1 (7 Hrs.)
January 28, 1983—Friday—9:00 AM–5:00 PM
THE USE OF LASERS IN SURGERY
Eugene W. Friedman, M.D.
FEE: $125.00 (including luncheon. CREDIT: AMA Cat. 1 (6.5 Hrs.)
January 6—May 5, 1983—Thursdays—4:00 PM–5:00 PM
CLINICAL PHARMACOLOGY LECTURE SERIES
Joel Kupersmith, M.D.
FEE: NONE. CREDIT: AMA Cat. 1 (18 Hrs.)
January 18, 1983—Tuesday—4:00 PM–6:00 PM
METHODS FOR ACCESSING CURRENT AND RETROSPECTIVE LITERATURE OF THE CARDIOVASCULAR SYSTEM, CARDIOVASCULAR DISEASES AND CARDIOVASCULAR AGENTS
Harriet R. Meiss, A.M.L.S. and Robert S. Culp, M.L.S.
FEE: $25.00. CREDIT: AMA Cat. 1 (2 Hrs.)
* Union Health Center, New York, NY
January 5, 1983—Wednesday—7:30 AM–9:30 AM
MOUNT SINAI TEACHING DAYS
AMENORRHEA AND GALACTORRHEA
Nathan G. Kase, M.D.
January 12, 1983—Wednesday—7:30 AM–9:30 AM
CANCER CHEMOTHERAPY
Larry Norton, M.D.
January 19, 1983—Wednesday—7:30 AM–9:30 AM
CUTANEOUS SIGNS OF INTERNAL DISEASE
Raul Fleischmajer, M.D.
January 26, 1983—Wednesday—7:30 AM–9:30 AM
MALABSORPTION SYNDROMES
Charles D. Gerson, M.D.
FEE: NONE. CREDIT: AMA Cat. 1
* Central General Hospital, Plainview, NY 11803
January 5, 1983—Wednesday—12 NOON–1:00 PM
MOUNT SINAI TEACHING DAYS
NEWER ANTIBIOTICS
Joseph Masci, M.D.
FEE: NONE. CREDIT: AMA Cat. 1
January 19, 1983—Wednesday—12 NOON–1:00 PM
FUNCTIONING MENSTRUAL DISORDERS
Nathan G. Kase, M.D.

FEE: NONE. CREDIT: AMA Cat. 1

* Mount Sinai Medical Center

January 15, 1983—Saturday—9:00 AM–4:00 PM

THE SATURDAY MORNING GRAND ORTHOPAEDICS SYMPOSIA

Victor H. Frankel, M.D.

CREDIT: AMA Cat. 1

* Long Beach Memorial Hospital

January 11, 1983—Tuesday—3:00 PM–6:00 PM

MOUNT SINAI TEACHING DAYS

SELECTION OF APPROPRIATE ANTIBIOTICS—COST EFFECTIVENESS

Glenn S. Hammer, M.D., Bernard Mehl, M.D.

FEE: NONE. CREDIT: AMA Cat. 1

* Community General Hospital of Sullivan County
Harris, New York

January 11, 1983—Tuesday—3:00 PM–6:00 PM

MOUNT SINAI TEACHING DAYS

DERMATOLOGY FOR THE NON-DERMATOLOGIST

Brian Berman, M.D.

CUTANEOUS MANIFESTATIONS OF SYSTEMIC DISEASE

Raul Fleischmajer, M.D.

FEE: NONE. CREDIT: AMA Cat. 1

* Franklin General Hospital, Valley Stream, NY

January 19, 1983—Wednesday—1:00 PM–5:00 PM

MOUNT SINAI TEACHING DAYS

INTENSIVE CARE OF THE PATIENT WITH MULTIPLE SYSTEM FAILURE

Un-Sup Kim, M.D., Mark Rosen, M.D., Robert S. Kurtz, M.D.

FEE: NONE. CREDIT: AMA Cat. 1

NYU Medical Center Post-Graduate Medical School and the Department of Medicine

550 First Avenue
New York, NY 10018

January 6 to June 22, 1983—Wednesdays—4:00 PM–7:00 PM

INTERNAL MEDICINE BOARD REVIEW

FEE: $760. CREDIT: AMA Cat. 1 (72 Hrs.)

For further information contact NYU Post-Graduate Medical School. Tel: 212/340-5295.

The New York Academy of Medicine

Section on Anesthesiology and Resuscitation
2 East 103rd Street
New York, NY 10029

January 5, 1983—8:00 PM

NEUROSURGERY AND ANESTHESIA

Raj Murali, M.D., Elizabeth A. M. Frost, M.D., Henry C. Tausk, M.D.

CREDIT: AMA Cat. 1

For further information contact Paul A. Radnay, M.D., Secretary, Office of Medical Education, The New York Academy of Medicine. Tel: 212/876-8200.

SUNY Downstate Medical Center Kings County Hospital Center in cooperation with District 1, NYSSA Department of Anesthesiology

450 Clarkson Avenue
Brooklyn, NY 11203

January 31, 1983—4:00 PM–5:00 PM

VISITING PROFESSOR PROGRAM

ANATOMY & PHYSIOLOGY OF THE AUTONOMIC NERVOUS SYSTEM

Robert K. Stoelting, M.D.

CREDIT: AMA Cat.1

For further information contact Abraham I. Raskob, M.D., SUNY Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, NY 11203. Tel: 212/270-1233.

New York Trudeau Society Chapter of the American Thoracic Society

8 Mountain View Avenue
Albany, NY 12205

* Hotel Thayer, West Point, NY

January 28 and 29, 1983

CRITICAL APPROACH TO CRITICAL CARE

PEDIATRIC LUNG PROBLEMS

UNDERSTANDING BASIC AND APPLIED PHYSIOLOGY IN LUNG DISEASE

CASE PRESENTATIONS

ANNUAL TRUDEAU LECTURE

For further information contact David Pratt, M.D., New York Trudeau Society, 8 Mountain View Avenue, Albany, NY 12205. Tel: 518/459-4197.

NYU Medical Center Post-Graduate Medical School

550 First Avenue
New York, NY 10016

* Schwartz Lecture Hall—Classroom F
401 East 30th St., NYC

January 5 to June 22, 1983—Wednesdays—4:00 PM–7:00 PM

COURSE #302—INTERNAL MEDICINE BOARD REVIEW, 1983

ONE-ON-ONE TUTORIALS

RHEUMATOLOGY #301

GERIATRIC MEDICINE #308

EMERGENCY MEDICINE #316

CLINICAL ELECTROCARDIOGRAPHY #322

INFECTIOUS DISEASES #325

NEW STRATEGIES IN DIABETIC THERAPY #327

FEE: $760. CREDIT: AMA Cat. 1 (72 Hrs.) & AAFP

For further information contact Registration Office, NYU Post-Graduate School. Tel: 213/340-5295.

The New York Cardiological Society, Inc.

84 Grove Street, Suite Two
New York, NY 10014

* Empire Room—Waldorf-Astoria Hotel, NYC

January 27, 1983—Thursday—8:00 PM

ARVILLA BERGER LECTURE ON CARDIOLOGY

Stephen E. Epstein, M.D.

CREDIT: AMA Cat. 1 (2 Hrs.)

For further information contact New York Cardiological Society, Inc., 84 Grove St., NY Tel: 212/924-5346.

Kingsbrook Jewish Medical Center Co-sponsored by the Brookyln Academy of Medicine

Rutland Road & East 49th Street
Brooklyn, NY 11203

* Lillian Minkin Briger Ballroom at David Minkin Rehabilitation Institute,
Kingsbrook Jewish Medical Center
Rutland Road & 49th St., Brookyln, NY 11203

January 11, 12, 1983—Tuesday & Wednesday—8:30 AM—5:00 PM

SYMPOSIUM—SENSORY EVOKED POTENTIALS: A WORKSHOP

CREDIT: AMA Cat. 1 (14 Hrs.)

For further information contact Asa P. Ruskin, M.D., Kingsbrook Jewish Medical Center, Rutland Rd., & East 49th St., Brookyln, NY 11203. Tel: 212/756-9700.

NYU Medical Center Post-Graduate Medical School

550 First Avenue
New York, N.Y. 10016

ONE-ON-ONE TUTORIALS—1983

COMPUTED TOMOGRAPHY

COMPUTED TOMOGRAPHY OF THE HEAD AND NECK
INTERVENTIONAL RADIOLOGY
DIAGNOSTIC ULTRASOUND
CYTOPATHOLOGY
A TOTAL MEDICAL INFORMATION SYSTEM
MODERN BLOOD BANK MANAGEMENT: THEORY AND PRACTICE
RENAL BIOPSY INTERPRETATION
NEUROPATHOLOGY
For further informtion contact NYU Post-Graduate School, 550 First Ave., New York, NY 10016. Tel: 212/340-5295.

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January 4, 1983 to April 16, 1983
COMPREHENSIVE PROGRAM IN BASIC MEDICAL AND CLINICAL SCIENCES: (for ECFMG., FLEX., VQE., MSKP.)
For further information contact Dr. Natale Colosi, Dean, 426 West 52nd Street, NY. Tel: 212/757-2486.

QUEENS COUNTY

Flushing Hospital and Medical Center

4500 Parsons Blvd.
Flushing, NY 11355
January 16, 1983—Sunday—9:00 AM–1:00 PM
SECOND ANNUAL REVIEW IN INTERNAL MEDICINE
HEMATOLOGY
Edward Amorosi, M.D.
FEE: Per session: $50.00 FH&MC Staff Members
$60.00 Non-Staff Members
CREDIT: AMA Cat. 1
For further information contact Luisa T. Gonzalez, Flushing Hospital and Medical Center. Tel: 212/670-5741.

Long Island Jewish-Hillside Medical Center/ Queens Hospital Center Affiliation, The Postgraduate Institute for Medical and Dental Education and the Health Sciences Center SUNY at Stony Brook

Department of Medicine

New Hyde Park, NY
* Nursing School Auditorium–Queens Hospital Center
82-68 164th Street, Jamaica, NY
January 5, 1983—Wednesday—11:00 AM–12:00 NOON
GRAND ROUNDS—NEW DEVELOPMENTS IN DIABETIC NEUROPATHY
Steven Horowitz, M.D.
January 12, 1983—Wednesday—11:00 am–12:00 NOON
GRAND ROUNDS—IMMUNOPATHOGENESIS OF THE NEPHRITIDES
Ganesh Bhat, M.D.
January 19, 1983—Wednesday—11:00 AM–12:00 NOON
GRAND ROUNDS—NEW THERAPIES FOR THE CONTROL OF ACID REFLUX
Bertram Fuchs, M.D.
January 26, 1983—Wednesday—11:00 a.m. to 12:00 NOON
GRAND ROUNDS—UPDATE ON HEPATITIS B
Cladd Stevens, M.D.
For further information contact Herbert Diamond, M.D., Chairman, Dept. of Medicine, Long Island Jewish-Hillside Medical Center, New Hyde Park, NY

Peninsula Hospital Center under the Auspices of Downstate Medical Center, Co-Sponsored by the Academy of Medicine, County of Queens

51-15 Beach Channel Drive
Far Rockaway, NY 11691
* Perlberg Auditorium
January 9, 1983—Sunday—9:00 AM–12:00 NOON
INTENSIVE REVIEW FOR FAMILY PHYSICIANS
ECHOCARDIOGRAPHY
ECG'S
Henry Meilman, M.D., Javier Lorenz, M.D.
January 16, 1983—Sunday—9:00 AM–12:00 NOON
ACUTE INFECTIOUS DISEASE & IMMUNIZATIONS—(PEDIATRICS)
Margaret Hammerschlag, M.D.
January 23, 1983—Sunday—9:00 AM–12:00 NOON
HEMATOLOGY
Albert Braverman, M.D.
January 30, 1983—Sunday—9:00 AM–12:00 NOON
PEDIATRICS—GROWTH & DEVELOPMENT
Winston Price, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Edward H. Davis, M.D., Peninsula Hospital Center. Tel: 212/945-7100, Ext. 377.

Long Island Jewish-Hillside Medical Center Queens Hospital Center Affiliation Department of Psychiatry

82-68 164th Street
Jamaica, NY 11432
* School of Nursing, Queens Hospital Center
January 7, 1983—Friday—11:00 AM–12:00 NOON
PIAGET AND FREUD: A BRIEF INTRODUCTION TO THE DEVELOPMENTAL PSYCHOLOGY OF THE FORMER, AND SUGGESTED CORRELATIONS TO THE LATTER—GRAND ROUNDS
Herbert Levowitz, M.D.
January 14, 1983—Friday—11:00 AM–12:00 NOON
MEDICAL STAFF MEETING—GRAND ROUNDS
Walter J. Tardy, M.D.
January 21, 1983—Friday—11:00 AM–12:00 NOON
CPR REVISITED—THE CURRENT STATUS OF CARDIO-PULMONARY RESUSCITATION—GRAND ROUNDS
Arnold Blumberg, M.D.
January 28, 1983—Friday—11:00 AM–12:00 NOON
BIOFEEDBACK—FACT OR FANCY—GRAND ROUNDS
Robert Martin, M.D.
CREDIT: AMA Cat. 1
For further information contact Philip E. Levine, M.D., Dept. of Psychiatry, Queens Hospital Center Affiliation Long Island Jewish-Hillside Medical Center, 82-68 164 St., Jamaica, NY 11432. Tel: 212/990-3551.

The Jamaica Hospital

89th Avenue & Van Wyck Expressway
Jamaica, NY 11418
* Community Room
January 6, 1983—Thursday—8:30 AM–9:30 AM
CARDIOLOGY
MITRAL VALVE PROLAPSE
Michael Cohen, M.D.
January 20, 1983—Thursday—8:30 AM–9:30 AM
NUCLEAR MEDICINE AND THE MYOCARDIAL INFARCTION
Andrew Grunwald, M.D.
January 4, 1983—Tuesday—8:30 AM–9:30 AM
ENDOCRINOLOGY & METABOLISM
DIABETES MELLITUS—LATE COMPLICATIONS
Selim Baruh, M.D.

January 7, 1983—Friday—8:30 AM-9:30 AM
MEDICAL GASTROENTEROLOGY
CURRENT STATUS OF GALLSTONE MANAGEMENT
Robert A. Schaefer, M.D.
January 21, 1983—Friday—8:30 AM-9:30 AM
EFFECT OF PROSTAGLANDINS AND NONSTEROIDAL ANTIINFLAMMATORY DRUGS ON GASTRIC MUCOSA
Jesse M. Berkowitz, M.D.
January 28, 1983—Friday—8:30 AM-9:30 AM
DISEASES OF THE LIVER, PART II
Fenton Schaffner, M.D.
January 11, 1983—Tuesday—8:30 AM-9:30 AM
HEMATOLOGY
LARGE CELL LYMPHOMA: A CURABLE DISEASE
Morton Coleman, M.D.
January 13, 1983—Thursday—8:30 AM-9:30 AM
INFECTIOUS DISEASES
CENTRAL NERVOUS SYSTEM INFECTION
Robert H. Lapin, M.D.
* Trump Pavillion
January 5, 1983—Wednesday—9:00 AM-10:30 AM
MEDICAL GRAND ROUNDS & PROGRESS IN MEDICINE
LOCAL HYPERTHERMIE AND CANCER
Harry L. Leveen, M.D.
January 12, 1983—Wednesday—9:00 AM-10:30 AM
ARTERIAL BLOOD GAS ANALYSIS IN THE DIAGNOSIS OF MIXED ACID-BASE ABNORMALITIES
Nathan Seriff, M.D.
January 19, 1983—Wednesday—9:00 AM-10:30 AM
VASCULITIS
Charles L. Christian, M.D.
January 26, 1983—Wednesday—9:00 AM-10:30 AM
NUTRITION—FACTS OR FICTION
Victor Herbert, M.D.
* Community Room
January 25, 1983—Tuesday—8:30 AM-9:30 AM
NEPHROLOGY
MECHANISM OF URINARY ACIDIFICATION
RENAL TUBULAR ACIDOSIS
Emmanuel B. Masih, M.D.
January 18, 1983—Tuesday—8:30 AM-9:30 AM
NEUROLOGY
RECENT DEVELOPMENTS IN CEREBROVASCULAR DISEASE
John C. M. Brust, M.D.
January 14, 1983—Friday—8:30 AM-9:30 AM
ONCOLOGY
PSYCHIATRIC ASPECTS OF ONCOLOGY
Stephen M. Saravay, M.D.
* The Assembly Room
January 28, 1983—Friday—12:30 PM-1:30 PM
PATHOLOGY GRAND ROUNDS
IMMUNOLOGY OF LEISHMANIASIS
Charles A. Santos-Buch, M.D.
January 3, 1983—Monday—12:30-1:30 PM
PRIMARY CARE CONFERENCES—GYNECOLOGY
MEDICAL MANAGEMENT OF THE HIGH RISK OBSTETRICAL PATIENT
Arthur Avedian, M.D.
January 10, 1983—Monday—12:30 PM-1:30 PM
LAPAROSCOPY: USES & ABUSES
Maher Saad, M.D.
January 17, 1983—Monday—12:30 PM-1:30 PM
EARLY RECOGNITION & THERAPY OF GYNECOLOGICAL MALIGNANCY
M. Maurice Abitbol, M.D.
January 24, 1983—Monday—12:30 PM-1:30 PM
LABORATORY MEDICINE
NEWER MODALITIES OF LABORATORY DIAGNOSIS
Ahmed Saad, Ph.D.
January 31, 1983—Monday—12:30 PM-1:30 PM
OPHTHALMOLOGY
OCULAR MANIFESTATIONS OF SYSTEMIC DISEASES
George Kneisser, M.D.
January 7, 1983—Friday—12:30 PM-1:30 PM
RADIOLOGY
WHAT'S NEW IN PEDIATRIC RADIOLOGY
Jack Haller, M.D.
* The Community Room
January 27, 1983—Thursday—8:30 AM-9:30 AM
RHEUMATOLOGY
SJOGRENS SYNDROME
Keith B. Elkon, M.D.
CREDIT: AMA Cat. 1
For further information contact The Jamaica Hospital, 89th Avenue & Van Wyck Expressway, Jamaica, NY.
Tel: 212/657-1800.

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86-68 164th Street
Jamaica, New York, 11432
* Nurses Auditorium, Queens Hospital Center
January 12, 1983 through May 25, 1983—Wednesday—6:30 PM-9:00 PM
THE 4th ANNUAL INTERNAL MEDICINE BOARD REVIEW COURSE
Catherine Marino, M.D.
FEE: $300. CREDIT: Cat. 1 (50 Hrs.)
For further information contact Ann J. Boehme, Long Island Jewish Medical Center/Queens Hospital Center Affiliation, New Hyde Park, NY. Tel: 212/470-2114.

NASSAU COUNTY

Hempstead General Hospital

800 Front Street
Hempstead, NY 11551
* Hospital Dining Room
January 12, 1983—Wednesday—7:00 PM
EMERGENCY DEPARTMENT LECTURE SERIES
CARDIOPULMONARY CEREBRAL RESUSCITATION
ALAN BIGMAN, M.D.
January 12, 1983—Wednesday—8:00 PM
UPDATE ON CARDIAC DRUGS
Robert J. Rabinowitz, M.D.
CREDIT: AMA Cat. 1
For further information contact Valerie Roessner, Hempstead General Hospital. Tel: 516/560-1216.

Nassau County Medical Center

2201 Hempstead Turnpike
East Meadow, NY 11554
October 1, 1982 thru May 20, 1983—11:00 AM-12:30 PM
GRAND ROUNDS IN PSYCHIATRY 1982-83
For further information contact Herbert Anhalt, M.D.,
Tel: 516/542-2419.
September 1982—June 1983 (monthly)—4:30 PM-5:30 PM
GRAND ROUNDS IN OPHTHALMOLOGY
For further information contact Elsa Rahn, M.D.,
Tel: 516/542-2706.
September 21, 1982–June 28, 1983—11:00 AM-12 NOON
CONTINUING LECTURES IN OB/GYN
For further information contact Robert Weiss, M.D.,
Tel: 516/542-2165.

Long Beach Memorial Hospital in affiliation with The Page & Wiliam Black Postgraduate School of Medicine of The Mount Sinai School of Medicine (CUNY)

455 East Bay Drive
Long Beach, NY 11561
* Hospital Auditorium
January 11, 1983—3:00 PM–6:00 PM
SELECTION OF APPROPRIATE ANTI-BIOTICS—COST-EFFECTIVENESS
Glenn S. Hammer, M.D., Bernard Mehl, D.P.S. CREDIT: AMA Cat. 1
For further information call Community Relations Dept. Tel: 516/432-8000, extension 362 or 363.

Nassau County Medical Center

2201 Hempstead Turnpike
East Meadow, NY 11554
January 6, 1983—Thursday—10:00 AM
THE THIRD ANNUAL MEDICAL GRAND ROUNDS
THE USE OF ESTROGEN RECEPTORS IN BREAST CANCER
Joseph C. Allegra, M.D.
CREDIT: AMA Cat. 1 & AAFP
January 13, 1983—Thursday—10:00 AM
UPDATE ON ASTHMA
Jack Alder, M.D.
CREDIT: AMA Cat. 1 & AAFP
January 20, 1983—Thursday—10:00 AM
ENDOCARDITIS CAUSED BY UNUSUAL STREPTOCOCCI
Rose Recco, M.D.
CREDIT: AMA Cat. 1 & AAFP
January 27, 1983—Thursday—10:00 AM
PATHOGENESIS OF TYPE II DIABETES MELLITUS AND ITS TREATMENT
Harold Lebovitz, M.D.
CREDIT: AMA CAt. 1 & AAFP
For further information contact Ethel A. Ford, CME Coordinator, Dept. of Medicine, Nassau County Medical Center, Tel: 516/452-0123.

SUFFOLK COUNTY

Brookhaven Memorial Hospital Medical Center

101 Hospital Road
Pathogue, NY 11772
* 1st Floor Conference Room
January 4, 1983—Tuesday—8:00 AM–9:00 AM
PEDIATRIC CONFERENCES
ENT EMERGENCIES
Dominick Sampogna, M.D.
CREDIT: AMA Cat. 1 & AAFP
January 7, 1983—8:00 AM–9:00 AM
CLINICAL PROBLEMS IN FAMILY MEDICINE
CARDIOVASCULAR/CHEST—BENIGN BREAST DISEASE
Richard Dranitzke, M.D.
CREDIT: AMA Cat. 1 & AAFP
January 14, 1983—8:00 AM–9:00 AM
ECHOCARDIOGRAPHY
Michael Zema, M.D.
CREDIT: AMA CAt. 1 & AAFP
January 28, 1983—8:00 AM–9:00 AM
HEMATOLOGY/ONCOLOGY
HODGKINS DISEASE 1983
Larry Nathanson, M.D.
CREDIT: AMA Cat. 1 & AAFP
For further information contact Dorothy S. Lane, M.D., Brookhaven Memorial Hospital Medical Ctr., 101 Hospital Rd., Patchogue, NY. Tel: 516/654-7795.

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The Johns Hopkins University School of Medicine and The Johns Hopkins Hospital, Dept. of Pathology

605 Pathology Building
Baltimore, Maryland 21205
April 18–April 29, 1983
CLINICAL CYTOPATHOLOGY FOR PATHOLOGISTS—POSTGRADUATE COURSE
CREDIT: AMA Cat. 1 (125 Hrs.)
Application is to be made before February 2, 1983.
For further information contact John K. Frost, M.D., 610 Pathology Building. Tel: 301/955-3520.

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Barbados, West Indies
February 12–19th, 1983
IX INTERNATIONAL OCULOPLASTIC SOCIETY CONGRESS
FEE: $250.000. CREDIT: AMA Cat. 1 (20 Hrs.)
For further information contact Ms. A. Burnett, c/o Dr. P. Guibor. Tel: 212/734-1010 or 800/223-4500.

SUNY—Upstate Medical Center Office of Graduate and Continuing Education

750 East Adams Street
Syracuse, NY 13210
* Sugarbush Inn, Sugarbush, Vermont
January 16–22, 1983
5th ANNUAL CLINICAL FOCUS: OPHTHALMOLOGY
James L. McGraw, M.D.
CREDIT: ACCME Cat. 1 (20 Hrs.)
For further information contact Mrs. Betty Frost, Program Assistant, Office of Continuing Education, Upstate Medical Center at Syracuse State University of NY, 766 Irving Ave, Syracuse, New York 13210. Tel: 315/473-4606.

FUTURE EVENTS

The Edward S. Harkness Eye Institute at Columbia-Presbyterian Medical Center

635 West 165th Street
New York 10032
February 1, 1983 to April 29, 1983—8:00 AM–9:00 AM Daily
PART III—REVIEW OF BASIC & CLINICAL SCIENCE COURSES OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY IN PREPARATION FOR OKAP EXAMS
FEE: $300.
For further information contact Alice B. McBride, 635 West 165th Street, New York. Tel: 212/694-2725.

Flushing Hospital and Medical Center Department of Medicine

4500 Parsons Blvd.
Flushing, NY 11355
February 1, 1983—Tuesday—10:30 AM–12:00 NOON
GRAND ROUNDS—THE NEPHROTIC SYNDROME
Ira Greifer, M.D.
February 8, 1983—Tuesday—10:30 AM–12:00 NOON
GRAND ROUNDS—GENERALIZED RHEUMATISM RELATED TO FIBROCYTIS, POLYMYALGIA RHEUMATICA, POLYMYOSITIS AND THE NEW RHEUMATIC SYNDROMES
Peter Barland, M.D.
February 15, 1983—Tuesday—10:30 AM–12:00 NOON
GRAND ROUNDS—CANCER UPDATE: BREAST, LUNG AND COLON CANCER
Steven Vogl, M.D.
For further information contact Luisa T. Gonzalez, Flushing Hospital and Medical Center. Tel: 212/670-5741.

physicians' placement opportunities

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WILLARD Area Hospital, Ohio, contact James H. Ross, Jr., Administrator. Tel: 419/933-2931 between 8:00 a.m.–4:00 p.m.

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Classification codes

CN = Contemporary Nutrition
CNT = Clinical Note
CPC = Clinicopathologic Conferences
CR = Case Reports
DI = Drug Information
ED = Editorials
GER = Geriatrics
HIST = History of Medicine
HYP = Hypertension
ID = Infectious Diseases
IHN = Interesting Historical Notes
LE = Letters to the Editor
PH = Public Health News
RPC = Correlation Conferences in Radiology and Pathology
SH = School Health
SPEC = What's New in Specialties?

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Members under age 60 may add supplementary hospital protection up to $80 per day. Spouse and children may be included optionally. Skilled nursing home benefits are available. Plan may be renewed for life of insured person . . . . member, spouse or child.

d. **Accidental Death, Dismemberment & Permanent Total Disability Plan with Special Renewal Guarantee*.**
Members under age 60 may add protection up to $100,000. Total amount is also paid if the member is permanently and totally disabled as the result of an accident, after 12 consecutive months of total disability

Continued

**The renewal of your policy is guaranteed* so long as (a) you are a member of MSSNY, (b) you are under age 70, (c) you remain actively engaged in medicine and (d) the Society sponsors this Plan and does not sponsor or endorse any other similar program.

e. **Student Disability Income Protection Plan*.**

Group Life Plan with Special Renewal Guarantee. Society members under age 65 who are medically insurable may add up to $250,000 term life protection. New MSSNY members under age 65 are guaranteed substantial amounts of the protection without regard to medical history, if they apply within 60 days of joining MSSNY. Tax-deductible coverage is available for a physician's employees or the physicians and other employees in a professional corporation.

Renewal guarantee: By special agreement with MSSNY, the Company cannot cancel or refuse to renew your group life contract so long as the Society sponsors this plan and no competing life plan.

UNDERWRITERS OF INSURANCE PLANS:

The Society Group Life Plan is underwritten by Bankers Life Co., Des Moines, Iowa, a leader in the professional association life field. The other endorsed plans are written by the Commercial Insurance Co's of New York City. Commercial Insurance has written many of the county and district branch programs in New York for many years.

PUBLICATIONS

NEW YORK STATE JOURNAL OF MEDICINE. Published monthly, the Journal provides continuing medical education through original scientific articles, case reports; symposia and seminar meeting dates throughout New York State. It also lists physician placement opportunities, classified advertising, and the annual convention program.

MEDICAL DIRECTORY OF NEW YORK STATE. A biennial listing of over 35,000 physicians licensed in New York State indicating their office addresses, specialty boards and colleges and official hospital staff appointments; as well as the staff lists of hospitals throughout the state.

NEWS OF NEW YORK. This twice-monthly newsletter is MSSNY's main channel of communication of socioeconomic and legislative information to the membership.

MSSNY MEMBERSHIP BENEFITS QUESTIONNAIRE

Please send me further information on the following:

☐ Supplemental Insurance Programs:

( ) Group Term Life Insurance

( ) Disability Income Insurance ( ) Office Overhead Expense Insurance

( ) Hospital Indemnity Insurance ( ) Accidental Death & Dismemberment Insurance.

( ) Medical Student Disability Income Insurance

☐ Computer Services
☐ Car Leasing
☐ Car Rental
☐ Car Purchasing
☐ Wholesale Purchasing
☐ Microfilming Service
☐ Financial Services
☐ Real Estate Transactions
☐ Financial Analysis & Estate Planning
☐ Office Computer Software
☐ Office/Home Furniture
☐ MSSNY Pension Plan
☐ Security Communications Systems & Fire Detection Equipment
☐ Diamonds for Investment
☐ Business Machines & Equip.
☐ Physician Buying Co.
☐ All Risk Office Insurance Package
☐ Encyclopedia
  ☐ Britannica ☐ Americana
☐ Medical Text Books
☐ Quality Tires
☐ Rare Coins
☐ Travel Programs
☐ Office Medical Equipment Lease/Purchase
☐ Manual Accounting Systems
☐ Other________________

Name____
(please print)

Address________________________________ZIP__________

County Medical Society_________________________Tel.#__________
(area code)

Please return questionnaire to: Division of Insurance & Membership Benefits, c/o MSSNY, 420 Lakeville Rd., P.O. Box 5404, Lake Success, N.Y. 11042. Phone: (516) 488-6100, ext. 235/6.

How to shelter up to $15,000

Open a Citibank Keogh before December 31st and convert business income into personal income and avoid current taxes.

If you own all or part of an unincorporated business, opening a Citibank Keogh Plan lets you convert 15% per year (up to $15,000) of your business earnings into personal income and deduct it as a business expense. What's more you pay no taxes on the money until you withdraw it.*

At Citibank, we want you to get the most from your money. And we realize that opening a Keogh Plan is a major financial decision. That's why we've set up a special Citibank Tax Shelter Center. It's staffed by specialists who will explain our Keogh Plan in detail. They can handle everything from the transfer of existing Keoghs to the tailoring of an individual Keogh investment portfolio that meets your specific financial needs. Remember though, to get a tax deduction this year you must open your Keogh Plan by December 31st, 1982.

For more information about opening a Citibank Keogh Plan, call the Citibank Tax Shelter Center at (212) 750-7733 or 1-800-522-5686. Outside N.Y. State 1-800-221-1080. Or, if you prefer, send in the coupon below. If you own an incorporated business, call and find out about Citibank's SEP Plan.

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For more information about the Citibank Keogh Plan, clip and send this coupon to:

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Tax Shelter Center
P.O. Box 5098
FDR Station
New York, N.Y. 10158

NAME

ADDRESS APT.

CITY

STATE ZIP

( )
PHONE (DAY)

( )
PHONE (NIGHT)

Do you already have a Keogh Plan?
Yes ☐ No ☐

NM-2

CITIBANK®

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*Generally you can begin withdrawals anytime after 59½ and avoid tax penalties.

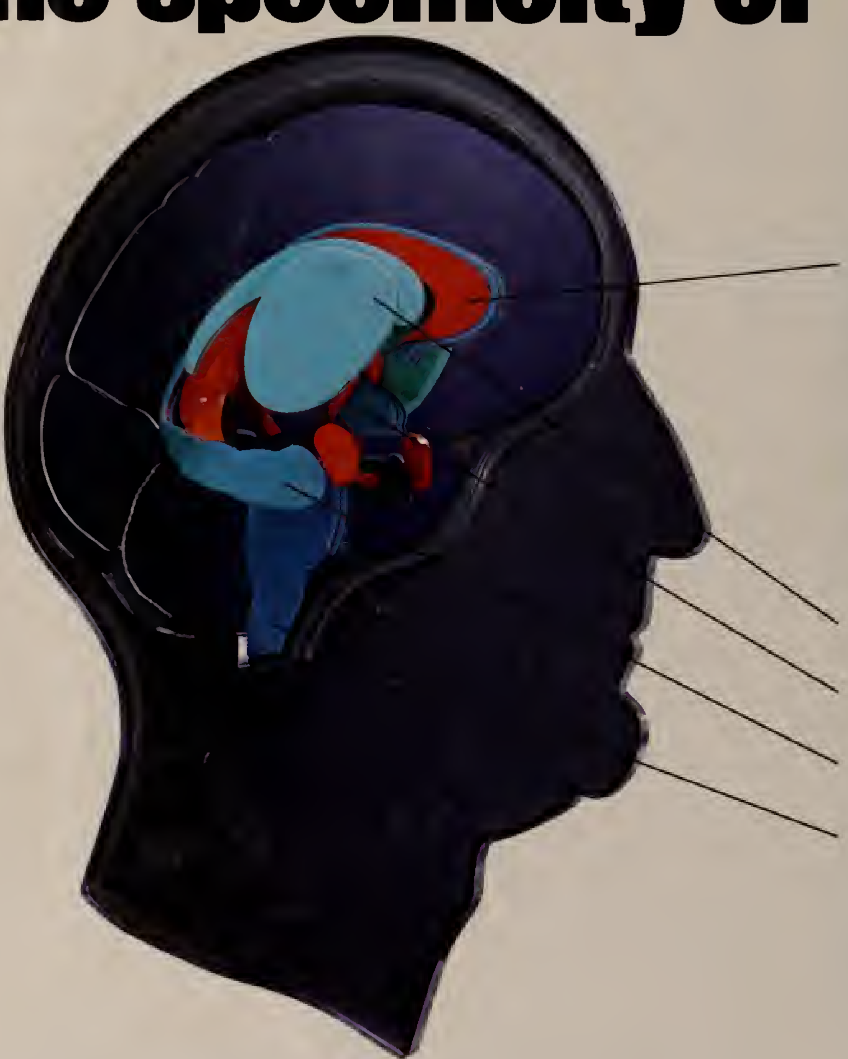
For agitation, anxiety, and depressed mood in the elderly...

The specificity of Mellaril® (thioridazine)

TABLETS: 10 mg, 15 mg, 25 mg, and 50 mg thioridazine HCl, USP.
MELLARIL-S® (thioridazine) SUSPENSION
25 mg/5 ml: Each 5 ml contains thioridazine, USP, equivalent to 25 mg thioridazine HCl, USP.

Active in the limbic system[1,2] where behavioral symptoms arise[1]...

less active where neurotoxic effects occur[1-3]



striatal system—minimal extrapyramidal stimulation

hypothalamus—little effect on temperature-control mechanisms . . . minimal hyperthermia

hippocampus—minimal effect on seizure threshold

emetic center—minimal antiemetic activity

Although old age lowers the tolerance for this class of drug and the most common neurologic side effects in geriatric patients are extrapyramidal manifestations, with Mellaril (thioridazine) there is minimal extrapyramidal stimulation. There appears to be an increased risk of agranulocytosis and leukopenia with phenothiazines in the geriatric population. Dosage for nonpsychotic geriatric patients ranges from 20 to 200 mg per day.

1 Borison R Scientific Exhibit, 32nd Institute on Hospital and Community Psychiatry, Boston, MA September 15-18, 1980 2 Borison R Lecture, Duke University Department of Psychiatry Durham, NC, September 18, 1980
3 Baldessarini RJ: Drugs and the treatment of psychiatric disorders in *Goodman and Gilman's The Pharmacological Basis of Therapeutics*, ed 6 New York Macmillan Publishing Co Inc. 1980. pp 391 402,407

Before prescribing or administering, see Sandoz literature for full product information The following is a brief summary

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides; carefully consider benefit versus risk in less severe disorders. During pregnancy, administer only when the potential benefits exceed the possible risks to mother and fetus.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy, observed primarily in patients receiving larger than recommended doses, is characterized by diminution of visual acuity brownish coloring of vision, and impairment of night vision, the possibility of its occurrence may be reduced by remaining within recommended dosage limits. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving), and increase dosage gradually. Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension since phenothiazines may induce a reversed epinephrine effect on occasion.

Neuroleptic drugs elevate prolactin levels, the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. Daily doses in excess of 300 mg should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*– Drowsiness, especially with large doses, early in treatment, infrequently, pseudoparkinsonism and other extrapyramidal symptoms; rarely, nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*– Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor *Endocrine System*– Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*– Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*– ECG changes (see *Cardiovascular Effects* below). *Other*– Rare cases described as parotid swelling.

It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. It has been reported that old age lowers the tolerance for phenothiazines; the most common neurologic side effects are parkinsonism and akathisia, and the risk of agranulocytosis and leukopenia increases. The following reactions have occurred with phenothiazines and should be considered whenever one of these drugs is used. *Autonomic Reactions*– Miosis, obstipation, anorexia, paralytic ileus. *Cutaneous Reactions*– Erythema, exfoliative dermatitis, contact dermatitis. *Blood Dyscrasias*– Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia. *Allergic Reactions*– Fever, laryngeal edema, angioneurotic edema, asthma. *Hepatotoxicity*– Jaundice; biliary stasis. *Cardiovascular Effects*– Changes in terminal portion of electrocardiogram, including prolongation of Q-T interval, lowering and inversion of T-wave, and appearance of a wave tentatively identified as a bifid T or a U wave have been observed with phenothiazines, including Mellaril (thioridazine); these appear to be reversible and due to altered repolarization, not myocardial damage. While there is no evidence of a causal relationship between these changes and significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients showing characteristic electrocardiographic changes while taking the drug. While proposed, periodic electrocardiograms are not regarded as predictive. Hypotension, rarely resulting in cardiac arrest. *Extrapyramidal Symptoms*– Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonus, oculogyric crises, tremor, muscular rigidity, and akinesia. *Persistent Tardive Dyskinesia*– Persistent and sometimes irreversible tardive dyskinesia, characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e.g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements) and sometimes of extremities may occur on long-term therapy or after discontinuation of therapy, the risk being greater in elderly patients on high-dose therapy, especially females. If symptoms appear, discontinue all antipsychotic agents. Syndrome may be masked if treatment is reinstituted, dosage is increased, or antipsychotic agent is switched. Fine vermicular movements of tongue may be an early sign, and syndrome may not develop if medication is stopped at that time. *Endocrine Disturbances*– Menstrual irregularities, altered libido, gynecomastia, lactation, weight gain, edema, false positive pregnancy tests. *Urinary Disturbances*– Retention, incontinence. *Others*– Hyperpyrexia, behavioral effects suggestive of a paradoxical reaction, including excitement, bizarre dreams, aggravation of psychoses, and toxic confusional states; following long-term treatment, a peculiar skin-eye syndrome marked by progressive pigmentation of skin or conjunctiva and/or accompanied by discoloration of exposed sclera and cornea; stellate or irregular opacities of anterior lens and cornea; systemic lupus erythematosus-like syndrome.

Dosage: Dosage must be individualized according to the degree of mental and emotional disturbance, and the smallest effective dosage should be determined for each patient. *In geriatric patients with multiple symptoms such as agitation, anxiety, depressed mood, tension, sleep disturbances, and fears* the usual starting dosage is 25 mg t.i.d. and the dosage ranges from 10 mg b.i.d. to q.i.d. in milder cases to 50 mg t.i.d. or q.i.d. for more severely disturbed patients; the total daily dose ranges from 20 mg to a maximum of 200 mg

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